

CONSTRUCTION AND EQUIPMENT GUIDELINES FOR EXPORT MEAT

DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY
AUSTRALIAN QUARANTINE AND INSPECTION SERVICE

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IMPORTANT

This document is no longer regulated by the Department of Agriculture, Fisheries and Forestry and was archived in 2023. It is available upon request as it may provide useful guidance for the construction of export meat facilities.

Certain sections within the document have been replaced by the Export Meat Operational Guideline: Provisions for Commonwealth authorised officers at export registered establishment, these sections have been "greyed out".

Readers are recommended to consult current building codes and relevant standards to ensure compliance with current requirements.

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Greyed out sections are covered in the Export Meat Operational Guideline 3.1: Provisions for Commonwealth authorised officers at registered establishments (PCORE).

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Greyed out sections are covered in the Export Meat Operational Guideline 3.1: Provisions for Commonwealth authorised officers at registered establishments (PCORE).

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UNREGULATED

UNREGULATED document.

Greyed out sections are covered in the Export Meat Operational Guideline 3.1: Provisions for Commonwealth authorised officers at registered establishments (PCORE).

Preface

These guidelines have been designed to inform plant managers, architects, engineers and consultants about the structural and equipment standards for export meat establishments in Australia. In this context, meat has the widest possible meaning, and includes not only meat and offals produced within abattoirs but also meat produced from field shot game animals processed through a game meat establishment, poultry meat produced in a poultry abattoir, rabbit and hare meat, and meat products derived from each of the above.

The guidelines and recommendations are the result of more than 70 years' experience by Government and industry in designing and maintaining export meat establishments. In the main, they are applicable to both large and small, complex and straightforward plants.

They are consistent with the standards outlined in the 'Australian Code of Practices for Construction of Abattoirs', which was drawn up by a committee consisting of representatives of the Commonwealth, States and the Northern Territory and approved by the Australian Agricultural Council in August 1984.

Requirements for export registered meat establishments are set out in 'orders' issued by the Minister, and the main objective of these guidelines is to explain ways of meeting the requirements of those orders. The orders are different for the various main categories of meat, but as an example, meat and meat products produced from the more traditional species of animals that are slaughtered in abattoirs are contained in the Export Meat Orders.

Proposals for construction and equipment that are submitted for approval are evaluated on the basis of whether or not they allow the hygienic production of meat and provide for inspection needs. The scope and nature of the operations are taken into account in deciding the facilities and equipment requirements for each project.

It is strongly recommended that these guidelines be followed in alterations and additions to existing plants and the construction of new establishments, as the principles contained herein will be applied in deciding whether or not to approve submissions.

The Australian Quarantine and Inspection Service will give due consideration to any proposal of an innovative nature and does not intend to delay the introduction of new technology so long as inspection and hygiene essentials are accommodated.

The set of guidelines does not apply to existing parts of currently registered establishments, though of course it contains many principles of hygiene that do apply.

Photographs and sketches of suggested designs for processing rooms and equipment are included only as a guide.

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- Australian Meat Exporters' Federal Council Australian Meatworks' Federal Council
- Australian Meat and Live-stock Corporation
- Council of Australian Public Abattoir Authorities Meat Research Laboratory of CSIRO
- Department of Primary Industries and Energy

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- Meateng Pty Ltd

1 Interpretation

1.1 Glossary of terms

1.1.1 Precise legal definitions are set out in the orders applying to meat of the various kinds. The meanings set out below are intended as no more than an aid in understanding this guideline. In this guideline, the word 'meat' has a range of meanings, and must be read within its context.

1.1.2 'Boning'

1.1.2 A boning room includes a room in which bone-in and boneless meat cuts are produced, boneless manufacturing meat is produced, and frozen carcasses and meat are bandsawed into smaller portions. A room in which only meat fractions or mechanically separated meat are produced is not a boning room.

1.1.3 'Cannery'

1.1.3 A cannery includes a plant, or an area of a plant, in which the full range of operations takes place which leads to what is normally recognised as canned meat (shelf stable or pasteurised) and to shelf stable meat and meat products in flexible pouches. Canning is the process by which meat and meat products are converted to canned meat.

1.1.4 'Carcase'

1.1.4 A carcase may mean the whole body of an animal at any time between stunning and/or death and the break-up of that body. A dressed carcase may have the head and feet either attached or removed, depending on the normal dressing procedures for that particular species or class of animal.

1.1.5 'Carcase part'

1.1.5 A carcase part is any edible or potentially edible portion removed from a carcase, side or quarter other than by the process of boning. It includes such things as tendons saved for edible purposes and beef briskets after removal from the quarter by cropping.

1.1.6 'Carton'

1.1.6 A carton includes a case or crate. Therefore, a carton room includes not only a room in which fibreboard cartons are to be held or stored but also a room in which cases or crates into which meat or meat products are to be packed and held or stored.

1.1.7 'Casings'

1.1.7 A casing room is a room in which inspected and passed runners are handled in the course of conversion into sausage casing. A casing establishment is an independent establishment in which this conversion takes place.

1.1.8 'Container depot'

1.1.8 A container depot is an independent premises where container systems are packed with meat that has been produced elsewhere and at which such meat may be stored before containerisation.

1.1.9 'Container terminal'

1.1.9 A container terminal is any independent premises where container system units that have been previously packed and sealed are held while awaiting export.

1.1.10 'Dressing'

1.1.10 Dressing takes place either on a slaughter floor or, in the case of game animals and rabbits, in a dressing area. The extent of dressing varies among the various species and categories of animal, and is detailed in orders.

1.1.11 'Meat product'

1.1.11 Meat product means a food made from or containing significant quantities of meat that has been processed beyond boning, slicing or trimming. Meat product generally applies to meat that has been subjected to a process that has changed its basic nature from that of fresh meat.

1.1.12 'New premises'

1.1.12 New premises means a premises that is not currently registered and that has not been registered for the operations sought in the previous 30 days. Thus a new premises may include one that is already constructed. The terms 'new premises' and 'new establishment' have the same meaning.

1.1.13 'Secondary edible products'

1.1.13 Secondary edible products include meat extract, soup stock and other foods recoverable after the mechanical, thermal or other treatment of edible meat or bone material.

2 Plans and specifications

2.1 Approval

2.1.1 Construction of new premises should not commence and alterations to existing registered premises must not commence before the plans of the premises and associated specifications have been approved. In the case of new premises, the site should also be approved in advance.

2.1.2 Where plans and specifications are modified during construction or alterations, amended plans and specifications must be submitted for approval.

2.1.3 Equipment to be used in any section of new premises or existing registered premises in which edible meat or meat products are to be produced must not be put into use before the equipment has been approved.

2.1.4 Floor, wall and ceiling finishes, and surface finishes having direct contact with edible product, must not be used in new premises or existing registered premises until the finishes have been approved.

2.1.5 A list of approved surface finishes and equipment is published by the Department and should be consulted.

2.1.6 Where a building site has been approved, and construction has not commenced within 12 months of the date of site approval, or the occupier of the premises has not sought export registration within 2 years of the date on which construction commenced, approval of the site and approval of plans and specifications for buildings will lapse.

2.1.7 Slaughtering establishments must obtain the appropriate licence from the relevant state authority before being considered for export registration.

2.1.8 Slaughtering establishments proposed to be located in the vicinity of airport flight paths should obtain a written statement from the Department of Aviation advising of their acceptance.

2.2 Submission of plans

2.2.1 Two copies of plans, specifications and other information necessary to facilitate consideration of approval of new premises, alterations or existing registered premises, equipment, and floor and wall finishes must be submitted to the person and address specified in the applicable orders. All submissions must show the date of preparation.

2.3 Plans

2.3.1 Plans must be drawn in accordance with the following:

- the paper size must be International A or B series and must not exceed 1189 x 841 mm
- contrasting paper and ink colours must be used
- drawings must be legible, with sharp, clear lines
- drawings of sites and building layouts must indicate the north point of the compass
- essential dimensions, including the dimensions of rooms and sections, must be shown
- the letter or number height must be not less than 3.5 mm
- the scale must be not less than:
 - site plans-1:500
 - floor plans-1:50
 - uncomplicated layouts-1:100
- the name of the occupier and address of the premises must be shown on each page

2.4 Plan and specification requirements for new premises

2.1.15 Contour map

2.4.1 A contour map fully and clearly illustrating and describing the location of the applicant's premises, together with an aerial photograph if available, must be provided with the plans and specifications.

2.1.16 Site Plan

2.4.2 A site plan of the entire premises showing the location of any buildings, railroad sidings, roadways and alleyways adjoining the plant must be provided. In addition, the site plan must show any streams, catch basins, water wells, reservoirs and storage tanks. The nature of the proposed operations must be indicated, either on the plan or in the specification.

2.4.3 The external boundary of the premises that it is proposed to register as a registered establishment must be clearly indicated and the actual way in which the boundaries are to be delineated.

2.4.4 If there are nearby buildings on adjoining properties, their use must be indicated and their height should be advised.

2.4.5 The character, surfacing and drainage of roadways, driveways, streets, and vehicular loading areas, must be indicated.

2.4.6 Objectionable industries within 1 km of the external boundary of the premises must be shown. In addition, any objectionable industries beyond a 1 km radius that the applicant considers may affect operations at the premises must be shown.

2.4.7 Where buildings to be used in processing product already exist on the site, plans must be submitted that fully and clearly illustrate the layout of rooms, their proposed use, building construction and ceiling heights.

2.1.17 Floor plan

2.4.8 A floor plan of each level in all buildings for which plans are submitted must be provided and must show the locations of the following:

- walls, partitions and posts
- doorways, windows and other openings
- rail systems for conveying carcasses or parts
- chutes
- principal pieces of equipment
- hot water and cold water hose points
- handwashing facilities
- sterilisers
- stairways
- lifts

2.1.18 Roof Plan

2.4.9 A roof plan showing vents, roof mounted equipment and other relevant information must be provided. The type of other information required is any fittings or other thing that may affect the production of meat within the plant or the welfare of personnel.

2.1.19 Section and elevation drawings

2.4.10 Cross-section and elevation drawings of all buildings for which plans are submitted must be provided, and must show:

- the character and finish of floors, walls, partitions and ceilings
- the heights of ceilings
- the principal pieces of equipment
- the height of any rails

2.1.20 Drainage plan

2.4.11 A detailed plan must be submitted that shows how floor drainage, effluent, sewage and stormwater is collected and removed from all buildings for which plans are submitted. These plans must indicate disposal after removal.

2.1.21 Specifications and notations

2.4.12 Specifications and notations for projects must cover such items as the following:

- flow of operations
- source of water supply
- a description of the hot water supply
- the means of steam removal in work rooms
- the protection of outer openings that would admit insects or other vermin

2.4.13 Specifications applying to projects must be provided either in typewritten form presented within a protective cover or else noted on the drawings.

2.1.22 Construction

2.4.14 New premises should be constructed to comply with the chapters of this guideline that are relevant to the operations being carried out in those premises.

2.5 Plan and specification requirements for alterations to existing registered premises or rearrangement of operations

2.1.23 Major alteration or rearrangement

2.5.1 When changes are proposed to a registered establishment in an area for which drawings have previously been approved, revised plans, showing the existing construction and equipment which will remain unchanged together with the proposed alterations and additions, must be submitted for approval.

2.5.2 Where the modifications result in change to the layout of equipment and product flow, the revised plans and specifications submitted must show this.

2.1.24 Minor alteration

2.5.3 Orders conditionally permit minor alterations and repairs to establishments without the need for a formal submission of plans and specifications for approval. Generally, the circumstances are the replacement of existing equipment with updated models and the repair or replacement of surface finishes. The conditions are usually that replacement equipment and finishes are approved and that the departmental officer in charge of the establishment is informed in advance.

2.1.25 Construction

2.5.4 Alterations to existing registered premises should be constructed to comply with the chapters of this guideline that are relevant to the operations being carried out in those premises.

2.6 Drawing and specification requirements for equipment, surface finishes and floor, wall and ceiling finishes

2.1.26 Details to be provided

2.6.1 An application for approval of equipment must be accompanied by drawings or brochures together with specifications that clearly and fully illustrate and describe the design, construction and installation of the equipment.

2.6.2 An application for approval of a surface finish that will have direct contact with edible meat must detail the formulation of the finish, including any colouring agents, on a 100 per cent basis and must be supported by relevant toxicity data.

2.6.3 Applications for the approval of wall, floor and ceiling finishes must contain details of the chemical composition of the outer finish on a 100 per cent basis and must be supported by relevant toxicity data. Applications must also be accompanied by drawings and specifications or notations showing the method of application, securing, bonding and joining where this is applicable. Where a flexible jointing compound is used, the application must contain details of its chemical composition on a 100 per cent basis supported by relevant toxicity data.

2.6.4 Samples of surface, floor, wall and ceiling finishes, including jointing, may be required to be provided.

2.1.27 Approval to be incorporated in plans and specifications

2.6.5 An application for approval of new premises or alterations to existing registered premises which is to incorporate equipment or floor and wall finishes that have been approved must include one or all of the following:

- the name of the manufacturer and the number and date of the approval
- a copy of a letter from the Department that carries a date and indicates approval

2.1.28 Exemption

2.6.6 Approval of the items of equipment listed below is not necessary, provided they are constructed from acceptable materials as specified in Chapter 42:

- simple hand tools such as knives and weasand rods, provided they are of hygienic construction
- equipment used in packaging product such as gluing and strapping machines
- equipment where no direct product contact is involved such as cryovac machines or vacuum packaging equipment
- equipment for handling packed or wrapped product such as roller conveyers
- equipment for handling inedible material such as screw conveyors

2.1.29 Construction

2.6.7 Exemption equipment should be constructed to comply with the requirements in Chapter 42 relevant to that equipment.

2.7 Inspection and recommendation

2.1.30 Progress inspection

2.7.1 Buildings and equipment may be inspected by a departmental officer on a regular basis during construction and equipment installation to assess compliance with the approved plans and specifications.

2.1.31 Final Inspection

2.7.2 When a project has been completed and the equipment has been installed and is operational, the occupier should notify the Regional Office of the Inspection Service and request a final inspection of the premises.

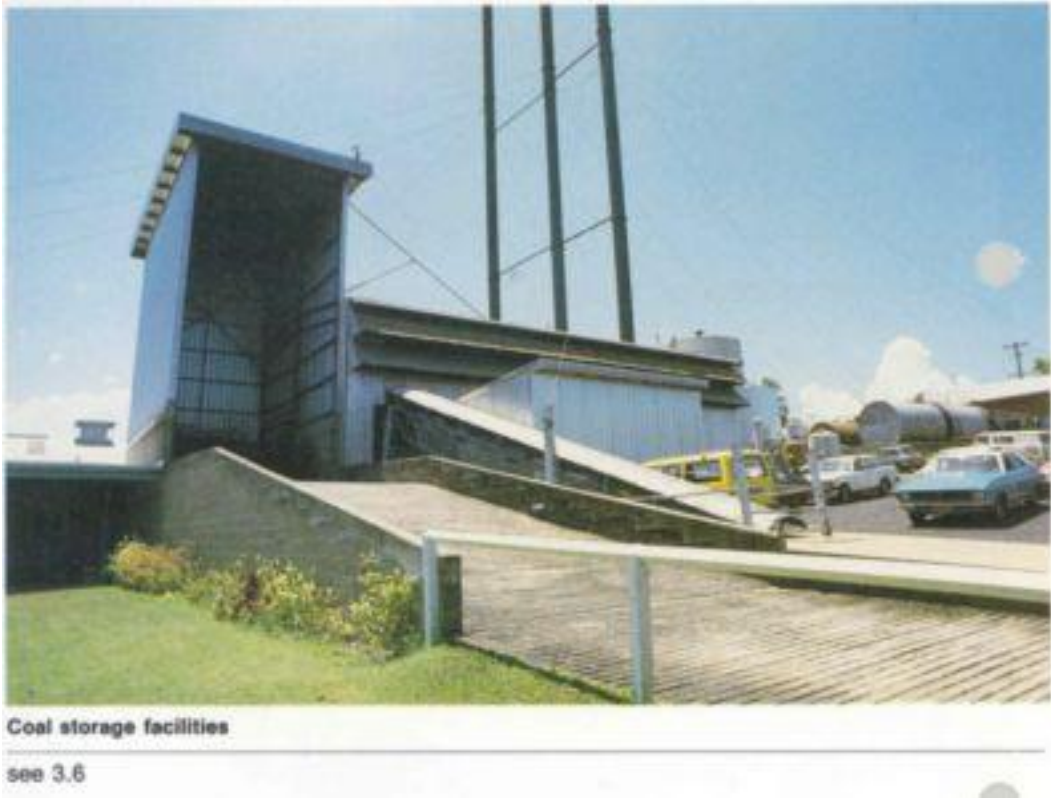
2.1.32 Recommendation

2.7.3 Upon receiving a request for a final inspection, the Service will arrange for an officer to carry out a final inspection of the premises as soon as practicable and without undue delay.

2.7.4 The officer undertaking the final inspection will report on the premises to the Service, and the results will be advised with a minimum of delay.

2.7.5 All submissions in relation to construction and equipment that are received by the Department will be treated on a confidential basis.

Layout of a modern slaughtering plant



3 Site selection and approval

3.1 Introduction

3.1.1 Site characteristics should be such as to minimise the impact of the development on the local community and avoid conflicts with the natural environment and planned land use in the area.

3.1.2 Buildings intended to be on the site, having regard to the operations proposed to be carried on at the premises, should be a reasonable distance from any building used for human habitation and any factory, public road or public place that is likely to cause meat on the proposed premises to be contaminated or otherwise adversely affected.

3.2 General conditions

3.2.1 Necessary water, electricity and drainage facilities including disposal of works effluent stormwater and site drainage and sewerage disposal, must be available at the site.

3.2.2 The area should be reasonably free of dust, and of odours, smoke, ash and other such things as are sometimes produced by sawmills, oil refineries, city dumps and sewage disposal systems.

3.2.3 Feedlot complexes should be distant enough that associated problems such as flies, dust, odours, vermin and pesticides, residues will not affect the day-to-day operations of the premises.

3.2.4 The site should lend itself to the construction of an adequate system of drainage, having regard to the operations intended to be carried out on the premises.

3.2.5 It is desirable that trees and natural landscaping be retained where possible.

3.2.6 Sites subject to flooding should be avoided.

3.2.7 The area of land required should be determined before selecting the site. Space should be sufficient for such things as stockyards, holding paddocks, vehicular roadways, parking areas, effluent ponds and other ancillary constructions.

3.3 Expansion

3.3.1 When planning the premises, careful consideration should be given to the design to allow space for future expansion.

3.4 Soil types

3.4.1 When selecting the site, care should be taken to avoid undesirable soil types. Soil types subject to large expansion and contraction can adversely affect construction costs or cause serious damage to buildings. Heavy soils subject to waterlogging can create drainage problems and allow pools of stagnant water to form.

3.5 Accessibility

3.5.1 Paved and graded access ways should be available, or capable of being made available, to connect receival and dispatch areas to streets or highways.

3.6 Siting of ancillary facilities

3.6.1 In the siting of inedible product departments, stockyards, effluent treatment systems and steam generating plants in relation to edible product processing facilities, the prevailing winds and terrain should be taken into account.

3.6.2 Where coal or sawdust fired boilers or incinerators are incorporated in the complex, particular attention should be paid to the possibility of fallout from smokestacks and of dust from sawdust and coal stockpiles.

3.7 Water

3.7.1 An adequate supply of potable water must be available

3.7.2 Depending on the source of supply, it may be necessary to install an inplant chlorination system or other treatment systems to ensure potability of water at all times.

3.7.3 One of the following must be provided:

- a letter from the water supply authority carrying a date and confirming that adequate potable water will be supplied for the proposed operations
- full details of the source of the potable water supply and any treatment systems to be used.

3.8 Electricity

3.8.1 The electricity supply should be adequate to meet the anticipated peak demand.

3.8.2 A letter from the electricity supply authority carrying a date and confirming that adequate electricity will be supplied for the proposed operations is necessary when such a source is to be used. In other cases, full details of the means of supplying electricity must be given.

3.8.3 Transformers and capacitors containing polychlorinated biphenyls are not permitted on the site of new establishments. A statement by the electricity authority to this effect is required to be provided.

3.9 Sewage, effluent and stormwater disposal

3.9.1 A letter from the relevant authority carrying a date and stating that the method of disposal is acceptable should be provided.

3.10 Drainage system

3.10.1 The site plan should indicate the proposed method of disposal of works effluent and sewage. Stormwater and site drainage should also be indicated.

3.11 Waste disposal

3.11.1 The method of disposing of any liquid, gas and solid wastes from the establishment must be acceptable to the relevant authorities and not constitute a hazard to the overall hygiene of the premises.



Plant surrounds

see 4.3

4 Surrounds and miscellaneous facilities

4.1 Scope

4.1.1 This chapter covers roads, pathways, landscaping and miscellaneous facilities such as manure screening, solid waste disposal and hide and skin processing.

4.2 Roads and pathways

4.2.1 On-site roadways, load-in and load-out areas, and pathways between buildings must be suitably paved, graded and drained.

4.3 Landscaping

4.3.1 The area surrounding buildings, stockyards, roads and pathways should be suitably graded, grassed and landscaped. In addition to enhancing the appearance of the works this will reduce the risk of problems with dust or stagnant water.

4.4 Paunch contents and manure separation

4.4.1 The separation of stockyard manure from wash-down water can be accomplished in settling pits or by screening. Paunch contents are usually separated by screening unless discharged with the works effluent.

4.4.2 Screening equipment should be on a concrete paved, curbed and drained area provided with hot or cold wash-down points.

4.5 Truck washing area

4.5.1 Facilities for washing livestock trucks are detailed in Chapter 8.

4.5.2 Chapter 8 also applies to washing facilities for meat-carrying vehicles.

4.6 Blood collection

4.6.1 Pits and tanks into which blood is received must be outside the slaughter floor. They may be located beneath the slaughter floor.

4.6.2 Blood pits and tanks should be constructed so that they are impervious to moisture and suitably drained. They should be provided with facilities to enable effective cleaning.

4.7 Solid waste disposal

4.7.1 Facilities must be provided for the disposal of solid waste, including such things as pig hair, paunch contents, stockyard manure, heavy solids from the save-all and rubbish.

4.8 Skins

4.8.1 Skin drying sheds should be located in such a position that they cannot create a nuisance.

4.8.2 The skin drying building should be roofed.

4.8.3 The floors or areas beneath the skins should be paved, drained and have curbed sides.

4.9 Hides

4.9.1 Hide curing and processing facilities should be suitably located away from edible product departments.

4.9.2 The walls of the room should be of impervious material to a height of 1.8 metres.

4.9.3 Floors should be of material impervious to moisture and suitably drained.

4.9.4 Where a chiller is used to temporarily store hides, it should be located in an edible product section of the premises.

5 Services

5.1 Introduction

5.1.1 This chapter deals with services required for plant operations which must be installed in accordance with appropriate standards and the regulations of all relevant authorities.

5.1.2 Important considerations are as follows:

- materials of construction must be suitable for the area in which they are to be installed

- safety aspects of installations
- adequate access for maintenance and sufficient room to work once access has been gained
- at all times meat hygiene must not be put at risk

5.1.3 Pipelines for any purpose must be impervious and approved as necessary by the relevant authorities.

5.2 Scope

5.2.1 Service dealt with in this chapter include the following:

- steam
- potable water, both hot and cold
- non-potable water
- drainage
- electricity
- refrigeration
- pneumatics
- pipeline identification

5.3 Steam

5.3.1 The steam generating plant must be located so that exhaust gases and fuel receival and storage facilities do not create a nuisance or a hazard to meat hygiene.

5.3.2 Boiler additives must be of an approved type if steam is directly or indirectly to come into contact with meat. Perhaps the most common way this may occur is where steam injection is used to heat potable water.

5.4 Potable water

5.4.1 Potable water standards are set out in detail in orders.

5.4.2 Potable water should in addition to meeting these standards be free of turbidity, colour and disagreeable taste or odour.

5.4.3 Where premises have in-plant chlorination facilities installed, storage facilities or other means must be provided to ensure a contact period of at least 20 minutes between chlorination and use within the premises.

5.4.4 In-plant chlorinators where installed must be of an automatic, continuous type and fitted with alarms to indicate failure of the apparatus.

5.5 Potable water reticulation

5.5.1 The reticulation system must be designed and installed so that back siphonage of used or polluted water cannot occur.

5.5.2 Where it is necessary to use submerged outlets, an effective system, such as vacuum breakers, must be provided to prevent back siphonage. The only vacuum breakers acceptable are those which can continuously be shown to be functional when the water supply is operating normally.

5.5.3 The reticulation system should have no unused ends that might mean the water becomes stagnant.

5.5.4 In warm processing areas, overhead cold water lines should be insulated if it is necessary to prevent condensation forming.

5.5.5 Identification markings should be at intervals of not more than 8 m and adjacent to branches, junctions, valves, walls and control points.

5.6 Private wells and bores

5.6.1 If the water is obtained from a private underground source, the wells or bores must be under the control of the registered establishment and effectively protected from pollution.

5.7 Reuse of potable water

5.7.1 Water from potable source may be reused for the same potable purpose in the following situations:

- in vapour lines leading from deodorisers used in the preparation of edible products
- in cooling retorted canned meat after the water has been effectively treated, filtered and chlorinated
- in spray units in pig scaling equipment or dehairing machines. Where this arrangement is installed, it is necessary to install after the unit a bank of sprays that use unrecirculated potable water. This bank of sprays must be located so as to precede hand shaving and would normally be part of the polished operation

5.7.2 Water should be filtered before reuse.

5.7.3 Storage tanks, cooling towers, pipelines etc. used in handling the reused water should be constructed in a way that facilitates inspection and cleaning.

5.7.4 Lines supplying potable water to the facility must be installed so as to eliminate back siphonage.

5.7.5 The equipment used should be capable of being drained and cleaned.

5.8 In-plant storage tanks for potable water

5.8.1 In-plant storage tanks should be provided with effective covers to prevent the entry of insects and other extraneous matter.

5.8.2 The inlet, outlet and, if provided, the recirculation system, should be installed to ensure that there are no stagnant areas.

5.9 Hot potable water

5.9.1 An adequate supply of hot potable water must be provided. Water provided for the purpose of sterilisation must not be less than 82°C at point of use, while that provided for handwashing must be delivered at between 35°C and 45°C.

5.9.2 Where a ring main system is used on a slaughter floor or in a processing room, a dial faced thermometer must be on the 82°C supply return line as the line leaves the room. This thermometer must be located so as it can be readily observed by the authorised officer.

5.9.3 Where hot potable water for sterilisation is produced by steam injection at point of use a thermometer should be on each item of sterilising equipment.

5.10 Non-potable water

5.10.1 Non-potable water is restricted to the following uses:

- on ammonia condensers not connected with the potable water supply
- in vapour lines serving inedible product rendering cookers
- for cleaning condemned or inedible materials
- for stockyard washing
- for moving solid material in sewer lines

5.10.2 Non-potable water may be provided for initial washing of stock, but it is necessary to ensure there is no inter connection to the potable supply and that potable water is installed for the final wash.

5.11 Drainage

5.11.1 Three entirely separate drainage systems should be provided as follows:

- sanitary drainage
- processing or trade waste drainage
- stormwater drainage

5.12 Sanitary drainage

5.12.1 Lines from toilets and urinals are to be directed to an adequate septic tank system or to the local sewerage system. These lines must not discharge into save-alls or any other device from which fat is recovered for further processing.

5.12.2 The drainage system should be designed to eliminate any possibility of drainage backing up and flooding the floors of any processing area.

5.12.3 Septic tanks, if used, should be away from processing areas so as to prevent any nuisance.

5.13 Processing or trade waste drainage

5.13.1 The drainage system from processing areas should be designed to enable rapid removal of wash down or other water from the floors of departments. The system should ensure the effective and expeditious removal of plant effluent from the premises.

5.13.2 Drainage inlets should be provided to adequately remove waste water in processing areas.

5.13.3 Each drainage inlet should be at least 100 mm in diameter and be fitted with perforated or grilled drain covers.

5.13.4 Slaughtering systems should have spoon drains positioned under the rails along the entire course of the dressing rail.

5.13.5 The width of such drains should be not less than 600 mm and the slope at least a 1:50 fall to the floor drainage inlets.

5.13.6 Drains should be equipped with effective deep seal traps and be adequately vented to the outside atmosphere.

5.14 Primary treatment systems

5.14.1 Save-all primary treatment systems should be provided to effectively handle drainage from the establishment.

5.14.2 The volume of a save-all should allow a residence time sufficient to ensure reasonable recovery of fats and sediments.

5.14.3 Each system should be in an area away from edible processing departments so as not to constitute a potential nuisance.

5.14.4 Each system should be surrounded by a concrete apron, curbed on three sides, with the open side being at least 1.8 m wide and sloped towards the save-all or grease trap to facilitate drainage of liquid back into the pit.

5.14.5 The save-all should be constructed so that it can be readily emptied and cleaned.

5.14.6 Hot (82°C) and cold water hose points for wash down purposes should be in the vicinity of the save-all.

5.15 Stormwater drainage

5.15.1 Local authorities frequently will not allow stormwater to be connected to the save-all or effluent treatment system. The Department will approve stormwater drainage connections to effluent treatment systems where local governments permit, provided the design and installation ensure that a fail-safe system prevents flooding.

5.16 Further effluent treatment

5.16.1 Any additional effluent treatment facilities must be located so as not to create an odour or other nuisance to processing areas.

5.17 Electrical fittings

5.17.1 Electrical pipe fittings should be installed at least 25 mm from equipment or walls. Other electrical fittings such as switches, ducts, cable ladders and switch bases should be sealed to the wall or sufficiently clear to permit effective cleaning of the space between the fitting and the wall.

5.18 Refrigeration

5.18.1 Where condensation is likely to lead to product contamination, effective means to confine and remove the condensation must be provided.

5.18.2 Where overhead refrigeration facilities are installed, insulated drip pans, directly connected to the drainage system, should be placed beneath them.

5.18.3 Floor type refrigeration units should be placed within curbed and separately drained areas unless located adjacent to a floor drain.

5.19 Pneumatics

5.19.1 Where practicable, the exhaust from air operated equipment should be piped to the exterior of processing buildings.

5.19.2 Oil from air exhausts must be adequately trapped to prevent contamination of product.

5.20 Identification of pipelines

5.20.1 Pipelines in new establishments must be identified in accordance with Australian Standard AS 1345-1982, Identification of the Contents of Piping, Conduits and Ducts.

Existing registered meat establishments must comply before 1 January 1995.

6 Basic construction requirements

6.1 Introduction

6.1.1 The items in this chapter are to ensure that the interiors of edible product areas are of sanitary construction using approved non-toxic materials.

6.1.2 Light coloured finishes should be used to help maintain sanitary conditions.

6.2 Internal walls

6.2.1 Materials used should be as follows:

- impervious to moisture
- smoothly finished
- rust resistant
- resistant to or protected from impact

- not readily subject to chipping or flaking

6.2.2 Joints and fixing devices should be sealed to effectively prevent entry of moisture.

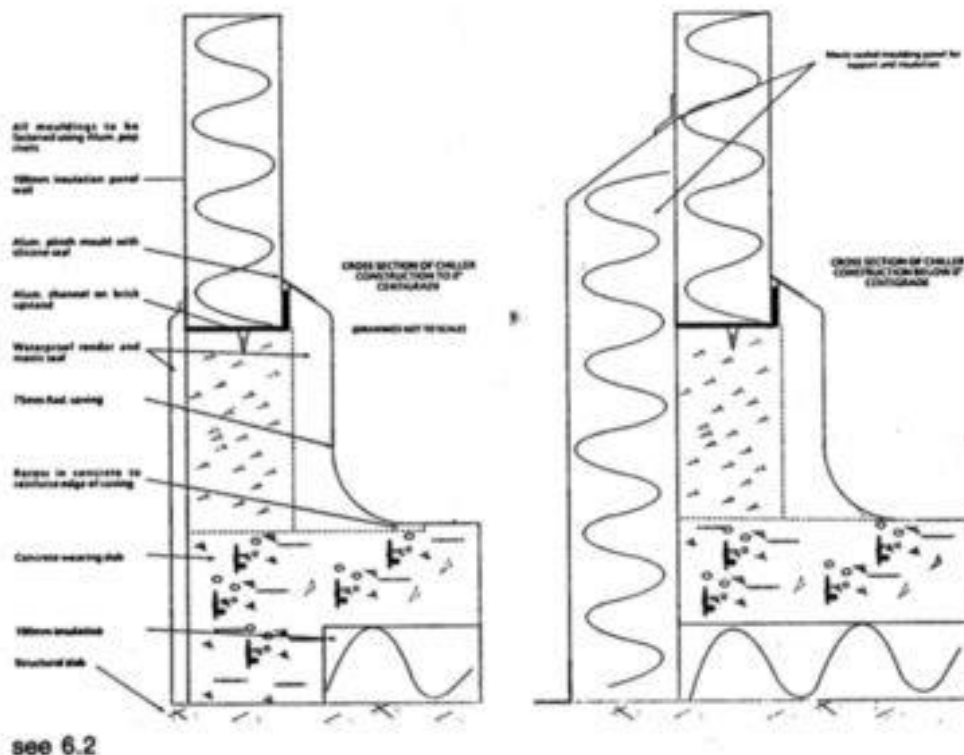
6.2.3 Where walls are not of full height, they should be capped with a 45° sloping top.

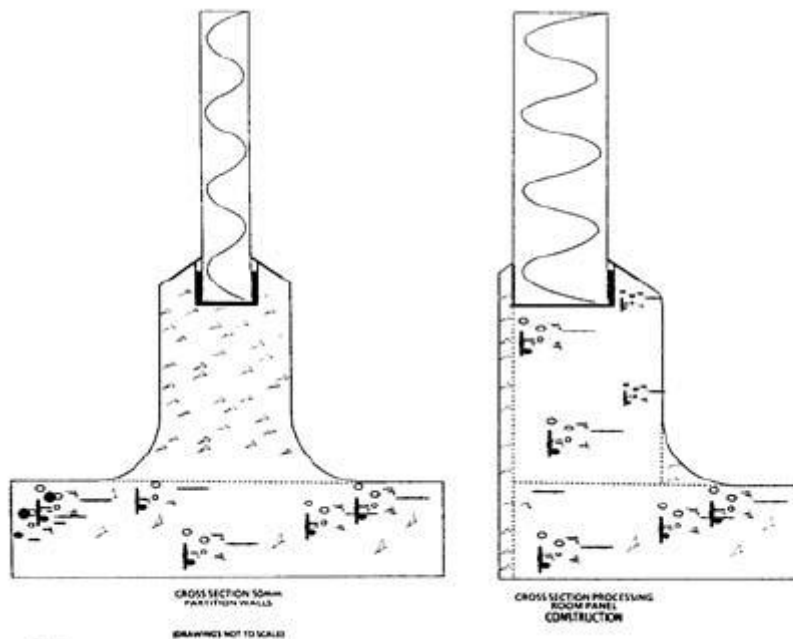
6.2.4 Where internal panel type construction is to be incorporated, other than in freezers, wall panels should be placed on a concrete plinth raised a minimum of 150 mm above floor level.

6.2.5 Wall panel construction should be suitably protected in any area where impact damage might occur. This may be achieved by installing bump rails or fixing suitable approved materials to the panel.

6.2.6 Where internal wall or ceiling surfaces are painted, the paint should be non-toxic and the painted surface should not contact edible meat. The paint should be light in colour and give a smooth finish that is impervious to moisture. The finished surface should be able to withstand hosing with detergents and 82°C water and withstand a reasonable degree of impact.

6.2.7 Walls adjacent to high stands need to be smoothly finished and impervious to liquids to an equivalent height above the level of the operations.





see 6.2

6.3 Floors

6.3.1 Materials used should be concrete or other approved substances impervious to liquids. Floors in areas where meat emulsions are prepared or further utilised should be acid resistant.

6.3.2 The surface should be relatively smooth but not slippery.

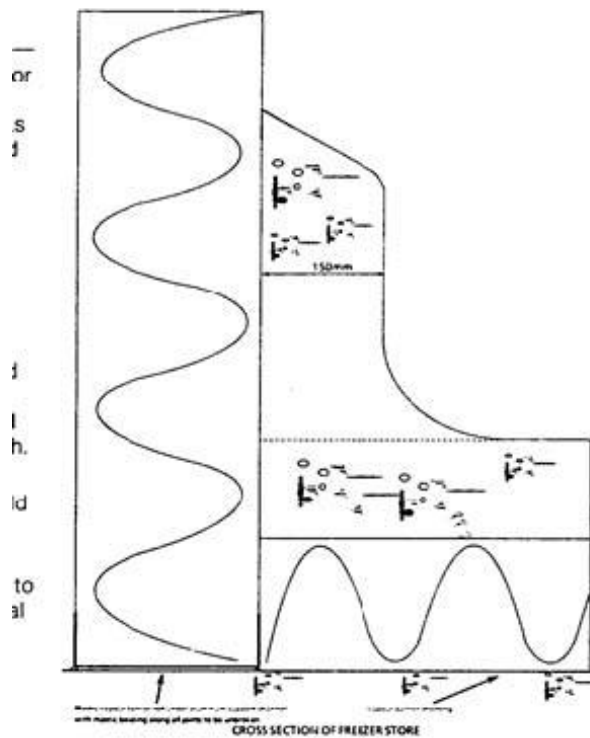
6.3.3 Floors should be evenly graded to drainage inlets so liquid does not accumulate.

6.3.4 Where anti-slip surfaces are applied to floors the surfacing material should be of an approved type and its finish should be relatively smooth.

6.3.5 Where bricks are used as flooring material, the frog of the brick should not be uppermost.

6.3.6 Grouting used between bricks and tiles in floors should be impervious to liquids and of the minimum practical width.

6.3.7 Floor joints should be seated with material impervious to liquids and finished flush with the surface.



see 6.3

6.4 Curbing

6.4.1 To help confine drainage, curbing should be provided at floor penetrations (such as lowerators and chutes) and should be at least 300 millimetres high and coved to a radius of at least 75 millimetres.

6.4.2 Pipes associated with establishment plumbing are excluded from the provision for curbing.

6.5 Ceilings

6.5.1 It is recommended that ceilings be provided in all rooms of slaughter floors and processing buildings.

6.5.2 Ceilings should be constructed from approved materials smoothly finished and impervious to moisture. Joints and fixing devices should be effectively sealed.

6.5.3 The minimum height of a ceiling, or the distance measured from the floor to a wall plate, should be as follows:

- in the case of a slaughter floor for cattle (including buffaloes) and horses-4.8 m; (or not less than 1 m above rail height)
- in the case of a slaughter floor for calves, sheep, pigs and goats-3.6 m; (or not less than 1 m above rail height)
- in the case of a scalding room for pigs-4.8 m; (or not less than 1 m above rail height)

- in the case of a boning room-3 m; (or not less than 1 m above rail height)
- in the case of a room in a cannery used for retorting or for preparing hot packs-4.8 m
- in the case of a room or area in a cannery used only for preparing cold packs-3.6 metres

6.6 Coving

6.6.1 Walls and curbs should be covered to the floor with a radius of at least 75 millimetres.

6.6.2 Wall to wall junctions should be coved with a radius of at least 25 millimetres.

6.7 Passageways, doors and jambs

6.7.1 Passageways, doors and door jambs should be constructed from, or sheathed with, rust resistant materials.

6.7.2 Where sheathing is used, joints should be effectively sealed against moisture entry by continuous welding or other equally effective means.

6.7.3 Fixing devices such as pop rivets or screws should be effectively sealed to prevent crevices which are difficult to clean.

6.7.4 Doorways through which product is transferred by rail or truck should be at least 1.5 m wide.

6.7.5 Passageways through which product is transferred by rail or truck should be of adequate width to ensure that there is a space of at least 2.1 m between the vertical of the meat rail, and the furthest wall, or item of equipment and 900mm to the nearest wall: i.e. minimum width of the passage with a meat rail should be 3 m. Where there are no meat rails passageways should be at least 1.5 m wide.

6.8 Columns

6.8.1 Columns should be sheathed with approved material in accordance with 6.7.1 and 6.7.2 in zones where meat contact might occur.

6.8.2 Columns on slaughter floors should be located so that the columns cannot contact exposed meat.

6.9 Stairways

6.9.1 Stairways above areas in which edible meat is handled should be constructed of material impervious to moisture, and have solid treads, closed risers and solid side curbs. Side curbing should have a minimum height of 150 mm measured at the leading edge of the tread.

6.10 Windows

6.10.1 Where provided, windowsills should be not less than 1.8 m from floor level.

6.10.2 Internal sills should be sloped at a 45° angle.

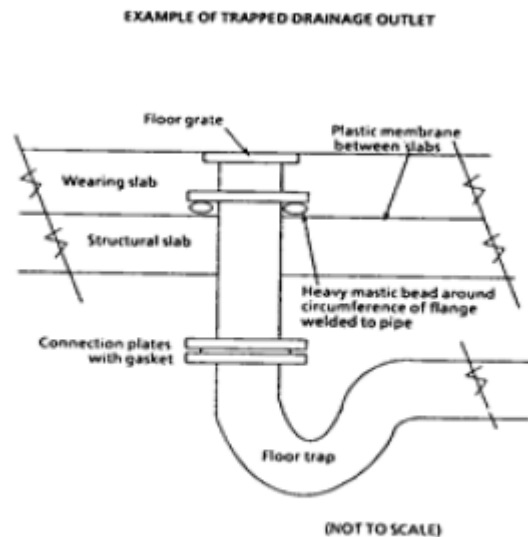
6.10.3 Where windows face an area that produces noxious odours, the windows should be non-opening.

6.11 Drainage

6.11.1 Floors should be evenly graded to a floor waste having a trap in the shape of a P, U, or S that is effectively vented to the outside.

6.11.2 On slaughter floors, inlets should be strategically located in spoon drains that follow the course of the dressing rail.

6.11.3 Spoon drains or floors graded to strategically located inlets may be used in chillers, processing areas and the like.



see 6.11

6.12 Floor gradients

6.12.1 The gradient of floors should be as follows:

- for wash areas-1:25
- for wet areas-1:50
- for other areas-1:100

6.13 Insect proofing

6.13.1 Exterior openings leading directly or indirectly to areas where edible meat is present should be insect proofed.

6.13.2 Where personnel enter edible product processing areas either directly or indirectly from outside the building, consideration may be given to having a corridor with subdued lighting between the outside of the building and the entrance to the room to limit problems with the entry of insects. Insect electrocution devices may be installed in such a passageway and fulfil a most useful purpose.

6.13.3 Specific equipment requirements for insect electrocution devices are detailed in Chapter 42.

6.14 Rodent and vermin proofing

6.14.1 Buildings should be constructed to be rodent and other vermin proof. Doors should be tight fitting.

6.15 Ventilation

6.15.1 Ventilation may be provided by natural or mechanical means. Mechanical ventilation should achieve at least 4 air changes an hour.

6.15.2 With mechanical ventilation systems, air intakes should be properly located to avoid the intake of potentially contaminated air.

6.15.3 Ventilation equipment of all types should be located so that air from condemned rooms or other inedible product areas cannot be introduced into the ventilation system.

6.15.4 Where roof mounted air conditioners, evaporative coolers and the like are located near production lines, edible product should not be contaminated with condensate or overflow water.

6.15.5 Where mechanical ventilation systems are used, the flow of air should be from clean to dirty areas.

6.15.6 Where positive pressure ventilation systems are installed to help exclude dust from buildings, the system is not to be regarded as a substitute for adequate insect proofing.

6.16 Lighting

6.16.1 The intensity of lighting required to be provided at work stations is as follows:

- in the case of post-mortem, offal room, boning room and meat product inspection stations- 600 lx for new premises and existing registered establishments must comply by 1 January 1991;
- in the case of an area where prescribed goods are trimmed before an inspection station 600 lx for new premises and existing registered establishments must comply by 1 January 1991;
- in the case of employee work stations other than in an area where prescribed goods are trimmed before an inspection station-220 lx;
- in the case of suspect pens or yards-220 lx measured 1 m above the ground; and
- in the case of suspect pens or yards-220 lx measured 1 m above the ground; and
- in the case of covered livestock pens-110 lx measured 1 m above the ground.

6.16.2 Shattered protective shields must be provided over exposed lights.

6.16.3 Artificial lighting must not distort colours or cause shadows at the inspection surface. This also applies where meat is prepared for inspection or is packaged.

6.17 Hose points

6.17.1 Hose length should not exceed 18 metres.

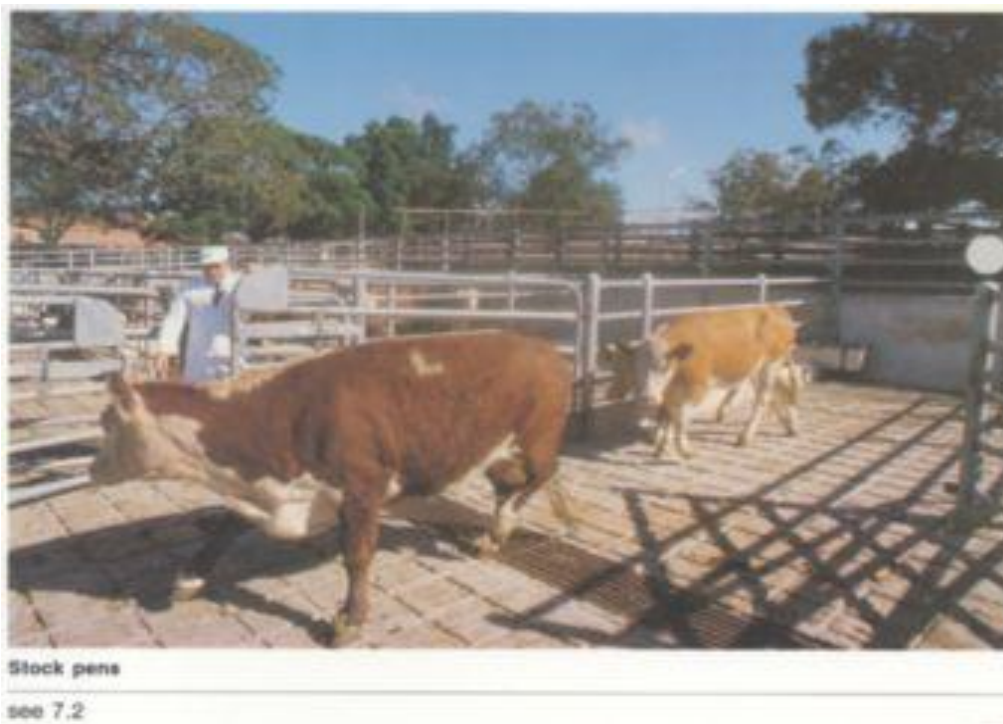
6.17.2 A sufficient number of hot and cold hose points should be provided to service the area.

6.17.3 Hose racks should be constructed of rust resistant materials.

6.17.4 Hoses should be of material and colour that does not cause marking of surfaces they contact.

6.18 Noise factor

6.18.1 It is well recognised that prolonged exposure to excessive levels of noise is detrimental to health and hearing. Slaughter floors and other processing areas of meat establishments can be excessively noisy unless particular attention is paid to this problem. An awareness of the need to control noise levels is important at the design stage, as problems can be avoided that would be expensive to rectify later.



7 Stock pens for cattle (including buffaloes), horses, smallstock and deer

7.1 Introduction

7.1.1 The purpose of these facilities is to assist in providing clean, adequately rested animals suitable for slaughter at a steady rate matched to the throughput of the filling floor.

7.2 Design considerations

7.2.1 In designing livestock facilities, every effort should be made to eliminate sharp bends, slippery floors, protrusions and other hazards that predispose livestock to bruising. Where these hazards cause injury or suffering to animals the hazards must be corrected.

7.2.2 The layout of the facilities should allow for a straight through operation, eliminating unnecessary doubling back and crossing over, from the point of unloading to the point of slaughter.

7.2.3 For horses, design consideration should be given to the provision of additional exit gates to allow for the removal of injured animals.

7.3 Location in relation to other buildings

7.3.1 Holding pens must not be within 9 m of any part of a main building in which dressing takes place or meat is processed. This provision does not apply to a building used for stunning and sticking provided no other dressing operation is carried out in that area.

7.4 Location in relation to works roadways

7.4.1 On-site roadways should not pass through the stock pen facilities.

7.5 Location in relation to prevailing winds

7.5.1 Holding pens should be situated so that any prevailing winds do not create a dust and odour problem in meat production areas.

7.6 Receival area for incoming stock

7.6.1 Suitably designed receival areas for incoming stock adjacent to stock pens should be provided. Receival areas should be paved with impervious material adequately drained and capable of being readily cleaned.

7.6.2 Unloading ramps designed to suit the means of transport must be provided to ensure that animals are not put at risk of injury.

7.6.3 For young calves and pigs the unloading ramp should be as close as practicable to the covered small stock pens.

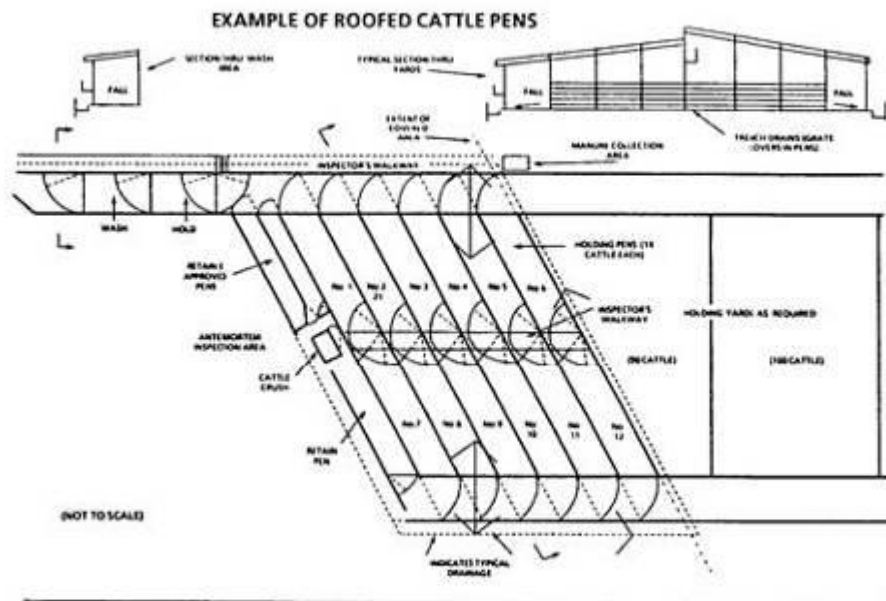
7.7 Animal holding pens

7.7.1 Separate holding pens should be provided for each class of stock intended to be slaughtered at any one time.

7.7.2 Holding pens at the premises should be of sufficient area to allow all the animals likely to be slaughtered at the premises in any one shift on a day to be in the holding pens at one time.

7.7.3 Pens should be of metal construction.

7.7.4 Overhead sprinkler cooling facilities should be provided in buffalo holding pens.



7.8 Area of holding pens

7.9 Roofing

7.8 Area of holding pens

7.8.1 The area of pens should not be less than required under relevant Australian animal welfare codes of practice. These should be sought from the authorities having responsibility for animal welfare in the appropriate State or Territory. Export Meat Orders require that largestock be provided with not less than 1.8m² per animal, and smallstock with 0.47 m² per animal.

7.8.2 In the case of horses consideration should be given to providing a larger pen area per head than normally would be recommended for other large stock species. In addition it is recommended that provision be made for the segregation of stallions.

7.9 Roofing

7.9.1 Holding pens, races and walkways should be roofed in accordance with the following criteria:

- for cattle, buffalo and horses-sufficient to cover 25 per cent of the day's kill, exclusive of races, alleyways and suspect pens
- for smallstock-sufficient to cover a full day's kill, exclusive of races, alleyways and suspect pens
- for races and drover walkways leading immediately to the slaughter floor or discrete slaughter/sticking building-complete coverage

7.10 Floors

7.10.1 The floors in holding pens and races should be in accordance with one of the following

- paved with concrete or other approved material that is impervious to liquids and is properly graded and drained
- slatted flooring laid directly onto a paved base
- elevated slatted flooring
- elevated open mesh metal

7.10.2 Holding pen and race floors paved with concrete or other approved material on which stock directly stand should be finished in a way that minimises slipping. For cattle, a deep crosshatch pattern giving squares of about 25 cm x 25 cm seems optimal.

7.10.3 In holding pens and races where slatted flooring is laid directly onto a paved base, the slatted flooring must be capable of being removed for cleaning.

7.10.4 Where elevated slatted or elevated open mesh flooring is used in holding pens or races, the area under the pens or races should be paved, graded, drained and readily capable of being cleaned.

7.10.5 It is desirable that elevated slatted floors be provided for sheep, lambs and goats, and where necessary be designed to accommodate smaller animals such as kid goats.

7.10.6 A concrete floor is not a suitable surface for holding of horses for lengthy periods of time. Consideration should be given to the provision of good quality metal (gravel) as a floor base, which is well drained. This floor base should be used for all yards other than the suspect pen and the yard immediately before the forcing race to the slaughter floor.

7.11 Curbing

7.11.1 The perimeter of pens should be provided with a 300 mm high continuous concrete curb, except at gateways.

7.11.2 At gateways a curved rise should be provided to prevent drainage water from running onto unpaved areas, races, alleyways or adjoining roadways.

7.11.3 Races leading to the slaughter floors should be curbed.

7.12 Fences and gates

7.12.1 It is recommended that fences and gates be constructed of steel or equivalent approved material or any combination of these materials. For horses however, consideration should be given to the provision of fences and gates of solid construction, wherever possible.

7.12.2 The design and finish of fences should be such that projections which will harm or bruise stock are eliminated.

7.12.3 A strong, positive latch should be provided on each gate.

7.13 Drainage

7.13.1 Drainage should not be allowed to flow from one pen across another.

7.13.2 Pens should not contain depressions which would allow accumulated water to be consumed by livestock.

7.13.3 Open drainage channels should not pass through pens.

7.13.4 Curbs between adjoining pens should permit one pen to be cleaned without wetting nearby occupied pens.

7.13.5 Drainage from building or stormwater drainage from pen roofs should not be allowed to flow across the floor of pens.

7.13.6 Drainage should be directed to perimeter channel drains or to spoon drains. Where directed to alleyways the drains should be covered if those alleyways are used for ante mortem inspection or as races.

7.13.7 Drainage from races and footpaths should be confined, not allowed to flow over pens and directed to the manure settling pit.

7.14 Manure collection

7.14.1 An acceptable manure and effluent disposal system should be available.

7.14.2 Where a manure settling pit is installed, it should be as far as possible from buildings in which meat is produced or held and it should be constructed to facilitate frequent cleaning.

7.14.3 The liquid from the separation system used should be disposed of by an impervious enclosed drain or pipe in a way that does not create a nuisance.

7.15 Water troughs

7.15.1 Water troughs or drinking devices should be provided in holding pens.

7.15.2 An adequate supply of potable water should be connected to these facilities.

7.16 Hose points

5.1.1 Sufficient hose points should be provided to enable the cleaning of pens and should be positioned so that no part of the paved areas is more than 18 m from a wash point.

7.17 Paddocks and yards

7.17.1 Adequate watering facilities for livestock should be provided.

7.17.2 Shade should be provided by artificial means or by trees.

7.17.3 Trucks of trees in yards should be suitably protected to prevent damage to their bark.

7.18 Suspect pens

7.18.1 Adequately sized and roofed suspect pens for each class of stock must be provided and should incorporate the following:

- an effective crush designed specifically for cattle, buffalo or horses
- for smallstock an effective crush or squeeze gate

7.18.2 Handwashing facilities consisting of a wash basin operated by foot pedal or thigh, a soap dispenser, a paper towel dispenser and a used towel receptacle must be provided.

7.18.3 The handwash basin should be located in an area from which stock are effectively excluded.

7.18.4 Hot water for handwashing must be available and can be provided by means of an individual heating unit or a line from the main works supply.

7.18.5 A lockable facility for storing equipment used for ante-mortem inspection is to be provided.

7.18.6 Suspect pens for each class of stock should be clearly signposted with the words '(insert class of stock) Suspect Pen'.

7.18.7 Provision should be made to enable access to the knocking area or stunning facility for animals that cannot walk.

7.18.8 Each suspect pen must be separately curbed, except at gateways, where humps should be provided to aid in drainage confinement.

7.18.9 Suspect pens must be separately drained via a perimeter drain channel to the manure settling pit and drainage not allowed to flow over other pens or alleyways.

5.18.9.1 Rails, posts, gates, crushes and other equipment in suspect pens must be made of metal or other suitable impervious material.

7.19 Cattle and horse washing facilities

7.19.1 Washing facilities consisting of a footbath, sprays or other acceptable facilities should be provided in a roofed area for washing cattle and horses for slaughter. An adequate length of race should be set aside to allow excess water to drain from the stock before slaughter.

7.19.2 Where water used for stock washing is recycled, the water must comply with the following:

- a system for removing and recovering solids must be provided
- supplementary fresh water should be available to provide an adequate supply
- the final wash section is to use potable water

7.20 Lighting

7.20.1 In covered pens a minimum overall illumination of 110 lx must be provided.

7.20.2 In suspect pens a minimum overall illumination of 220 lx must be provided.

7.20.3 In ante-mortem inspection areas a minimum overall illumination of 110 lx must be provided.

7.21 Ante-mortem card holder

7.21.1 A device for holding ante-mortem cards should be provided for each pen.

7.22 Guard and working dogs

7.22.1 Where dog pens or kennels are provided they should be effectively paved and drained and must be at least 27 m from any building or livestock pen or yard.

7.23 Electric goads

7.23.1 Where used, electric goads should be capable of being regulated to the lowest effective voltage and should be installed so as to be incapable of delivering a current in excess of 50 volts AC.

7.24 Toilet facilities

7.24.1 Toilet and handwashing facilities should be provided in the vicinity of stock pens.

7.25 Bootwash facilities

7.25.1 Bootwash facilities should be provided and be conveniently located to enable the washing of footwear of personal leaving the pen area.

7.26 Deer pens

7.26.1 The walls of deer pens should be solid, at least 2.6 m high and constructed to be able to withstand any physical impact by the deer.

7.26.2 Gates of deer pens should be solid, constructed to withstand any physical impact by the deer, and may be either sliding or swinging.

7.26.3 Square and acute corners should be eliminated from deer holding pens.

7.26.4 If provided, the crush pen should be a circular pen of 5 m maximum diameter, with a pair of centrally swung solid gates, located so as to distribute deer to adjacent pens and raceways.

7.26.5 Deer holding pens should be roofed so as to provide sufficient cover for at least a single day's slaughter operation.

7.26.6 Material used in this area should be specially selected to minimise noise.

7.26.7 Flooring should provide secure footing and adequate drainage.

7.26.8 The minimum area of deer holding pens based on internal dimensions should be calculated in accordance with the following:

- for each entire male fallow deer or species of similar size-0.6 m²

- for each entire male red deer or species of similar size-1.2 m²
- for each female of all species-three-quarters of the area necessary for the male

7.27 Lanes for deer

7.27.1 Lane ways for deer should be constructed in the same manner as deer holding pens and should be at least 1.5 m wide. Long narrow lanes should not be used.

7.28 Lead-in race for deer

7.28.1 The lead-in race for deer should have walls at least 2.6 m high to a distance of 9 m out from the pens.

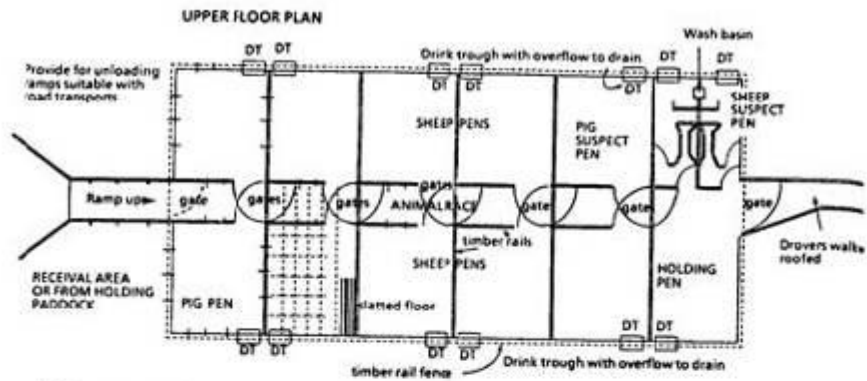
7.28.2 The walls should taper to a width of 2 m to 3 m at entry to the pens.

7.28.3 The lead-in race should be set at an angle to the pens and may incorporate a curved layout or wing fence.

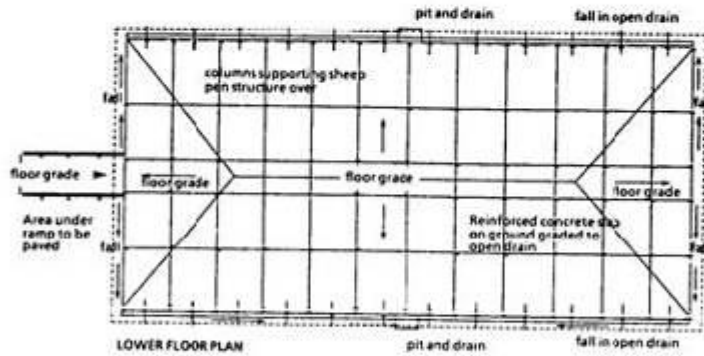
7.29 Ramps for deer

7.29.1 Descending ramps are unsuitable for deer and should not be used.

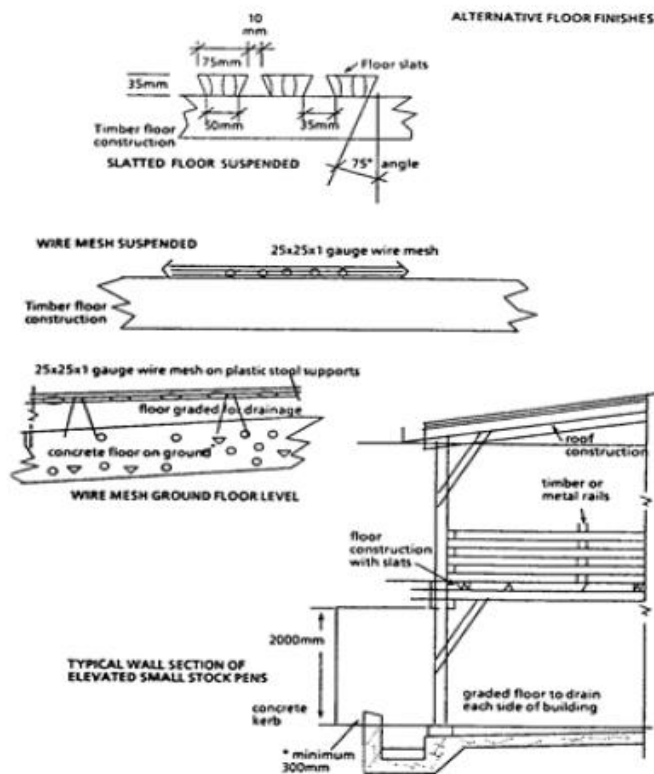
EXAMPLE OF ROOFED ELEVATED SMALLSTOCK PENS AND ANTE-MORTEM INSPECTION



VETERINARY FACILITIES
 Equipment storage cabinet (lockable) Hand wash basins foot pedal operated. Paper towel dispenser. Used towel bin. Hot water unit. Soap dispenser. Supply of disinfectant to be available.



see 7.2



GENERAL NOTES

1. Pen size determined by regulation requirement of area for one animal by number equal to days kill capacity; which area is to be roofed.
2. Wash down hose points to be located that maximum hose required is less than 18 metres.
3. Holding pens should preferably be situated so that prevailing winds do not create a dust and odour problem in processing areas.
4. Lighting
Pens- minimum intensity of 110 lux
Ante-mortem inspection area- minimum intensity of 220 lux overall
5. Pens are to be situated not closer than 9m from main buildings.
6. All drainage is to be directed to a manure collection pit situated away from main buildings as indicated in regulations.
7. Ante-mortem card holders supplied to each pen.
8. Suspect pen identified by a sign "PIG" or "SHEEP SUSPECT PEN."

{DRAWINGS NOT TO SCALE}

GENERAL NOTES TRUCK WASH AREAS

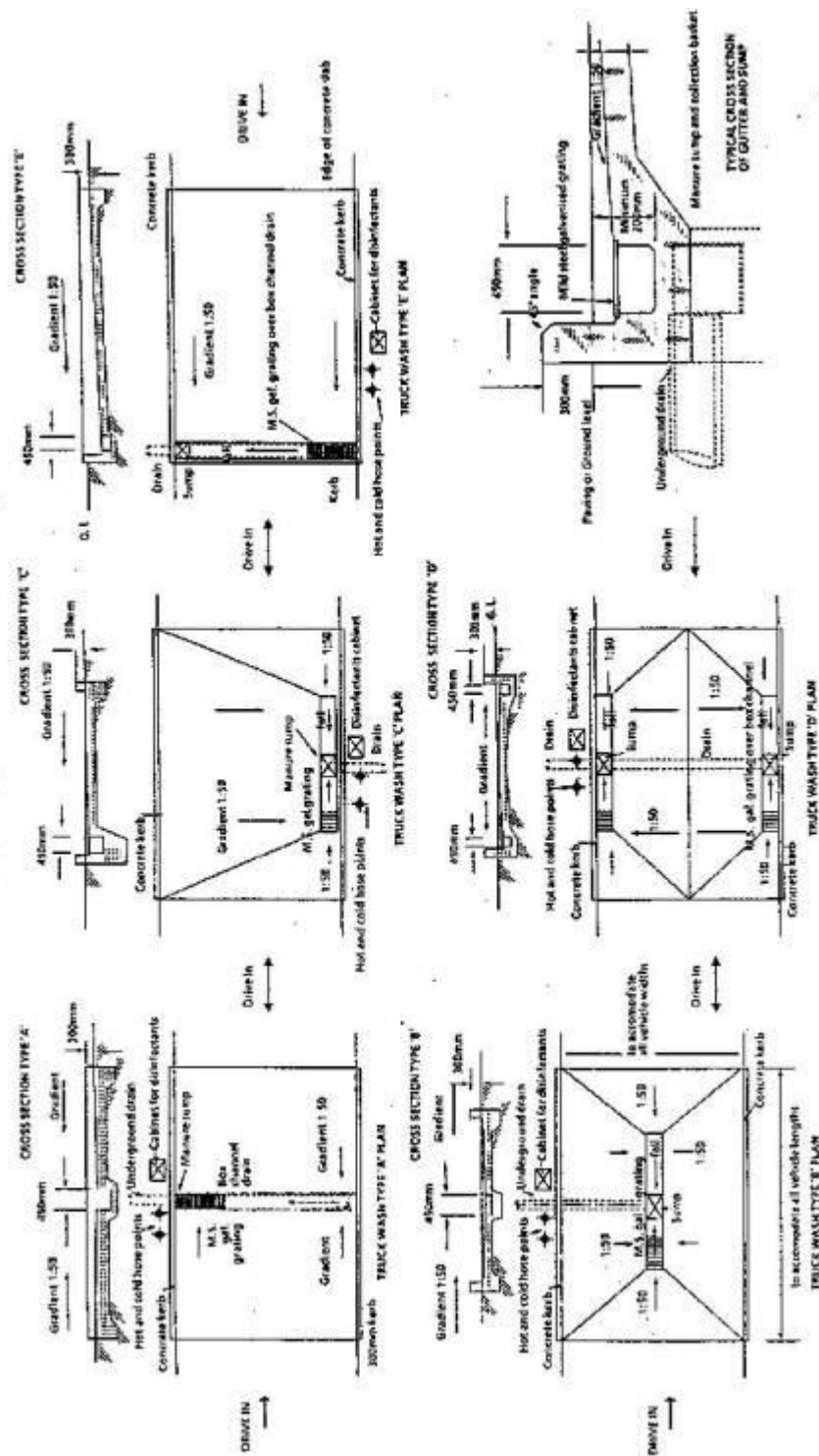
1. LOCATION
Adjacent to stock unloading area of the establishment for the cleaning and disinfection of livestock carrying vehicles after unloading.
2. SIZE
Size of truck wash to suit largest anticipated vehicle.
3. CONSTRUCTION
The surface shall be impervious and durable.
4. DRAINAGE
The surface drainage gradient should be 1:50 to a box channel and manure sump designed to accommodate a collection basket or equivalent arrangement within the underground drainage reticulation.
5. SERVICES
An adequate supply of warm and cold water shall be available for the cleaning and disinfection operation.
Hose points and hose.
6. FACILITIES
A lockable cabinet or shed is required at truck washing sites for holding disinfectants and detergents when not in use. See proposed type layouts.
7. LIGHTING
The area should be well lit to enable cleaning of vehicles after daylight hours.
8. ROOFING
Roofing may be a requirement of other relevant authorities, particularly in cases where the effluent is ultimately disposed to a municipal sewerage or trade waste system.

{DRAWINGS NOT TO SCALE}

UNREGULATED document.

Greyed out sections are covered in the Export Meat Operational Guideline 3.1: Provisions for Commonwealth authorised officers at registered establishments (PCORE).

EXAMPLE OF LIVESTOCK CARRYING TRUCK WASH AREA



8 Livestock truck wash areas

8.1 Location

8.1.1 A paved and drained area should be provided adjacent to the stock unloading area for cleaning livestock carrying vehicles after unloading.

8.2 Basic construction and facilities

8.2.1 The surface of the truck wash area should be durable, be impervious to liquids and have a drainage gradient of at least 1:50.

8.2.2 Drainage from the truck wash area should be connected to a manure sump or equivalent facility.

8.2.3 Where a nuisance would otherwise be created, suitable curbing and shielding should be provided to confine splash to the area.

8.2.4 Drainage lines from these areas should be of sufficient diameter to accommodate the high level of solids associated with washing these trucks. Mild steel piping is unsuitable for drainage lines in this area because of the corrosive nature of effluent from stock truck washing and of strong detergents.

8.2.5 An adequate supply of potable water under sufficient pressure should be available for cleaning operations.

8.2.6 Where vehicles are likely to be cleaned after daylight hours, the area should be well lit.

8.2.7 A suitable lockable cabinet or shed should be provided at truck washing sites for storing disinfectants and detergents.

9 Slaughter floors – General

9.1 Introduction

9.1.1 The purpose of this chapter is to outline the essentials for a facility of sanitary construction which is equipped to achieve the desired rate of slaughter under particular methods of slaughter. This chapter also sets out those requirements common to slaughter floors for all or most categories of stock.

9.2 Distance from stockyards or pens

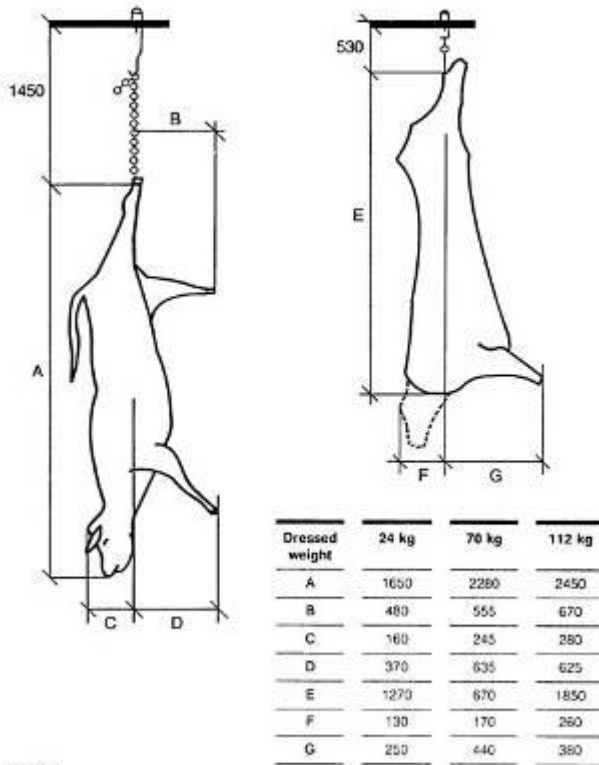
9.2.1 The minimum distance between the stockyards or pens and the slaughter floor should be 9 m. A knocking or sticking area connected to the main building by an enclosed ramp may be closer, provided no other dressing operation is carried out in that area.

9.3 Separation from inedible product areas

9.3.1 There must be no air connection between slaughter floors and inedible departments.

9.4 Distance from employees' amenities

9.4.1 Employees' amenities should be located conveniently close to the slaughter floor.



see 9.1

9.5 Product flow

9.5.1 As a general principle product flow should be from 'dirty' to progressively cleaner areas.

9.5.2 As a general principle product flow lines for product should not cross over one another.

9.6 Inspection

9.6.1 Carcase parts that are to be recovered for edible purposes or that are required for post-mortem inspection must not be removed from the slaughter floor until after carcase disposition has been made. To avoid operational problems, it is important to design a layout that minimises the possibility of inadvertent removal.

9.7 Kidney enucleation station

9.7.1 Where this task is not performed by the eviscerator, a separate station should be provided. The station should be located before the high (fronts) inspection point in the case of largestock, and before the carcase inspection point in the case of smallstock. Direct access to handwash and steriliser facilities is necessary at these stations.

9.8 Carcase branding station

9.8.1 Space should be set aside after the final inspection station and before leaving the main slaughter floor for applying the official inspection stamp for carcases.

9.9 Carcase washing station

9.9.1 Carcase washing facilities need to be provided and may consist of manual washes, automatic washes or a combination of these systems.

9.9.2 Both automatic and manual washing systems should be provided with an exhaust system to dispel steam to the atmosphere.

9.9.3 Stands high and low as necessary should be provided for operatives engaged in the manual spray washing of carcases and sides.

9.9.4 Carcase washing spray water should be used at an adequate pressure and temperature to facilitate this operation.

9.9.5 The high wash should precede the low wash.

9.9.6 The high and low wash areas should be designed to ensure that waste water is contained and rapidly removed. Drainage inlets should be sufficient in number and of a design to minimise its risk of blockage. Where curbs are installed they should be at least 150 mm high. Where necessary to prevent overspray, screens of sanitary construction should be installed.

9.9.7 The wash areas should be drained in accordance with other wash area requirements.

9.9.8 Pre-evisceration carcase wash facilities must be provided for pigs, sheep, lamb and goats. These facilities are not permitted for other species.

9.10 Objective carcase measuring station – beef and pig

9.10.1 Where carcases are measured on the dressing floor for objective classification, space and stands for operators engaged in this task should be provided.

9.10.2 Where a back fat probing device is used for this operation, the device may be sited either before or after the carcase disposition point. If the device is sited before the carcase disposition point, sterilisation facilities are to be provided for the probe.

9.11 Trimming stations

9.11.1 Before the final inspection point, facilities must be provided to enable trimming of carcases or sides to remove any visible contamination.

9.11.2 Trimming stations are to be equipped with handwash and steriliser facilities.

9.11.3 Where necessary, stands should be provided.

9.11.4 Any receptacles for collecting inedible trimmings may be placed directly on the floor. Receptacles should be provided in adequate numbers and comply with Chapter 42.

9.12 Edible offal and parts disposal

9.12.1 Approved offal washing facilities may be provided for removing minor contamination as permitted by orders.

9.12.2 Facilities must be provided to allow edible offal and parts to be removed from the slaughter floor. This may be by chute, by slide or in approved containers.

9.12.3 Where tongues are saved, approved individual washing facilities should be provided prior to batching.

9.12.4 Facilities must be provided for paunches (or stomachs) and runners to be removed from the slaughter floor to a paunch (or stomach) emptying or runner stripping room. This may be by chute, slide or barrow.

9.13 Pet food disposal

9.13.1 Pet food should be removed from the slaughter floor by enclosed chute or other secure means to a pet food room for further processing.

9.13.2 Where pet food is removed in secure barrows, facilities for washing the barrows before they are reintroduced to the slaughter floor should be provided.

9.13.3 The pet food removal station should be the last work station on moving top or moving pan viscera tables.

9.13.4 Where operators handling pet food also handle edible material, handwashing facilities should be provided.

9.14 Condemned carcase disposal

9.14.1 A branch rail leading directly to an adjacent room or area for cutting down condemned carcasses should be provided at a point on the dressing chain immediately after carcase inspection has been completed.

9.14.2 Where it is intended to hold these carcasses to await availability of labour for cutting them down, a separate room with full-height walls, capable of lockup security, should be provided.

9.14.3 Where carcasses are cut down immediately, the condemn rail cut-down point should be well away from edible product. Where necessary to prevent splashing of edible product, walls to at least the height of the condemn rail should be provided.

9.14.4 Where necessary, a hoist or similar device for lowering carcasses to the condemn chute or barrow should be provided.

9.14.5 Ready access to handwash and steriliser facilities must be provided in this area.

9.15 Condemned parts disposal

9.15.1 Facilities must be provided for condemned parts to be directed straight to the condemned room or area for disposal.

9.15.2 In slaughtering systems using moving flight top viscera tables or moving pan viscera tables, inedible and condemned soft parts from the distal end of the table should be directed into a suitable chute or other approved system.

9.16 Inedible parts disposal

9.16.1 Facilities must be provided to allow inedible parts to be removed from the slaughter floor to an inedible product area. This may be by chute, barrow or other approved container.

9.16.2 Where barrows or other approved containers are used for inedible part disposal, facilities for washing them before they are reintroduced to the slaughter floor should be provided.

9.16.3 Inedible material should not be removed from viscera tables or pan conveyors until the removal of edible material has been completed. The design of facilities should take account of this.

9.17 Carcase decontamination

9.17.1 Where carcase decontamination equipment is incorporated into the dressing line, the equipment should comply with Chapter 42.

9.18 Electrical stimulation

9.18.1 Where electrical stimulation equipment is incorporated into the dressing line, the equipment should comply with Chapter 42.

9.19 Combined uses for slaughter floors

9.19.1 Slaughter floors may be used for different species, provided the following provisions are complied with.

Buffalo

9.19.2 Facilities for buffalo should be as detailed in this chapter and Chapter 10, Beef Slaughter Floor.

9.19.3 Buffalo and cattle must be slaughtered at different times on the same premises, and provision should be made for separate adequate active and holding chiller capacity so that segregation of buffalo and cattle carcasses can be maintained.

Chopper pigs

9.19.4 Chopper pigs may be slaughtered over the beef slaughter floor for dressing in the skin-off form.

9.19.5 Facilities required are as detailed in this chapter and Chapter 10, Beef Slaughter Floor.

Large calves

9.19.6 Facilities required for calves of more than 40 kg dressed weight are detailed in this chapter and Chapter 10, Beef Slaughter Floor.

9.19.7 Shackles of suitable length should be provided to enable dressing and inspection operations to be carried out.

Large calves slaughter floors

9.19.8 Where a separate slaughter floor for calves of 40 kg dressed weight and over, is provided, the floor should be constructed and equipped as detailed in this chapter and Chapter 10, Beef Slaughter Floor, except that the bleeding rail height may be adjusted.

Small calves

9.19.9 Facilities required for calves of less than 40 kg dressed weight should comply with this chapter and Chapter 13, Sheep and Lamb Slaughter Floor. The first wash of calves is permitted only after final carcass inspection.

9.19.10 Small calves may also be dressed on a cattle, large calf or pig slaughter floor, provided shackles of suitable length are used to enable dressing and inspection operations to be carried out.

Goats

9.19.11 Facilities required for goats are as detailed in this chapter and Chapter 13, Sheep and Lamb Slaughter Floor.

9.19.12 Goats may also be dressed on a cattle, large calf or pig slaughter floor, provided shackles of suitable length are used to enable dressing and inspection operations to be carried out and a pre-evisceration wash facility is provided.

9.19.13 Where other classes of livestock are slaughtered at the premises, provision should be made for adequate active and holding chiller capacity so that necessary segregation of goat carcasses can be maintained.

9.19.14 Separate chillers need not be provided where goat carcasses to be exported in that form are packaged before chilling.

Skin-on goats

9.19.15 Goats that are to be prepared skin-on and dehaired may be slaughtered and dressed on a pig slaughter floor at times separate from pigs, using the pig scalding and dehairing equipment.

9.19.16 Carcasses should be suspended at a height suitable to permit dressing and inspection.

Sheep and lambs

9.19.17 Sheep and lambs may be dressed on a pig or largestock chain, provided facilities including a pre-evisceration wash are provided and shackles of suitable length are available to allow dressing and inspection to be carried out.

Horse slaughter floors

9.19.18 Horses are allowed to be slaughtered only at premises that are not registered to slaughter other species.

9.19.19 The facilities required for horses are basically as detailed in this chapter and Chapter 10, Beef Slaughter Floor.

Deer

9.19.20 Depending on the size of the species concerned, deer may be dressed on a largestock or smallstock slaughter floor, provided shackles of a suitable length are used to enable dressing and inspection to be carried out.

9.20 Separation of pigs

9.20.1 Most abattoirs and meat processing plants will wish at some time to produce meat acceptable to religious groups that have strong aversions to pigs and pigmeat. The sensitivity on this matter varies greatly between religions and even within the same religion. Awareness of this issue at the design stage will reduce or eliminate problems in operation where it is planned to produce pigmeat and meat of other species.

10 Beef slaughter floor

10.1 Slaughtering systems

10.1.1 A system with a throughput rate of fewer than 40 carcasses an hour may be one of the following types:

- cradle dressing
- on-rail, gravity
- on-rail, moving chain
- combination of the above

10.1.2 A system with a throughput rate greater than 40 carcasses an hour is required to be of a moving conveyor type and to be provided with a moving viscera conveying system synchronised with the carcass conveyor.

10.2 Stunning and sticking methods

10.2.1 Stunning and sticking systems include:

- the knocking box method-stunning an individual animal in the knocking box using an approved device, discharging the animal onto the landing area, shackling and hoisting it onto the bleeding rail
- the restrainer conveyor method-similar to the knocking box method, except that the animal is discharged onto an elevated platform moving table or bleeding rail
- ritual killing without prior stunning-restraining cradles and associated equipment must be approved if this is to be permitted. Permission to kill ritually without prior stunning is rarely given

10.2.2 For animal welfare purposes, the duration between stunning and sticking must be minimised and this should be a consideration in plant design.



Restrainer conveyor

see 10.2

10.3 Correlation requirements

10.3.1 The carcase, its head and viscera must be correlated in any of the above systems to allow head inspection to be completed before viscera inspection and fronts inspection is started. The design must take account of this.

10.3.2 Where edible blood is to be collected, it must retained in correlation with the carcase, its head and viscera until inspection is completed. This requirement may necessitate design considerations.

10.4 Killing annex or area

10.4.1 Separate entrances should be provided for cattle, emergency slaughter animals and, where necessary, for personnel working in this area.

10.4.2 A knocking box or restraining device discharging onto a dry landing area or other approved rapid draining platform should be provided.

10.4.3 The dry landing area should be separately drained, not less than 2.1 m by 2.4 m and enclosed by a fence approximately 1.2 m high with rust-resistant bollards spaced at 0.4 m centres installed so as to preclude water accumulation.

10.4.4 Where the oesophagus (weasand) is to be tied in this area, a handwash and steriliser unit must be provided.

10.4.5 A satisfactory and convenient means of holding shackles near the dry landing area should be provided.

10.4.6 A hoist or hoists for raising stunned cattle and emergency slaughter animals to the bleeding rail should be provided where this system is used.

10.5 Bleeding area

10.5.1 A bleeding rail of sufficient height and length to permit thorough bleeding should be provided.

10.5.2 Minimum carcase spacing of 1.5 m should be provided on gravity rails and moving chain systems. When indexing carcasses after primary bleeding there should not be an excessive accumulation of carcasses.

10.5.3 A conveniently located handwash and steriliser unit together with an apron wash facility should be provided at the sticking station.

10.5.4 Where ritual slaughter methods are used, the steriliser unit must be of a size to accommodate the knife.

10.5.5 Where edible blood is collected, facilities for sterilising collection instruments or other equipment must be provided.

10.5.6 Where blood confinement is necessary, curbs a minimum of 150 mm high and walls at least the height of the bleeding rail should be provided.

10.5.7 Blood from the bleeding area or bleeding trough should be directed by fully enclosed drainage lines to a blood tank or pit outside the slaughter floor.

10.5.8 Where separate outlets are provided in bleeding areas for wash down water, drainage bungs provided for the outlets should be made of non-absorbent material.

10.5.9 Where rodding is practised, facilities for sterilising the rodding instrument must be provided, together with access to a handwash and steriliser unit.

10.5.10 Dressing operations other than pocketing of cheeks should not be designed to be carried out in the bleeding area.

Dimension	0 tooth Brahman yearling steer 187 kg dressed weight	6 tooth Hereford Bullock 240 kg dressed weight	8 tooth Friesian Bull 358 kg dressed weight	8 tooth Brahman Cross Bred 502 kg dressed weight
A*	2710*	3050	3670	3600
B	680	560	320	800
C	680	795	1030	1000
D	270	390	460	420
E	690	765	930	970
F	2470	2620	2860	3170
G	1050	1100	1100	1200
H	275	345	390	430
I	545	615	615	570
J	285	315	335	370
K	2900	3120	3400	3330

* Tongue hangs 70-80 mm below nose for steers, and approximately 150 mm below the nose of Bulls.

10.6 Forefeet and horn removal

10.6.1 The forefeet and horn removal stations must be equipped with a sterilising unit of suitable size for the removal instrument and an acceptable means of disposal for the severed forefeet and horns.

10.7 Collection of tendons

10.7.1 Where tendons are to be collected for edible purposes, a handwash and steriliser unit should be convenient to the station, together with suitable washing facilities for the tendons before aggregation.

10.8 Cradle dressing system

10.8.1 Cradles should be at least 1.5 m from the bleeding area made of rust-resistant metal and high enough that no part of the exposed carcass touches the floor during dressing operations.

10.8.2 The head removal station should be located outside the bleeding area be conveniently located to the head work-up area and have associated with it a handwash and steriliser unit.

10.8.3 Provision should be made for, hides to be removed directly from the slaughter floor.

10.8.4 An enclosed apron sterilisation cabinet should be provided for the eviscerator and the inspector.

10.8.5 The viscera truck washing area should have a floor sloped to an outlet at the rear and have minimum dimensions of 2.4 m x 2.1 m, the area should be located so that contamination of edible product by splash cannot occur and may need to be surrounded on three sides by walls at least 2.4 m high to contain splash. The area will also need to have adequate steam extraction equipment.

10.8.6 Handwash and steriliser units need to be provided in adequate numbers convenient to the dressing cradles and be of a size to accommodate all product contacting equipment used.

10.8.7 Where necessary, to facilitate inspection a portable stand should be provided at the front inspection station.

10.8.8 Other operations should be in accordance with Chapter 9 and this chapter 10.10 to 10.15 inclusive.

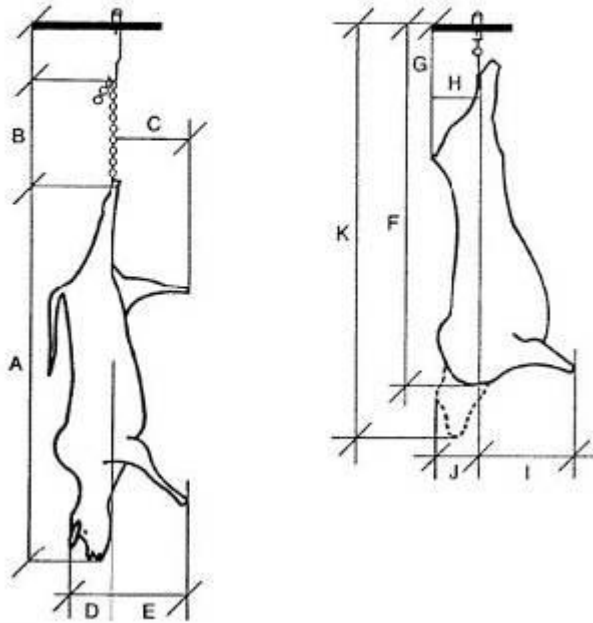
10.9 On-rail dressing systems

10.9.1 The dressing rail should be high enough that the lowest part of any carcass is at least 300 mm above the floor.

10.9.2 In systems using a moving flight top viscera table, the installation must ensure that carcasses clear parts of the table other than the flights.

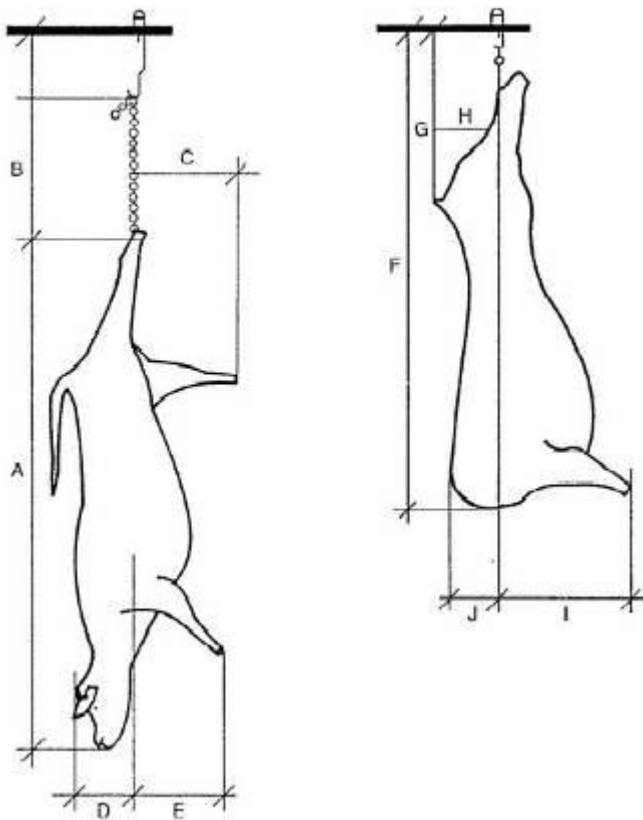
10.9.3 The dressing rail should be high enough to ensure adequate clearance of floor mounted equipment and operational equipment.

Brahman yearling bullock



see 10.5

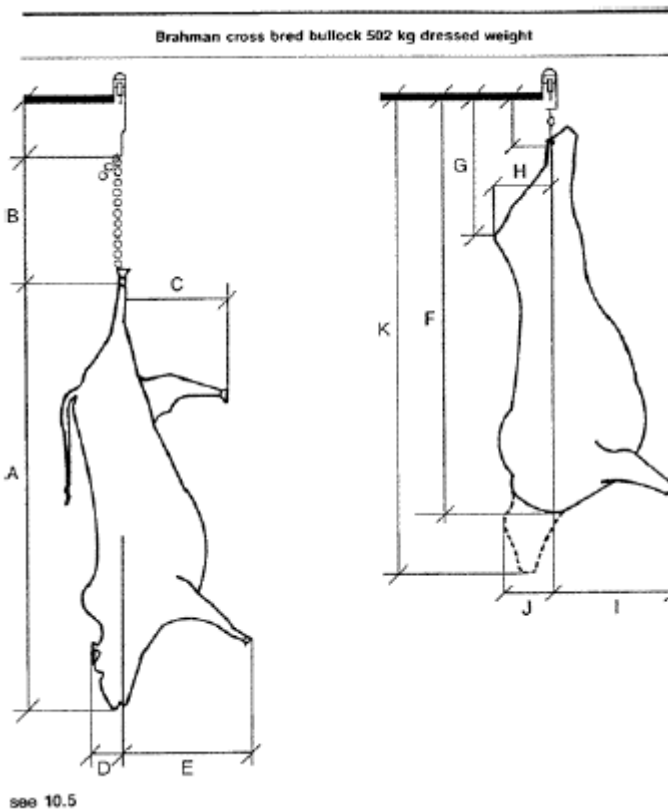
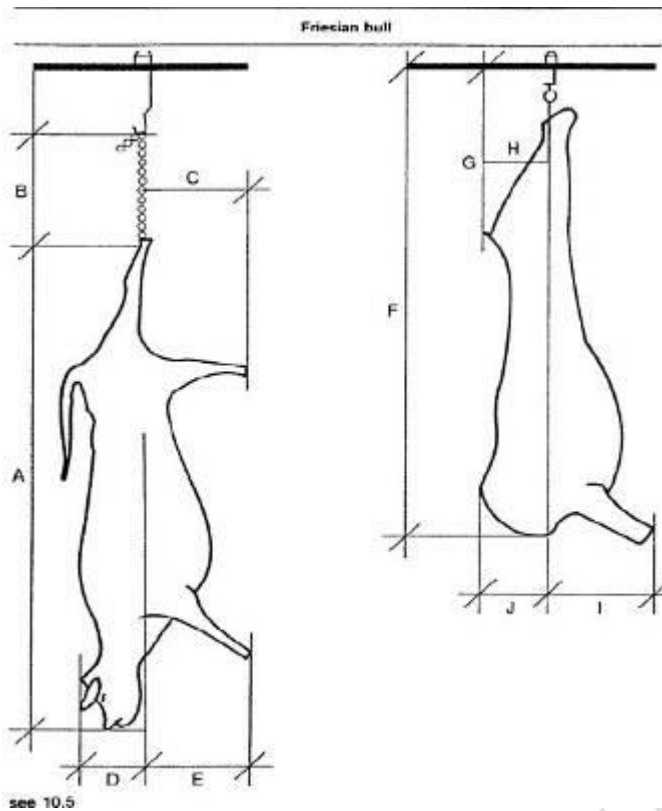
Hereford bullock 240 kg dressed weight



see 10.5

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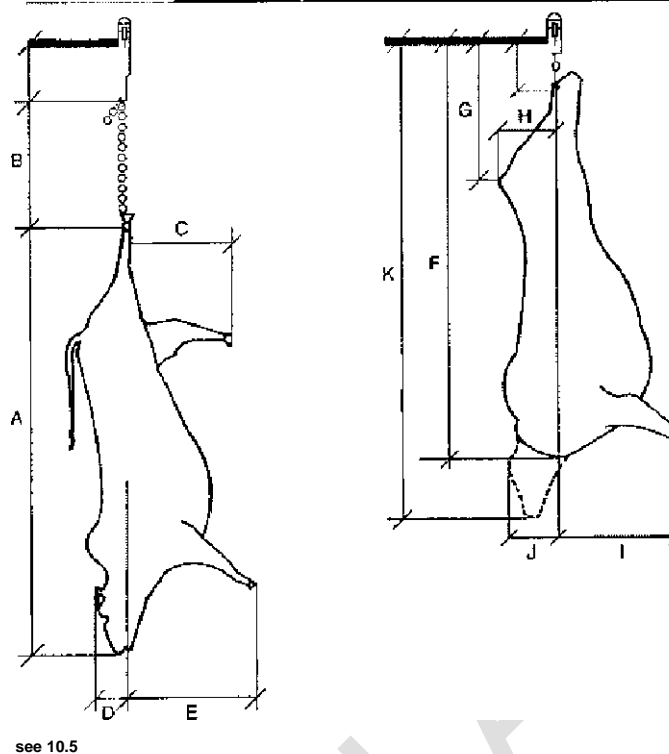
Greyed out sections are covered in the Export Meat Operational Guideline 3.1: Provisions for Commonwealth authorised officers at registered establishments (PCORE).



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Greyed out sections are covered in the Export Meat Operational Guideline 3.1: Provisions for Commonwealth authorised officers at registered establishments (PCORE).

Brahman cross bred bullock 502 kg dressed weight



10.9.4 Moving chain systems should provide for a minimum carcass spacing of 1.5 m before evisceration and 2.4 m at, and after, evisceration.

10.9.5 Minimum spacing of carcass sides after splitting should be 1.2 m.

10.9.6 The first and second leg stations should be provided with the following:

- a suitable means of supplying rollers or slides to, and removing shackles from, the stations
- a suitable means of removing hard and soft carcass parts from the stations
- an adequate number of handwash and steriliser units, with the units of a size to effectively sterilise product contacting surfaces.

10.9.7 The head removal station should comply with 10.8.2 and be located to permit the early removal of the head. Where a hide puller system is used that is capable of stripping heads, heads may be left until after that point.

10.9.8 Hide removal station stands should be equipped as in 9.9.6.

10.9.9 Product contacting equipment such as chains, probes and air knives used in association with hide strippers should be provided with facilities for sterilisation between carcasses.

10.9.1 A stand, together with handwash and steriliser facilities, should be provided at the station where the bung is dropped and tied.

10.9.11 The design must enable hides and hide pieces to be removed from the slaughter floor without creating any nuisance.

10.9.12 Head work up operations may include the following:

- skinning the head
- horn removal (if not previously carried out)
- flushing the head cavities and washing the head (first wash operation)
- dropping the tongue
- final trimming
- washing the head and tongue (second wash operation)
- in some operations, severing the tongue and hanging it on a hook next to the head for head inspection.

10.9.13 Head spacing should be a minimum of 600 mm, except that where separate tongue hooks are provided, the distance between the tongue and the next head should be a minimum of 300 mm.

10.9.14 Head hooks should be of swivel type capable of 360° movement.

10.9.15 The distance from the hanging point of the head hook to the platform or floor at the head inspection station should be 1.35 m.

10.9.16 A head hook steriliser should be provided.

10.9.17.1 Where a moving head chain is used, the wash sequence for head hooks should be cold, hot (82°C), cold.

10.9.18 A dial faced thermometer visible from the head inspection station should be fitted to the 82°C water wash

10.9.19 A head wash cabinet or cabinets complying with Chapter 42 should be provided.

10.9.20 Handwash and steriliser units should be provided in adequate numbers for the personnel involved and be of a size to accommodate the implements used.

10.9.21 Other operations are to be in accordance with Chapter 9 and 10.10 to 10.16 inclusive.

10.10 Brisket splitting station

10.10.1 The instrument used for brisket splitting should be of an approved type.

10.10.2 Suitable sterilisation facilities should be provided for the brisket splitting implement.

10.11 Evisceration

10.11.1 Where the drop rail method is used with on rail gravity type and cradle dressing systems, evisceration into a viscera truck and an enclosed apron sterilisation cabinet for the eviscerator and inspector should be provided.

10.11.2 Where a moving top viscera table is used with on-rail gravity type or moving chain type systems, the moving top viscera table should be as follows:

- long enough to meet correlation requirements
- of an approved type
- equipped with eviscerator's facilities consisting of:
 - boot storage facilities
 - one or more cabinets for apron and boot sterilisation with suitable access doors
 - handwash and steriliser facilities.

10.11.3 Where a moving viscera pan conveyor system is used, a means of sterilising product contacting equipment and implements associated with evisceration and the eviscerator's protective clothing, together with a means of containing the resultant spray and wash waters, should be provided.

10.11.4 On a moving top viscera table and a moving pan conveyor system, a space for a viscera presentation station should be provided, together with access to handwash and steriliser facilities for a person working at that station.

10.11.5 A moving top viscera table should have provision for a cold, hot (82° C), cold water wash and sterilisation sequence. Provision should be made for removal of steam which results from sterilisation.

10.11.6 The viscera table area must be installed to ensure that waste water from washing and sterilisation is contained and rapidly removed. Drainage inlets should be sufficient in number and of a design to minimise the risk of blockage. Where curbs are installed they should be at least 150 mm high.

10.11.7 A moving viscera pan conveyor system should be designed so that pans fully drain in an area constructed to confine and drain wash water. A moving viscera pan conveyor system should not be installed to pass through an inedible product department.

10.12 Carcase splitting station

10.12.1 Carcase splitting saws should be of an approved type.

10.12.2 Where necessary to prevent contamination of edible meat, saw screens of approved material and of sanitary construction should be provided.

10.12.3 Where splitting follows front inspection, facilities for cleaning and sterilising saws should be provided.

10.12.4 Where splitting precedes front inspection facilities must be provided for sterilising the product contacting the surfaces of the saw between carcasses and spray or wash water from these facilities should be adequately confined and directed to the drainage system.

10.12.5 Where automatic carcase splitting systems are used, product contacting items of the equipment should be capable of sterilisation between carcasses.

10.13 Inspection stations

10.13.1 The following stations should be provided:

- head inspection
- viscera inspection
- high and low fronts inspection
- low final inspection
- high final inspection
- retain head inspection
- retain carcase inspection
- retain viscera inspection

10.13.2 Inspection stands and platforms are to comply with the requirements in Chapter 42.

10.13.3 An adequate number of handwash and steriliser units should be provided at all inspection stations.

10.13.4 In a moving chain system, the head, viscera low final and high final inspection stations must be fitted with a device that will halt the viscera, carcase and head conveyors simultaneously.

10.13.5 Where a moving chain is stopped by a device under 10.13.4, the chain should be capable of being restarted only at the same inspection station.

10.13.6 The head, viscera and carcase inspection stations should be provided with 1.5 m of clear space for each authorised officer intended to be located on the dressing line and where necessary, encroachment barriers to maintain this area.



viscera inspection

see 10.13

10.14 Retain facilities

10.14.1 A retain carcass branch rail leading to the high and low retain inspection stations should be provided at a point on the dressing rail beyond the inspection station at the viscera table.

10.14.2 The carcass retain rail in 10.14.1 should form a loop back to the main dressing rail.

10.14.3 A rail should connect the retain carcass rail and the condemn rail.

10.14.4 The retain head rail or hooks should be near the retain carcass rail.

10.14.5 Head spacings and head hook heights on the head retain rail should comply with 10.9.13 and 10.9.15 respectively.

10.14.6 Provision should be made for viscera retention to be handled in one or other of the following ways:

- placed in mobile trays or viscera trucks and conveyed to the retain carcass rail
- placed in trays located near the moving top viscera table for later detailed inspection

10.14.7 Facilities for sterilising trays and trucks used for viscera retention should be provided.

10.14.8 A final inspection retain rail immediately after the high (final) inspection and preceding the high wash should be provided to allow sides retained to receive additional trimming.

10.14.9 The final inspection retain rail should form a loop with the main dressing chain so that retained sides are returned to the high (final) inspection position for reinspection after trimming.

10.14.10 Where necessary, trimming stands and associated facilities should be provided in conjunction with the final inspection retain rail.

10.15 Trimming stations

10.15.1 Before final inspection, sides are required to pass high and low trimming stations.

10.15.2 The high trim station should precede the low trim station and be equipped with stands of suitable height and with handwash and steriliser facilities.

10.15.3 The low trim station should be equipped with handwash and steriliser facilities and where necessary, stands of suitable height.

10.15.4 Stands provided in 10.15.2 and 10.15.3 may be of a rise and fall type.

10.15.5 Where other trimming stations are provided, they should be convenient to handwash and steriliser facilities.

10.15.6 Receptacles for collecting inedible trimmings may be placed directly on the floor. Receptacles should be provided in adequate numbers and comply with Chapter 42.

10.16 Subsequent operations

10.16.1 After washing, the system should enable carcase sides to be transferred by rail directly to a chiller.

11 Deer slaughter floor

11.1 Introduction

11.1.1 This chapter details the facilities required for deer slaughter at abattoirs and does not refer to game meat derived from deer in a game processing plant.

11.2 Slaughtering system

11.2.1 The design should permit carcasses to be dressed and presented for inspection as for cattle.

11.2.2 Carcasses may be processed over either a largestock or a smallestock slaughter floor, subject to the following:

- carcase access to the dressing floor from the stunning and bleeding section is convenient and does not interfere with any other slaughter operation

- carcasses conveyed by an overhead rail system have a clearance of at least 300 mm between the lowest part of the carcase and the floor.

11.2.3 Deer are permitted to be slaughtered only at a time separate from other lines of stock that normally pass over that floor.

11.3 Facilities

11.3.1 The facilities required should comply with Chapter 9 and the requirements in the Beef, Pig or Sheep and Lamb Slaughter Floor chapters, depending on which floor is being used.

12 Pig slaughter floor

12.1 Slaughtering systems

12.1.1 A system with a throughput rate of fewer than 30 carcasses an hour may be of an on-rail type and may be equipped with stationary viscera pan facilities.

12.1.2 A system with a throughput rate greater than 30 carcasses an hour is required to be of an on-rail moving chain type and provided with a moving viscera conveying system synchronised with the carcase conveyor.

12.1.3 Whether without carcase splitting, or with carcase splitting before or after carcase inspection, a system must achieve basic correlation requirements.

12.1.4 Other systems may be a combination of the above systems and will be evaluated on their respective merits.

12.2 Stunning and sticking methods

12.2.1 Approved stunning and sticking systems include the following:

- the stunning pen method - stunning an animal in a suitably confined area using an approved device, shackling the animal and hoisting it onto a bleeding rail or table
- the restrainer conveyor method - discharging the stunned animal from the restrainer conveyor onto a bleeding rail or table.

12.2.2 For animal welfare purposes the duration between stunning and sticking must be minimised and this should be a consideration in plant design.

12.3 Correlation requirements

12.3.1 The carcase, its head and viscera must be correlated in any system to allow head and viscera inspection to be completed before carcase inspection is completed. The design must take account of this.

12.3.2 No part of the head, tongue, abdominal or thoracic viscera is permitted to be removed from the slaughter floor until all the above inspections have been completed and disposition made, and account should be taken of this in the design.

2.3.3 Where edible blood is to be collected, it must be retained in correlation with the carcass, its head and viscera until inspection is completed. This requirement may necessitate design considerations.

12.3.4 Where edible blood is collected facilities for sterilising the blood collecting equipment must be provided.

12.4 Killing annex or area

12.4.1 Separate entrances should be provided for pigs, emergency slaughter animals and, where necessary, personnel working in this area.

12.4.2 Adequate facilities to suit the method of stunning should be provided.

12.4.3 A pig stunning pen should be constructed to adequately confine animals awaiting stunning.

12.4.4 Where required, shackle storage and stunned animal hoisting facilities should be conveniently provided in these areas. Shackle return systems can create considerable noise and care should be taken to minimise this.

12.5 Bleeding area

12.5.1 Where a bleeding rail is used, it must be of sufficient length and height to permit thorough bleeding with carcasses spaced at 900 mm.

12.5.2 The bleeding rail should be high enough that the lowest part of the carcass is at least 300 mm above the floor.

12.5.3 Where a bleeding table is used, it should be of an approved type and be constructed to allow cleaning of contact surfaces after each carcass.

12.5.4 Moving top bleeding tables should be automatically cleaned before reuse using a cold water spray.

12.5.5 Carcasses should be spaced at minimum centres of 900 mm on bleeding rails or tables. When indexing carcasses after primary bleeding there should not be an excessive accumulation of carcasses.

12.5.6 A conveniently located handwash and steriliser unit must be provided at the sticking station.

12.5.7 Where edible blood is collected, facilities for sterilising knives or other equipment must be provided.

12.5.8 Blood confinement should be ensured by suitably located troughs, curbs at least 150 mm high and walls at least as high as the bleeding rail, as necessary.

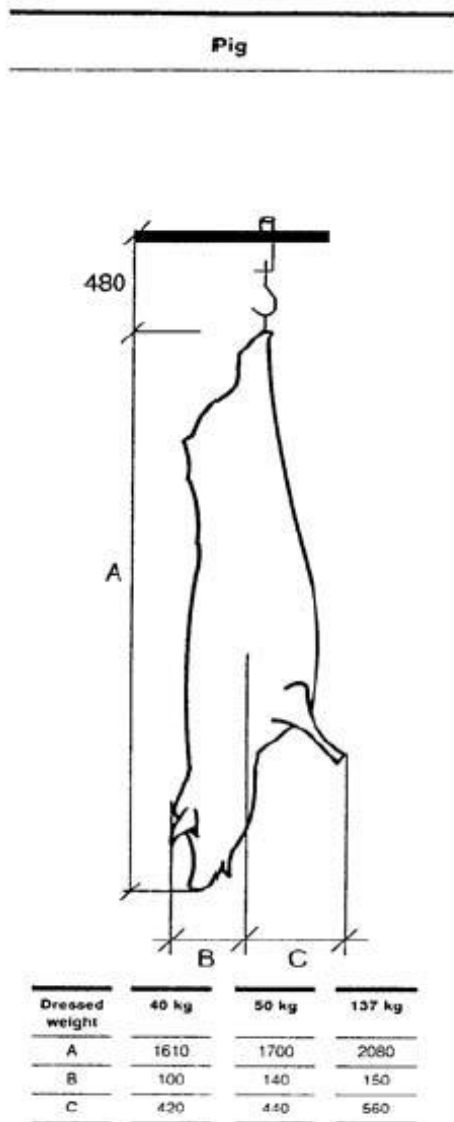
12.5.9 Blood from the bleeding area or bleeding troughs should be directed by a fully enclosed drainage line to a blood tank or pit outside the slaughter floor.

12.5.10 Where separate outlets are provided for washdown water drainage, bungs provided for the outlets must be made of non-absorbent material.

12.6 Dressing rail height and carcase spacing

12.6.1 The dressing rail should be high enough that the lowest part of the carcase is at least 300 mm above the floor.

12.6.2 Carcasses should be at least 900 mm apart between the commencement of dressing operations until completion of the final wash.



see 12.6

12.7 Location of certain operations

12.7.1 Scalding, dehairing, scudding, major singeing and shaving must be confined in an area separated from the rest of the dressing area. This separation is to be expected, except for carcass and personnel access, by walls that are either full height or of a height that is not less than 1 m above rail height and that ensures that no nuisance occurs from steam or spray.

12.7.2 Minor singeing and shaving may be located outside the area in 12.7.1 and before the pre-evisceration wash.

12.7.3 Where necessary, water wasting equipment in the area in 12.7.1 should be drained as for wash areas.

12.8 Scalding

12.8.1 Scalding tanks of adequate size or, in the case of on-rail systems, scalding cabinets constructed from approved materials should be provided.

12.8.2 An adequate method of extracting vapour to the external atmosphere should be provided.

12.8.3 Where multiple bank spray cabinets are used, recycled water from this equipment may be used only in accordance with 5.7.

12.9 Dehairing

12.9.1 Mechanical dehairing equipment should be of an approved type.

12.9.2 Where multiple bank dehairing machines are used, recycled water from this equipment should be used only in accordance with 5.7.

12.9.3 Where pigs are dipped in hot resin as an aid to hair removal, the dipping tanks should comply with Chapter 42.

12.10 Hair disposal

12.10.1 Provision should be made for pig hair to be directed from the dehairing area by conveyor, chute, slide, barrow or box channel drain to an inedible product area for disposal.

12.10.2 Box channel drains and conveyors used for this purpose should, where necessary, be fitted with rodent and insect proofing at the point where the drains or conveyors leave the slaughter floor.

12.11 Gambrelling station

12.11.1 Except in a system using automatic toenail removal equipment, facilities should be provided for scurf, hair and toenail removal from the hind trotters before gambrelling.

12.11.2 A suitable means of holding clean gambrels at this station should be provided.

12.11.3 Access to handwash and steriliser facilities should be available.

12.11.4 Gambrelling tables should comply with Chapter 42.

12.12 Shaving, singeing and trimming

12.12.1 High and low stands, together with handwash and steriliser facilities, should be provided.

12.13 Eardrum and eyelash removal

12.13.1 Space should be provided for these operations after the first wash and immediately before the first inspection station.

12.13.2 Access to handwash and steriliser facilities should be available.

12.14 Pre-evisceration wash

12.14.1 This wash may be of a manual or automatic type.

12.14.2 Provision should be made for washing to be located within the area in 12.7.1.

12.14.3 Stands for operatives engaged in high and low manual carcase washing should be provided.

12.14.4 Carcase washing spray water should be at adequate pressure and temperature to facilitate the operation.

12.14.5 The high wash should precede the low wash.

12.14.6 Wash areas should be designed to ensure that waste water is contained and rapidly removed. Drainage inlets should be sufficient in number and of a design to minimise the risk of blockage. Where curbs are installed they should be at least 150 mm high.

12.14.7 Where necessary, screens of sanitary construction using approved materials should be provided to contain overspray.

12.14.8 Wash areas should be drained in accordance with other wash area requirements.

12.15 Pre-evisceration operations

12.15.1 Adequate space should be provided for dropping and tying the bung and removing the spermatic cord.

12.15.2 Where opening up and brisket splitting are not performed by the evisceration operative, space for these operations should also be provided.

12.15.3 The stations should where necessary, be equipped with stands of suitable height and provide access to handwash and steriliser facilities.

12.15.4 Sterilising facilities must be of sufficient size to take the product contacting instruments or equipment used.

12.16 Evisceration

12.16.1 The eviscerator must have access to handwash and steriliser facilities.

12.16.2 Where the stationary pan method is used, the stationary viscera pans should comply with Chapter 42.

12.16.3 Where a moving pan viscera table is used with on-rail gravity or moving chain systems, the table should be of an approved type.

12.16.4 Where a moving viscera pan conveyor method is used with on-rail moving chain systems, the conveyor system should be of an approved type.

12.16.5 Facilities for washing and sterilising stationary viscera pans should be provided.

12.16.6 Moving pan viscera tables should be equipped for a cold, hot (82°C), cold water wash sterilisation sequence.

12.16.7 The viscera table must be installed to ensure that waste water from washing and sterilisation is contained and rapidly removed. Drainage inlets should be sufficient in number and of a design to minimise the risk of blockage. Where curbs are installed, they should be at least 150 mm high.

12.16.8 A moving viscera pan conveyor system should be designed so that pans fully drain in an area constructed to confine and drain wash water. A moving pan conveyor system should not pass through an inedible department.

12.17 Carcase splitting station

12.17.1 Carcase splitting equipment should be of an approved type.

12.17.2 Where necessary to prevent contamination of edible product, screens of sanitary construction using approved materials should be provided.

12.17.3 Where splitting follows carcase disposition, facilities for cleaning and sterilising product contacting surfaces of the splitting equipment should be provided.

12.17.4 Where splitting precedes carcase inspection, facilities must be provided for sterilising product contacting surfaces of the splitting equipment between carcasses, and the spray or wash water from these facilities should be adequately confined and directed to the drainage system.

12.17.5 Where automatic carcase splitting systems are used, product contacting items of the equipment should be capable of being sterilised between carcasses.

12.18 Inspection stations

12.18.1 The following stations should be provided:

- head inspection
- viscera inspection
- carcase inspection
- retain carcase and viscera inspection
- final inspection

12.18.2 Inspection stands and platforms should comply with Chapter 42.

12.18.3 An adequate number of handwash and steriliser units should be provided at inspection stations.

12.18.4 In a moving chain system, the head, viscera, carcase and final inspection stations must be fitted with a device that will halt the viscera, carcase and heads conveyor simultaneously.

12.18.5 Where a moving chain system is stopped by a device under 12.18.4, the chain should be capable of being restarted only at the same inspection station.

12.18.6 The head, viscera, carcase and final inspection stations should be provided with 1.5 m of clear space for each authorised officer on the dressing line and where necessary, encroachment barriers to maintain this area.



Pig head inspection

sep 12 18

12.19 Location of stations

12.19.1 The head and viscera inspection stations should be located to allow head and viscera inspection to be completed before carcase inspection is completed.

12.19.2 The final inspection station should be after trimming and before the final wash.

12.20 Head inspection

12.20.1 Provision may be made for heads to be presented for inspection either attached to the carcase or detached from the carcase.

12.20.2 Where the head is detached before inspection, provision must be made for the head to be placed on one of the following:

- a holding device mounted on the stationary or moving viscera pan system

- a separate head conveyor
- any other approved device

12.21 Retain facilities

12.21.1 A retain carcass branch rail leading to the high and low retain inspection stations should be provided at a point on the dressing rail after the carcass disposition point.

12.21.2 The carcass retain rail in 12.21.1 should form a loop with the main dressing rail.

12.21.3 A rail should connect the retain carcass rail and the condemn rail

12.21.4 Where heads are detached from carcasses, a device for holding retain heads should be provided near the carcass retain rail.

12.21.5 Provision should be made for viscera for retention to be handled in one of the following ways:

- placed in mobile trays and conveyed to the retain carcass rail
- placed in trays located near the viscera inspection station.

12.21.6 Facilities for sterilising retain viscera trays should be provided.

12.21.7 A final inspection retain rail immediately after the final inspection and preceding the final carcass wash should be provided to allow carcasses retained to receive additional trimming.

12.21.8 The final inspection retain rail should form a loop with the main dressing chain so retained carcasses are returned to the final inspection position for reinspection after trimming.

12.21.9 Where necessary, trimming stands and associated facilities should be provided in conjunction with the final inspection retain rail.

12.22 Quartering station

12.22.1 Where large pigs are quartered on the dressing floor, space and hoisting facilities should be provided.

12.23 Subsequent operations

12.23.1 After washing, the system should enable carcasses, sides or quarters to be transferred by rail directly to a chiller and placed under refrigeration

13 Sheep and lamb slaughter floor

13.1 Slaughtering systems

13.1.1 A system with a throughput rate of less than 30 carcasses an hour may be of an on-rail type but may be equipped with a stationary pan evisceration table or other approved facilities for holding thoracic and abdominal viscera.

13.1.2 A system with a throughput rate greater than 30 carcasses an hour is required to be of an on-rail moving chain type and provided with a moving viscera conveying system synchronised with the carcass conveyor.

13.1.3 Other systems may be a combination of any of the above systems and will be evaluated on their respective merits.

13.2 Stunning and sticking method

13.2.1 Approved stunning and sticking methods include the following:

- the restrainer box method - stunning an individual animal in the restraining box using an approved device, discharging the animal onto a platform at the side of the box, sticking, shackling and placing the animal onto the bleeding rail
- the restrainer conveyor method - driving the animal into the restrainer conveyor, stunning, discharging onto an elevated platform or moving table, sticking, shackling and placing the animal onto the bleeding rail
- the killing pen method - driving the animal into a slaughter pen which is elevated above the bleeding area, stunning and sticking at the edge of the elevated platform, shackling and placing the animal onto the bleeding rail.

13.2.2 For animal welfare purposes, the duration between stunning and sticking must be minimised, and this should be a consideration in plant design.

13.3 Correlation requirements

13.3.1 The carcass, its head and viscera must be correlated in any of the above systems to allow inspection and disposition to be completed before the carcass, head and associated viscera are removed from the slaughter floor. The design must take account of this.

13.3.2 Where edible blood is to be collected, it must be retained in correlation with the carcass, its head and viscera until inspection is completed. This requirement may necessitate design considerations.

13.4 Killing annex or area

13.4.1 A separate entrance or entrances for sheep or lambs, emergency slaughter animals and, where necessary, for personnel working in this area should be provided.

13.4.2 A restrainer box, restrainer conveyor discharging onto a table or platform, or a killing pen should be provided.

13.4.3 A satisfactory means of holding shackles near the shackling area should be conveniently provided.

13.5 Bleeding area

13.5.1 A bleeding rail of sufficient height and length to permit thorough bleeding should be provided.

13.5.2 A conveniently located handwash and steriliser unit or units should be provided at the sticking station.

13.5.3 Where ritual sticking methods are used, the sterilising unit must be of a size to accommodate the knife.

13.5.4 After sticking, carcasses should be spaced at minimum centres of 900 mm until the commencement of dressing operations. When indexing carcasses after primary bleeding there should not be an excessive accumulation of carcasses.

13.5.5 Where edible blood is collected, facilities for sterilising the blood collecting equipment must be provided.

13.5.6 Blood confinement should be ensured by suitably located troughs, curbs at least 150 mm high and walls at least as high as the bleeding rail, as necessary.

13.5.7 Blood from the bleeding area should be directly by a fully enclosed drainage line to a blood tank or pit outside the slaughter floor.

13.5.8 Where separate outlets are provided for wash-down water drainage, bungs provided for outlets must be made of non-absorbent material.

13.6 Dagging station

13.6.1 Where facilities are provided for crutching daggy animals, the facilities should be located before the commencement of dressing operations and after bleeding.

13.7 Carcase spacing and dressing rail height

13.7.1 Carcase spacings on the dressing rail for both gravity and moving chain systems should be a minimum of 900 mm, between the commencement of dressing to the completion of the final wash.

13.7.2 The carcase dressing rail should be high enough that the lowest part of the carcase is at least 300 mm above the floor.

13.8 Dressing stations before the pre-evisceration wash

13.8.1 Stations at which the following operations are undertaken should have access to handwash and steriliser facilities and such facilities as are required for the removal of material from the slaughter floor:

- hind and forefeet removal and disposal
- breasting
- udder removal and disposal
- pizzles and spermatic cord removal
- flanking
- backing off
- trimming

13.8.2 Where legging paper is used, facilities for dispensing the paper should be provided.

13.8.3 Where rodding is practised, access to steriliser facilities must be provided.

13.8.4 Facilities should be provided for heads to be fully skinned, washed and flushed.

13.8.5 Provision must be made for skins to be removed direct from the slaughter floor and in a way that does not create a nuisance.

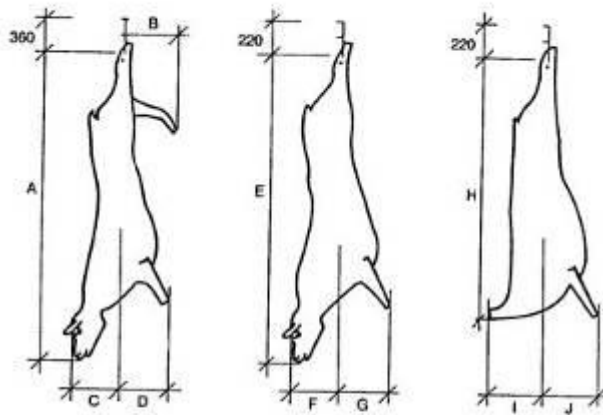
13.8.6 The pre-evisceration trim station should be positioned immediately before the pre-evisceration wash station and have access to handwash and steriliser facilities



Pelling machine

see 13.8

Sheep



Dressed weight	18 kg Lamb	21 kg Wether	22 kg Ram
A	1450	1720	1770
B	480	570	620
C	210	230	260
D	320	400	390
E	1265	1600	1620
F	200	230	220
G	230	240	250
H	1270	1300	1320
I	150	220	160
J	180	270	230

see 13.8

13.9 Pre-evisceration wash

13.9.1 Adequate spray washing facilities should be provided before evisceration.

13.9.2 Stands of suitable height should be provided for the operators engaged in manual washing.

13.9.3 Carcase washing spray water should be at an adequate pressure and temperature to facilitate this operation.

13.9.4 The high wash should precede the low wash.

13.9.5 Wash areas should be designed to ensure that waste water is contained and rapidly removed. Drainage inlets should be sufficient in number and of a design to minimise the risk of blockage. Where curbs are installed they should be at least 150 mm high.

13.9.6 Where necessary, screens of sanitary construction using approved materials should be provided to prevent overspray.

13.9.7 The wash areas should be drained in accordance with other wash area requirements.

13.10 Head work –up stations

13.10.1 Facilities for flushing buccal and oral cavities should be provided and may be located either before or after carcase inspection.

13.10.2 Sterilisation facilities for the contact surfaces of the flushing instrument must be provided.

13.10.3 Waste water from the head flushing operation should be adequately confined and directed to the drainage system.

13.10.4 Facilities should be provided, in association with full head skinning systems, for retaining unskinned heads of large horned rams in correlation with the carcase of origin until carcase disposition.

13.11 Pre-evisceration stations

13.11.1 The bung drop and tie, opening up, uterus and bladder removal and brisket split stations must be equipped with handwash and steriliser facilities.

13.12 Evisceration

13.12.1 The eviscerator must have access to handwash and steriliser facilities.

13.12.2 Where the stationary pan method is used, the stationary viscera pans should comply with Chapter 42.

13.12.3 Where the moving pan viscera table method is used, the moving pan viscera table should be of an approved type.

13.12.4 Where the moving viscera pan conveyor method is used the conveyor system should be of an approved type.

13.12.5 Facilities for washing and sterilising stationary viscera pans should be provided.

13.12.6 Moving pan viscera tables should be equipped for a cold, hot (82°C) cold water wash and sterilisation sequence.

13.12.7 The viscera table must be installed to ensure that waste water from washing and sterilisation is contained and rapidly removed. Drainage inlets should be sufficient in number and of a design to minimise the risk of blockage. Where curbs are installed they should be at least 150 mm high.

13.12.8 A moving viscera pan conveyor system should be designed so that the pans fully drain in an area constructed to confine and drain wash water. A moving pan conveyor system should not pass through an inedible department.

13.13 Inspection stations

13.13.1 The following inspection stations should be provided:

- carcase inspection
- viscera inspection

- retain carcase and viscera inspection
- final carcase inspection

13.13.2 Heads should be made available for inspection at the carcase or viscera inspection station.

13.13.3 Inspection stands and platforms should comply with Chapter 42.

13.13.4 An adequate number of handwash and steriliser units should be provided at inspection stations.

13.13.5 The carcase, viscera and final carcase inspection stations should be provided with 1.5 m of clear space for each authorised officer on the dressing line, and where necessary encroachment barriers to maintain this area.

13.13.6 In a moving chain system, the carcase, viscera and final carcase inspection stations must be fitted with a device that will stop the viscera and carcase conveyors simultaneously.

13.13.7 Where a moving chain system is stopped by a device under 13.13.6, the chain should be capable of being restarted only at the same inspection station.

13.13.8 The final inspection station should be before the final wash



Carcass inspection

sec 13.13

13.14 Head removal station

13.14.1 Unless facilities are provided for correlating the head with its carcass until the head, viscera and carcass inspections have been completed, the head removal station should be after the viscera and carcass inspection stations.

13.15 Condemned and inedible material disposal

13.15.1 At a point on the dressing line after carcass disposition, facilities should be provided for the removal of condemned carcasses and material from the slaughter floor.

13.15.2 Facilities should be provided for the removal of inedible material from the slaughter floor.

13.16 Retain facilities

13.16.1 Retain viscera trays should be provided for the retention of viscera, together with facilities for effectively sterilising the trays.

13.16.2 A retain carcass branch rail should be provided at a point beyond the carcass disposition station and lead to an area set aside for the further examination of retained carcasses and associated viscera.

13.16.3 The carcase retain rail should form a loop and rejoin the main dressing chain at a point before final carcase inspection.

13.16.4 Provision should be made to retain carcasses after the final inspection station.

13.17.5 Facilities should be provided in the retain rail area for the collection and disposal of condemned and inedible material.

13.17 Subsequent operations

13.17.1 The system should enable carcasses to be transferred by rail directly to the carcase chillers and placed under refrigeration.

13.18 Hanging room

13.18.1 Operations including weighing, grading, ticketing and wrapping may be carried out in a hanging room of adequate size.

13.18.2 A hanging room in which carcasses are to be held for more than 2 hours must be capable of being temperature controlled at not more than 10°C.

13.18.3 Rails in the hanging room should be spaced with 375 mm minimum centres.

13.18.4 Where trimming operations are conducted in the hanging room, detail work area lighting should be provided and handwash and steriliser facilities should be available.

14 Transportable abattoirs

14.1 Introduction

14.1.1 This chapter deals with the requirements for abattoirs that are designed and constructed to be moved from one site to another.

14.2 Site

14.2.1 Approval of the proposed site should be obtained from the Department of Primary Industrial and Energy before construction commences. Site details may be found in Chapter 3.

14.3 Water supply

14.3.1 An adequate supply of water for the proposed operations must be available.

14.3.2 The water should comply with Chapter 5.

14.4 Electricity supply

14.4.1 Details of the means of ensuring that an adequate electrical power supply is available should be provided.

14.5 Effluent disposal

14.5.1 Waste water and effluent should be removed by enclosed drainage lines.

14.5.2 The final disposal of effluent should be accomplished in a way that does not create a nuisance to the premises.

14.6 Sewage disposal

14.6.1 Sewage disposal should be by septic tanks.

14.7 Surrounds

14.7.1 The premises should be located on and surrounded by a paved and drained area.

14.8 Services

14.8.1 Services should be provided in accordance with Chapter 5.

14.9 Basic construction

14.9.1 Construction of the premises should be in accordance with Chapter 6.

14.10 Slaughtering and associated facilities

14.10.1 Slaughtering and associated facilities should be in accordance with whichever of Chapters 9 to 13 inclusive and Chapter 15 are applicable to the operations being carried out.

15 Slaughter floors – Associated facilities

15.1 Introduction

15.1.1 Associated facilities are those facilities that are required to be provided in association with slaughter floors when certain materials or products are saved.

15.1.2 Some items are also applicable to independent establishments.

15.1.3 The construction requirements for each facility are as detailed in the respective items.

15.2 Offal rooms

15.2.1 Rooms for holding, treating and packing offal should be in an edible product section of the premises separate from other departments and of the same basic construction as detailed in Chapter 6.

15.2.2 Where offal is to be treated, other than by trimming, packing or freezing, or is to be transferred to other premises, a separate chiller or other facilities equipped to reduce the temperature of offal to not more than 7°C within 12 hours of evisceration should be provided.

15.2.3 Equipment should be provided capable of maintaining the offal room of not more than 10°C.

15.2.4 Adequate freezing facilities should be provided on premises packing edible offal for export.

- 15.2.5 Adequate numbers of handwash and steriliser units should be provided.
- 15.2.6 Handwashing facilities should be inside the entrances to offal rooms.
- 15.2.7 Facilities for the disposal of trimmings should be provided.
- 15.2.8 Adequate numbers of offal draining, sorting and packing tables complying with Chapter 42 should be provided.
- 15.2.9 Facilities for holding packing material for immediate use during production in the offal room should be provided.

15.3 Stomach, paunch and omasa emptying and processing rooms

- 15.3.1 Rooms for emptying and processing stomachs, omasa and paunches should be in an edible product section of the premises separate from other departments and of the same basic construction as detailed in Chapter 6.
- 15.3.2 Areas in which stomachs, omasa and paunches are opened should be separate from areas in which tripes are further processed. This separation may be by the provision of separate rooms connected only by the necessary opening for transfer of product between rooms or by means of adequate space. Where separation is not by the provision of separate rooms, market access may be limited, and this should be a consideration at the design stage.
- 15.3.3 Personnel access to stomach, omasa and paunch emptying rooms should not be through rooms or areas where edible or inedible material is handled.
- 15.3.4 Personnel access to stomach, omasa and tripe processing rooms should not be through a room or area where inedible material is handled.
- 15.3.5 Adequate numbers of handwash and steriliser units should be provided.
- 15.3.6 Handwashing facilities should be inside the personnel entrances to stomach, omasa and paunch processing rooms.
- 15.3.7 Facilities for hanging individual tripes to allow trimming should be provided in the stomach, omasa and paunch emptying room.
- 15.3.8 Sterilisation facilities should be provided for the hooks used to hang tripes.
- 15.3.9 Where a fixed hook conveyor is used, the hooks should be automatically cleaned with 82°C water before reuse.
- 15.3.10 Omasa cleaning machines should be within the stomach, omasa and paunch emptying room.
- 15.3.11 Facilities for the disposal of trimmings should be provided.
- 15.3.12 Tripe cooking and scalding facilities should be located in a separate room provided with a means of extracting steam and vapour to the external atmosphere. Alternatives to separate rooms that ensure that problems with steam or cross-contamination do not occur will be considered.

15.3.13 All water washing, cooking and scalding equipment should be in an area in which water is contained and rapidly removed.

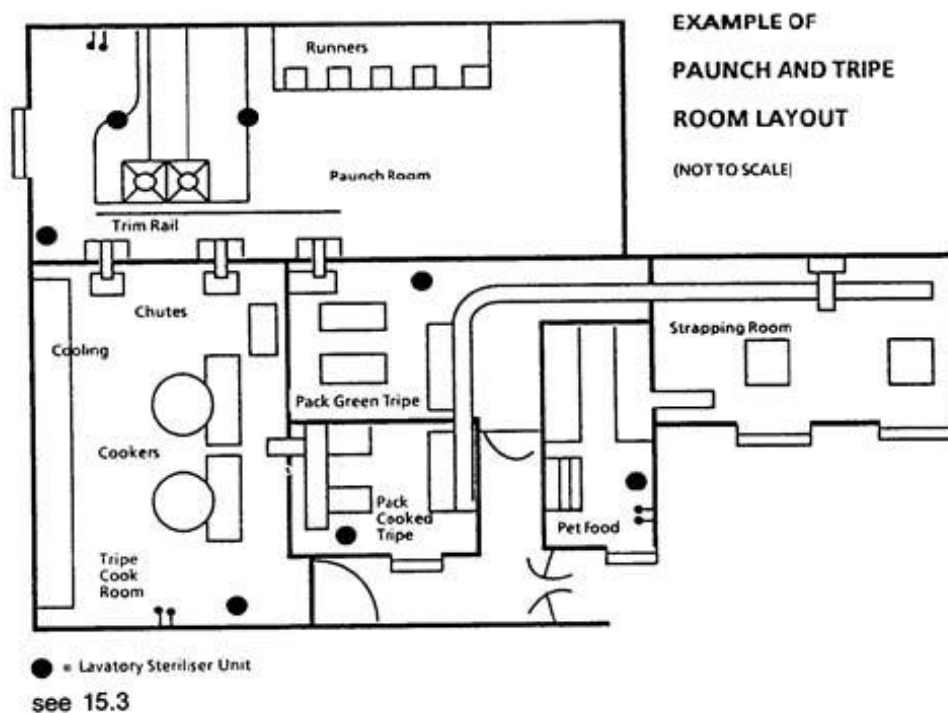
15.3.14 Gut emptying tables or other systems complying with Chapter 42 should be provided and should be connected directly to the drainage system.

15.3.15 For paunch emptying tables, a separate manure drainage line should be provided. The line should be of 200 mm minimum diameter in the case of large ruminants and 150mm minimum diameter in the case of small ruminants.

15.3.16 Deep seal traps are not necessary on paunch manure drainage lines where such lines are completely separate from any other drainage systems.

15.3.17 Other equipment should comply with Chapter 42.

15.3.18 Facilities for holding packing materials for immediate use during production in the tripe packing area should be provided.



15.4 Runner emptying and processing rooms

15.4.1 Rooms for emptying and processing runners should be in an edible product section of the premises separated from other departments by full height walls and of the same basic construction as detailed in Chapter 6.

15.4.2 Premises where casings are fermented should be at least 90 m from other buildings in which edible material is handled or stored.

15.4.3 Personnel access to the runner emptying room or area should not be through rooms or areas where edible or inedible material is handled.

15.4.4 Personnel access to the runner processing rooms or areas should not be through a room or area where inedible material is handled.

15.4.5 Adequate numbers of handwash and steriliser units should be provided.

15.4.6 Handwashing facilities should be inside the personnel entrances to runner processing rooms.

15.4.7 Facilities for the disposal of trimmings should be provided.

15.4.8 A storeroom large enough to store all chemicals used in the processing of runners that are likely to be on the premises at any one time should be provided.

15.4.9 Where necessary for orderly storage, rust resistant shelving, with the bottom shelf at least 300 mm above the floor, should be provided in the chemical store.

15.4.10A storeroom or area large enough to store dry stores and empty or packed casks and drums likely to be on the premises at any one time should be provided.

15.4.11A chiller complying with Chapter 20 for holding runners before further processing should be provided.

15.4.12 Product contacting equipment should be of approved design and constructed from approved materials in accordance with Chapter 42.

15.5 Hook and roller cleaning

15.5.1 An area with adequately drained floors and equipment for cleaning items such as hooks, rollers, skids and gambrels should be provided.

15.5.2 Cleaned gear is required to remain uncontaminated before use and so suitable storage needs to be provided.

15.5.3 There should be no air connection between a cleaning facility in 15.5.1 in which chemicals that give off strong fumes are used and an adjoining slaughter floor or other edible product department.

15.5.4 Where necessary, a means of extracting vapour and fumes to the outside atmosphere should be provided.

15.6 Cleaning materials store

15.6.1 Where the cleaning materials store adjoins a slaughter floor or other edible product department, the opening should be fitted with a full height, self-closing door.

15.6.2 The cleaning materials store should be adequately drained and ventilated and fitted with shelving at least 300 mm above the floor.

15.7 Carton and wrapping materials store

15.7.1 Rooms for the storage of cartons and other wrapping materials should be dust and vermin proof and have no air connection with rooms used for the storage of cleaning compounds and like materials.

15.7.2 The store should be supplied with rust resistant storage racks, the bottom shelf of which should not be less than 300 mm above the floor

16 Poultry slaughtering facilities

16.1 Introduction

16.1.1 This chapter deals with the requirements for slaughtering and processing of poultry.

16.1.2 The requirements detailed in Chapter 15, Slaughter Floors – Associated Facilities, are not applicable.



16.2 Site

16.2.1 Site approval should be obtained in accordance with 2.1 through 2.4 and Chapter 3 before proceeding with construction.

16.3 Surrounds

16.3.1 Surrounds should be in accordance with Chapter 4.

16.4 Basic construction

16.4.1 Basic construction requirements should be in accordance with Chapter 6.

16.5 Load-in, load-out area

16.5.1 The load-in, load-out area should be in accordance with Chapter 22.

16.6 Separation of operations

16.6.1 The premises should have separate rooms set aside for the following:

- killing and scalding birds
- dressing birds and
- packing operations

16.7 Drainage

16.7.1 In addition to the requirements set out in Chapter 5, drainage for the removal of viscera, feathers etc. within the packing, dressing and killing areas may take the form of a box channel drain.

16.7.2 The box channels should be wide enough to enable cleaning, and internal corners should be effectively coved.

16.7.3 Where viscera, feathers and other wastes are removed from the slaughter building to the save-all by means of a large diameter pipe, both ends of the pipe should be made rodent proof when not in use.

16.8 Minimum ceiling heights

16.8.1 The minimum distance from the floor to a wall plate or ceiling in the following rooms or areas should be as follows:

- killing rooms - 3.6 m
- dressing room - 3.6 m
- packing room - 3 m

16.9 Holding pens or areas

16.9.1 Adequate holding pens or areas for live birds should be provided on the premises.

16.9.2 The pens or areas should be covered, paved, curbed, effectively drained and well ventilated, with particular attention being paid to the control of extreme temperatures.

16.9.3 Wash down points should be provided to effectively clean the area.

16.10 Crate washing area

16.10.1A concrete paved, drained and curbed area, together with a hot and cold wash down point, should be provided adjacent to the holding pens for washing poultry crates.

16.11 Bird shackling area

16.11.1The live bird shackling area should be in an enclosed area and separated from bleeding and other processes.

16.12 Stunning

16.12.1The bird stunning method should be stated.

16.12.2Stunning equipment should be automatic and be designed and installed so that birds of all sizes will make adequate contact with the stunning processes.

16.13 Bleeding area

16.13.1Sticking/throat cutting should be carried out with automatic equipment and the method should be stated.

16.13.2Handwash and sterilising facilities should be available in the immediate vicinity of the sticking/throat cutting area.

16.13.3The bleeding line should be separated from the scald area by a wall or partition to at least shackle conveyor height.

16.14 Blood collection and disposal

16.14.1The method of blood collection and its disposal should be stated.

16.14.2Blood from the bleeding area should be removed via a blood drain or by a continuous automatic method.

16.15 Refrigerated storage

16.15.1The premises should contain a room or rooms adequately constructed and equipped for keeping under refrigeration all killed poultry likely to be on the premises at any one time.

16.15.2Refrigerated rooms should comply with Chapter 20 or 21, whichever is applicable.

16.16 Spin chillers

16.16.1Where in-line chilling facilities are incorporated in the processing line, they should comply with the following:

- in two-tank systems, water should not flow from the initial tank to the final tank
- overflow drains should be connected direct to the drainage system

- the rate of change of water in L per minute should be stated in the specifications accompanying the plans, together with details of the method of chlorination and the resultant free residual chlorine levels

16.17 Temperature control

16.17.1 Equipment should be provided to maintain packing or cutting rooms at 10°C maximum during packing and cutting.

16.18 Glycol bath

16.18.1 Where these facilities are provided to case harden poultry, the following information should be included in the specifications accompanying the plans:

- the capacity of the bath
- the method of installation
- the operating temperature

16.19 Deboning equipment

16.19.1 Where deboning equipment is installed, it should be located in a separate room constructed in accordance with Chapter 25 that is equipped to maintain a temperature no higher than 10°C.

16.20 Handwash facilities

16.20.1 Adequate numbers of approved handwash facilities should be provided.

16.21 Sterilisers

16.21.1 An adequate number of steriliser units should be provided.

16.22 Carton and wrapping materials storage

16.22.1 The storage and dispensing facilities provided in the processing room should be detailed in the specifications accompanying the plans.

16.23 Conveyor sterilisers

16.23.1 Facilities should be provided for washing and sterilising carcass shackles.

16.23.2 The sequence of operation should be cold, hot (82° C), cold water cycle.

16.24 Equipment

16.24.1 Equipment to be installed should be of an approved type and comply with Chapter 42.

16.25 Water supply

16.25.1 A supply of water adequate for the proposed operation should be available.

16.25.2 The water supply should be in accordance with Chapter 5.

16.26 Waste disposal

16.26.1 Establishment waste disposal and drainage should be in accordance with Chapter 5.

16.27 Inedible material

16.27.1 The method of collection, removal and disposal should be detailed in the specifications accompanying the plans.

16.28 Cleaning materials store

16.28.1 Facilities of adequate size for storing cleaning materials should be provided.

16.28.2 Where the store opens onto edible product areas, the door should be of a solid panel, full height, self-closing type.

16.28.3 The cleaning materials store should be separately drained, adequately ventilated and fitted with shelving.

17 Mechanically separated meat, meat fractions, edible fat and other secondary edible products

17.1 Introduction

17.1.1 In this chapter, 'other secondary edible products' is a general term which includes meat extracts, soup stock and edible products recovered after the mechanical, thermal and other treatments of edible meat and/or bone material.

17.2 Location

17.2.1 The processes covered by this chapter must be undertaken in areas designated as edible product areas.

17.2.2 Where independent facilities are to be established, approval of the site, in accordance with Chapter 2, should be obtained from the Department before proceeding with construction.

17.3 Surrounds

17.3.1 Surrounds should be in accordance with Chapter 4.

17.4 Basic construction and equipment

17.4.1 The same standards of hygiene apply as in all other edible product areas.

17.4.2 The basic construction of the work areas and equipment should be in accordance with Chapter 6.

17.5 Specific construction requirements

2.1.33 Ventilation

17.5.1 Ventilation should be provided in all rendering facilities to achieve comfortable working conditions.

17.5.2 Steam and vapour producing equipment should be adequately vented to the outside atmosphere.

2.1.34 Drainage

17.5.3 Where pits are used to house equipment, provision should be made to drain these areas to a trapped inlet at the lowest point of the pit.

2.1.35 Minimum ceiling heights

17.5.4 The minimum distance from the floor to a wall plate or ceiling should be 3.6m.

17.6 Mechanically separated meat production area

17.6.1 The temperature of the area in which mechanically separated meat is processed should be controlled at not more than 10° C.

17.6.2 Equipment for mechanically separated meat processing, unless installed in a room of its own, should be installed in a separately drained area.



Mechanically deboned meat

see 17.6

17.7 Load-in, load-out area

17.7.1 The load-in, load-out area should be in accordance with Chapter 22.

17.8 Carton and wrapping materials store

17.8.1 Where cartons and wrapping materials are stored, dust and vermin proof facilities of adequate size complying with 15.7 should be provided.

17.9 Cleaning materials store

17.9.1 Where cleaning materials are stored, facilities of adequate size complying with Chapter 15.6 should be provided.

17.10 Handwash facilities

17.10.1 approved handwash facilities and approved hand drying systems must be at personnel entrances and within the processing areas.

17.11 Raw product receival storage

17.11.1 Facilities for receiving and holding edible product before processing, including holding under refrigeration where necessary, should be provided.

17.12 Finished product storage

17.12.1 Where meat fractions are not to be used immediately in a processed meat product, facilities should be provided to chill them to a temperature of less than 7° C within 4 hours of rendering and to freeze them to - 10° C within 50 hours.

17.12.2 Bulk storage tanks for edible tallow should be constructed to allow periodic cleaning.

17.12.3 There should be no cross-connection between edible and inedible tallow tanks.

17.12.4 Storage tanks, when located in outside areas, should be surrounded by a concrete paved, drained area equipped with a hot and cold hose point.

17.12.5 Storage tanks should be prominently marked above the outlet valve with the words 'Edible Fat' in lettering at least 150 mm high.

17.13 Edible product lines

17.13.1 Lines used for carrying edible product should be in accordance with Chapter 42.

17.13.2 There should be no cross-connection between edible and inedible product lines.

17.14 Product contacting equipment

17.14.1 Product contacting equipment should be in accordance with Chapter 42.

17.15 Equipment wash area

17.15.1 Where necessary, a suitably equipped and constructed equipment wash area should be provided.

17.16 Water supply

17.16.1A supply of water adequate for the proposed operations should be available.

17.16.2The water supply should be in accordance with Chapter 5.

17.17 In-place cleaning

17.17.1Where in-place cleaning is used, full details of the cleaning procedures should be provided.

17.18 Establishment waste disposal

17.18.1Waste disposal and drainage should be in accordance with Chapter 5.

17.19 Process details

17.19.1In addition to the above requirements, the specifications should include a fully detailed process description and equipment cleaning schedule.

18 Inedible and condemned material handling facilities

18.1 Pet food rooms

18.1.1 Separate pet food rooms are necessary at premises where pet food is saved.

18.1.2 Pet food rooms must be in an inedible product area of the premises and should be of the same basic construction as edible product departments.

18.1.3 Personnel access to pet food rooms should not be through edible product departments.

18.1.4 Each entrance to a pet food room should be fitted with a full-height door, equipped with an approved locking device.

18.1.5 Adequate numbers of handwash and steriliser units should be provided.

18.1.6 Facilities for the disposal of trimmings should be provided.

18.1.7 Where a chute or slide is provided to the condemned room or area, the chute or slide should be constructed so that condemned material cannot be passed back into the pet food room.

18.1.8 Equipment should be constructed from acceptable materials in accordance with Chapter 42.

18.1.9 Plate freezers in pet food rooms should be in a separately drained area.

18.1.10 Facilities for storing and dispensing packaging material should be provided.

18.1.11 Packaged product being transferred to freezing facilities should not pass through edible product areas.

18.2 Condemned materials room or area

18.2.1 A separate room or area should be provided to handle condemned materials.

18.2.2 It is desirable that condemned material handling operations be fully automated and designed so that the system can be operated under security without locking up personnel.

18.2.3 The condemn room or area must be in an inedible product area of the establishment.

18.2.4 Where a room is provided, it should be of the same basic construction as edible product departments as detailed in Chapter 6.

18.2.5 Where an area is used, the area should be fully enclosed by an adequate full-height mesh fence welded to its framing.

18.2.6 Personnel access to a condemn room or area should not be through edible departments.

18.2.7 Condemned material should be effectively hogged, hashed or chemically denatured, before its disposal for further treatment, in one of the following ways:

- condemned materials should leave the slaughter floor by fully enclosed chutes which lead direct into hoggers or hashers
- facilities should be provided within enclosed chutes to automatically dye or denature condemned materials before the materials enter the condemn room or area

18.2.8 Where vehicles are used to remove condemned material from the premises, a curbed and separately drained concrete vehicle standing pad should be provided.

18.2.9 Inspection plates, screw covers or other means of access to equipment used in fully mechanised handling systems should be equipped for locking.

18.2.10 Condemned paunch emptying tables, where provided, should be connected to a paunch manure drainage line.

18.2.11 An adequate number of handwash and steriliser facilities should be provided in the condemn room or area.

18.2.12 Equipment should be constructed and installed to facilitate its cleaning.

18.2.13 Where other operations, such as foetal blood recovery or goldbeater's thread production, are permitted to be undertaken in the security of the condemn room, they should be well separated from the condemn handling operations.

18.3 Inedible material handling facilities

18.3.1 Facilities should be provided for removing inedible material continuously from production areas so this material does not accumulate in areas adjacent to edible departments.

18.3.2 Where vehicles are used to remove inedible material for further processing, a curbed and separately drained concrete vehicle standing pad should be provided.

18.3.3 Where vehicles are provided for the removal of inedible material they should have hoppers that are leak proof and constructed from approved materials.

18.3.4 Rooms or areas used to receive inedible material should be of the same basic construction as edible product departments.

18.4 Staining

18.4.1 Facilities should be provided for staining pet food and inedible meat, other than offal and poultry, which is to be exported chilled or frozen, or marketed domestically as fresh product.

19 Inedible rendering

19.1 Introduction

19.1.1 This chapter deals with the construction and equipment requirements for rendering inedible and condemned material into inedible tallow, meat meal and fertiliser.

19.2 Location

19.2.1 Buildings housing inedible rendering plants should be at least 27 m from any building in which animals are slaughtered or carcasses dressed, or meat is treated or stored.

19.2.2 The processes of milling, bagging, bulk storage and loadout associated with rendering should be separate from edible product departments.

19.3 Basic construction and equipment

19.3.1 The basic construction of the work areas should be in accordance with Chapter 6.

19.3.2 Walls should be constructed of approved impervious materials and finished smooth to a height of at least 1.8 m above floor level.

19.3.3 About a height of 1.8 m, louvres may be used.

19.4 Equipment

19.4.1 Rendering departments should be equipped with sufficient rendering vessels and ancillary equipment to ensure that inedible materials are processed with minimum delay.

19.5 Handwash facilities

19.5.1 Handwash facilities should be conveniently located in the wet processing areas.

19.6 Odour control

19.6.1 An effective method of controlling odours should be fitted to rendering systems.

19.7 Inedible tallow tanks

19.7.1 The area surrounding inedible tallow tanks should be adequately paved and drained.

19.7.2 Inedible tallow tanks should be prominently marked above the outlet valve with the words 'Inedible Tallow' in lettering at least 150 mm high.

19.8 Separation of operations

19.8.1 The rendering plant and equipment should be designed to ensure separation of raw and processed product.

19.9 Dead stock

19.9.1 Where a dead stock skinning area is associated with the inedible by-products department, the area should be paved and drained, and surrounded by a curb at least 150 mm high.

19.9.2 Hot and cold hose points should be provided.

19.9.3 Facilities should be provided for depositing material into holding bins or cookers.

19.9.4 A handwash and steriliser unit should be provided, complete with liquid soap dispenser, disinfectant, paper towel and used towel container.

20 Chillers

20.1 Introduction

20.1.1 This chapter is applicable to mechanically refrigerated areas designed to cool meat, or hold cooled meat, between processes under controlled temperature conditions.

20.1.2 The 'type' applied to chillers in this chapter indicates only the purpose, the holding period or the type of product held. It does not indicate any variation of standards.

20.1.3 This chapter deals with the following types of chillers:

- active (hot meat) - for primary cooling or chilling of carcasses
- holding - for holding carcasses after primary chilling, and meat and meat products before dispatch
- retain - for holding retained carcasses under security
- ageing - for extended holding of carcasses, cuts and vacuum packaged meat to improve tenderness
- conditioning – for conditioning meat and meat products
- thawing – for thawing frozen meat to permit boning or further processing
- tempering – for tempering frozen meat to permit further processing.



Active carcass chiller

see 20.1

UNREGULATED

UNREGULATED document.

Greyed out sections are covered in the Export Meat Operational Guideline 3.1: Provisions for Commonwealth authorised officers at registered establishments (PCORE).

- conditioning - for conditioning meat and meat products
- thawing - for thawing frozen meat to permit boning or further processing
- tempering - for tempering frozen meat to permit further processing.

20.2 Location and capacity

20.2.1 Chillers, other than those designed as inedible product chillers, should be in an edible product section of the premises.

20.2.2 The location of chillers relative to other work areas should be carefully considered, to minimise the risk of contamination of the meat.

20.2.3 Sufficient space should be available in a chiller to accommodate the quantity of meat processing in such a way that the cooling air flow is able to reduce or to maintain the temperature of the product to the desired degree.

20.2.4 In carcase chillers, sufficient rail length should be provided to allow carcase or sides to hang freely so that good air circulation can be achieved.

20.3 Basic construction and equipment

20.3.1 The same standards of hygiene apply as in other edible product areas.

20.3.2 The basic construction of the chiller and equipment should be in accordance with Chapter 6.

20.4 Specific construction requirements

20.4.1 The interior of each door should be provided with a mechanism to allow personnel to escape if personnel are accidentally locked inside.

20.5 Security

20.5.1 Chillers should be equipped with facilities to allow product to be held under security.

20.6 Thermometers

20.6.1 A direct or remote thermometer should be provided to each chiller.

20.6.2 The temperature sensor should be in a position that indicates the actual room temperature.



id storage facilities

see 21.6

20.7 Handwash units

20.7.1 A handwash unit should be convenient to active chillers.

20.8 Hose points

20.8.1 Sufficient hot and cold hose points should be provided to permit effective cleaning of all chillers.

20.8.2 The hose points should be outside the chillers.

20.9 Racking and shelving

20.9.1 Where chillers are provided with racking or shelving for storing product, rust resistant material should be used.

20.9.2 Where necessary, shelving or trays to confine drip from the product should be provided, with the bottom shelf 300 mm above the floor.

20.10 Rails

20.10.1 Where rails are provided for transport and storage of product, the rails should be in a position which ensures that the product does not contact chiller walls or support structures.

20.10.2 The following dimensions are the minimum acceptable:

- rails should be high enough that the lowest part of a carcass is at least 300 mm above the floor
- between rails
 - large stock - 900 mm;
 - small stock - 375 mm
- between rails and walls;
 - running rails - 600 mm
 - header rails - 900 mm

20.11 Drainage

20.11.1 Floors in active chillers should be graded at a minimum of 1:50.

20.11.2 Floors in other chillers should be graded at a minimum of 1:100.

20.11.3 All floors should be graded to floor drains in the chiller.

20.11.4 The defrost drain from cooling coils should be of adequate size to cope with the water from the melting ice on the coils and, if applicable, the water used to defrost the coil.

20.11.5 Where cooling coils are wall mounted, the drain water should be contained and removed by either a wall mounted channel or a spoon drain.

20.11.6 On floor mounted cooling units, the drain water should be confined by curbs at least 150mm high and directed to a trapped drain inlet.

20.11.7 On ceiling mounted cooling units, the drain water should be confined by suitable insulated drip trays directly connected to the drainage system.

20.11.8 Provision should be made so that during the defrost procedure, air circulating fans on the unit being defrosted can be switched off to prevent carryover or defrost water.

20.12 Retain chiller or cage

20.12.1 A separate area should be provided for holding retained carcasses, parts and offals.

20.12.2 Where more than one class of stock is slaughtered at the establishment and only one such area is provided, there should be ready access to the area for each class of stock slaughtered.

20.12.3 The separate retain chiller area may be a separate chiller equipped for locking or a retain cage equipped for locking located within a chiller.

20.13 Retain cage

20.13.1 A retain cage should be permanently affixed to the chiller wall, but may be constructed so that three sides fold back against the wall when the cage is not in use.

20.13.2 In the case of a folding cage, a permanent ceiling should be provided immediately above sections of the chiller rails so that the ceiling will be enclosed by the cage when the case is operating.

20.13.3 When the cage is a permanent structure, its walls should extend from about 50 mm above the floor to the ceiling.

20.13.4 Where mobile retain cages are used, they should be constructed as follows:

- the tubular framework and welded wire mesh should be constructed of rust-resistant metal
- the mesh size should be no greater than 75 mm x 50 mm and
- the wire used in the mesh should have a diameter of at least 3 mm.

20.13.5 Retain chillers or cages should be identified by the phrase 'Department of Primary Industries and Energy Retained' in letters at least 50 mm high.

20.14 Active chillers

20.14.1 Active chillers should be equipped with machinery capable of coping with the maximum cooling demand.

20.14.2 The active chilling rooms should be equipped with sufficient refrigeration capacity to enable the temperature in the centre of the thickest point of all carcasses and sides to be reduced from the time that they were first placed under refrigeration to a meat temperature of not more than

- in the case of beef, buffalo, horses and calves of more than 40 kg, pigs of more than 100 kg and deer - to 20°C or less within 20 hours;
- in the case of sheep, lambs, goats, calves of not more than 40 kg and pigs of not more than 100 kg - to 20°C or less within 8 hours;
- in the case of game meat - to 7°C or below in less than 10 hours; and
- in the case of edible offal (other than green offal) unless frozen - to 7°C or less within 12 hours.

20.15 Quartering area

20.15.1 A quartering area in which carcasses, sides or quarters are to be held should be equipped with refrigeration machinery capable of maintaining the area at a temperature no higher than 10°C.

20.15.2 A handwash and steriliser unit must be provided in the quartering area and must be capable of effectively sterilising the saw.

20.16 Waste receptacles

20.16.1 In ageing, conditioning, thawing and tempering chillers, suitable receptacles should be provided for storage and final disposal of used packaging material.

20.17 Thawing and tempering

20.17.1 A chiller used for thawing or tempering frozen carcass or carton meat to allow boning or further processing should be equipped with machinery to maintain a maximum air temperature of 10°C during the entire thawing or tempering operation.

20.17.2 A recording thermometer should be installed to give a continuous record of the air temperature.

20.18 Load-in, load-out area

20.18.1 The load-in, load-out area should be in accordance with Chapter 22.

20.19 Condensation

20.19.1 Refrigerated rooms should be designed and operated in a way that prevents the formation and accumulation of condensation on overhead structures and ceilings.

20.19.2 Refrigerated departments should not be constructed above other departments unless the lower is to operate at temperatures consistently below those of the upper.

20.19.3 Main refrigerant lines should not be routed through working areas.

20.19.4 Where forced draught unit coolers or air distribution ducting are located in the work area, both the drain trays and ducting should be insulated.

21 Freezer facilities and cold stores

21.1 Introduction

21.1.1 This chapter is applicable to freezer and cold store facilities on processing plants or which constitute an independent premises.

21.1.2 This chapter refers to the following 'types' of freezers and cold stores:

- blast freezers - including freezing tunnels and plate freezers
- chiller freezers - facilities with both chilling and freezing capabilities
- freezer stores - for holding frozen meat and meat products

21.2 Site

21.2.1 For independent freezer and cold store premises, approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before commencing construction.

21.3 Surrounds

21.3.1 Surrounds should be in accordance with Chapter 4.

21.4 Location

21.4.1 Freezers and cold stores should be away from inedible product departments, except where the freezers and cold stores are used exclusively for inedible product.

21.4.2 Freezers and cold stores should be located so as not to create condensation problems in other departments.

21.4.3 Where freezers open into non-refrigerated areas, the exchange of air between the two areas should be minimised by fitting such things as effective air curtains, clear plastic strips, clear plastic doors or automatic doors.

21.5 Basic construction

21.5.1 The same standards of hygiene should apply as in other edible product areas.

21.5.2 The basic construction of the freezer and cold store should be in accordance with the relevant sections of Chapter 6.

21.6 Specific construction requirements

21.6.1 Export meat is required to be stored in an area, chamber or store separate from non export eligible meat. The design should take account of this.

21.6.2 The export area, chamber or store should be capable of being secured by making provision for the application of seals.

21.6.3 Facilities for the secure storage of the Department's equipment and material should be provided.

21.6.4 Storage areas in independent premises should be amenable to ready identification of product according to ownership.

21.6.5 The interior of each door should be provided with a mechanism to allow personnel to escape if personnel are accidentally locked inside.

21.7 Drainage

21.7.1 In chiller freezers, drainage facilities in accordance with 20.11 should be provided for the removal of wash down water.

21.7.2 Floor waste outlets should be sealed by a screw cap or other approved device when the room is operating as a freezer.

21.8 Load-in, load-out area

21.8.1 The load-in, load-out area should be in accordance with Chapter 22.

21.9 Freezer tunnels

21.9.1 Where freezer tunnels are used for freezing exposed product, the tunnel should be installed so that its full length is capable of being opened for cleaning.

21.10 Freezer performance

21.10.1 Freezing rooms or tunnels should be equipped with sufficient refrigeration capacity to ensure that the temperature of meat from the time it is placed under refrigeration can be reduced to at least -10°C within the following periods:

- beef and other large stock including calves of more than 40 kg - 80 hours
- calves of not more than 40 kg mutton, lamb and goat carcasses - 48 hours
- pig and deer carcasses - 60 hours
- offals - 48 hours
- meat fractions - 50 hours
- mechanically separated meat - 48 hours

21.10.2 In addition, prescribed goods in the form of meat derived from the boning of carcasses, portions of carcasses or carcass parts should be reduced to a meat temperature of not more than -6°C within 48 hours and -10° within 80 hours of the time that they were first placed under refrigeration for freezing.

21.10.3 The performance details of other types of freezers should be specified.

21.10.4 The usual operating temperature and the maximum capacity of each freezer at that temperature to meet the requirements of 21.10.1 and 21.10.2 should be provided in a certificate or declaration by the manufacturer of, or agent for, the equipment.

21.11 Storage of other commodities

21.11.1 Where commodities other than meat are to be stored in the same cold store, details of the commodities and the area or room in which they are to be stored should be provided.

21.12 Thermometers

21.12.1A recording thermometer or telethermometer to indicate operating temperatures must be provided for each freezer or freezing facility.

21.12.2 The temperature sensor should be in a position that indicates the actual temperature in the product zone.

21.13 Underfloor ventilation pipes

21.13.1 Where underfloor ventilation pipes are provided, they should be rodent proof.

21.14 Meat examination facilities

21.14.1 Independent registered cold stores must provide meat examination facilities in accordance with Chapter 39.

22 Loading docks

22.1 Introduction

22.1.1 Loading docks provide protection to meat and its associated packing materials during loading and unloading at the premises.

22.2 Design considerations

22.2.1 Consideration should be given to the following points:

- the methods of handling the product
- the relative heights of loading docks, rails and truck decks
- the equipment necessary, such as dock levellers, to minimise operational delays

22.3 Location and site

22.3.1 The loading dock should be convenient to the product store.

22.3.2 The loading dock should be readily accessible to the means of transport being used.

22.3.3 Sufficient space should be available along the length and in front of the loading dock to allow for the movement of transport vehicles.

22.4 Basic construction

22.4.1 The loading dock should be provided with an awning to protect the meat during loading or unloading.

22.4.2 Where unpackaged meat is handled over the dock, the dock should be designed so that when possible the area is enclosed.

22.4.3 The height from the roadway to the underside of the awning should be such that all vehicles likely to be used have adequate clearance.

22.4.4 A full length concrete paved and drained area should be provided directly in front of the loading dock and extend at least 6 m from the leading edge of the dock.

22.4.5 The area nominated for truck movement should be finished with a well drained surface which is impervious and durable.

22.4.6 The loading dock should be of solid construction suitably protected from vehicle impact by bumper stops.

22.4.7 The spacings and heights of loading docks should be determined only after consideration of the type of vehicle to be used.

22.5 Marshalling areas

22.5.1 Where the product load has to be assembled in advance, the marshalling area should be protected from the elements.

22.5.2 The marshalling area should be capable of being maintained at a temperature of not more than 10°C.

22.5.3 Where minor trimming of chilled carcase meat is carried out at the loading dock, rails, handwash and steriliser units together with containers for holding trimmings should be provided.

22.6 Lighting

22.6.1 Both the loading dock and associated marshalling areas should have an illumination of 220 lx.

22.6.2 Where inspection and trimming of carcase meat is required, this work station must have an illumination of 600 lx.

23 Game processing premises

23.1 Introduction

23.1.1 This chapter contains the requirements for premises processing partly eviscerated field shot game animals. The operational requirements for harvesting game animals are quite stringent and the relevant orders should be consulted by those considering such a project.

23.2 Site

23.2.1 Approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained from Australian Quarantine and Inspection Service before proceeding with construction or conversion.

23.3 Surrounds

23.3.1 Surrounds should be in accordance with Chapter 4.

23.4 Services

23.4.1 Services should be in accordance with Chapter 5.

23.5 Basic construction

23.5.1 Basic construction requirements should be in accordance with Chapter 6.

23.6 Specific construction requirements

23.6.1 The minimum distance measured from the floor to the ceiling of a processing room should be 3.6 m, except in refrigerated areas, where a minimum height of 3 m may be accepted.

23.6.2 Where hanging rails are used, the rails should be high enough to ensure that the lowest part of the carcass is at least 300 mm from the floor.

23.6.3 The temperature of the carcass dressing room must be controlled to maintain the room at a maximum of 10°C.

23.7 Separation of operations

23.7.1 Separate rooms should be provided for the following operations:

- dressing carcasses
- boning, cutting, trimming and wrapping meat
- packing wrapped meat into cartons

23.8 Load-in dock

23.8.1 A fully enclosed load-in area in accordance with Chapter 22 should be provided.

23.9 Carcass washing facilities

23.9.1 Facilities should be provided for washing carcasses before the carcasses enter the receive chiller.

23.9.2 The carcass wash facilities may be in the loading dock.

23.10 Carcass receive chiller

23.10.1 A separate chiller should be provided for storing carcasses that are awaiting dressing.

23.10.2 The chiller should comply with Chapter 20.

23.11 Dressing room

23.11.1 A separate room should be provided for dressing carcasses.

23.11.2 The rail should be high enough that the lowest part of the carcass is at least 300 mm from the floor.

23.11.3 Carcasses should be spaced far enough apart to ensure that during dressing they do not come into contact with each other before having been inspected and passed.

23.12 Skin removal station

23.12.1 Where mechanical equipment is used for removing the skin, facilities should be provided to allow the parts of the equipment that contact product to be sterilised between carcasses.

23.13 Evisceration

23.13.1 Facilities should be provided to receive those viscera that remain after partial field evisceration.

23.13.2 Where viscera are to be recovered for edible purposes, facilities should be provided to allow the viscera holding equipment to be sterilised between carcasses.

23.14 Trimming stations

23.14.1 Trimming stations should be provided before the carcass inspection station.

23.14.2 For large species requiring both high and low trimming stations, the high trimming station should precede the low trimming station.

23.14.3 Suitable receptacles should be provided for trimmings.

23.15 Offal removal station

23.15.1 Where offal is to be recovered for edible purposes, individual offal washing facilities should be provided.

23.15.2 The operators involved should have access to a nearby handwash and steriliser unit.

23.15.3 The method of conveying recovered offals to the offal room should be described.

23.16 Inspection stations

23.16.1 Adequate facilities must be provided to allow for inspection of the carcass and associated viscera.

23.16.2 Where necessary, high and low platforms should be provided.

23.16.3 A stop button must be provided at inspection stations where a moving chain system is used.

23.16.4 Where a chain is stopped under 23.16.3, the chain should be capable of being restarted only at the same inspection station.

23.17 Retain facilities

23.17.1 A branch rail at a point beyond carcass inspection should be provided for retention of carcasses awaiting further inspection.

23.17.2 Where necessary, a high and low platform should be provided.

23.18 Carcass sawing station

23.18.1 Where carcasses are split, an approved carcass splitting saw should be provided, together with adequate sterilising facilities.

23.18.2 Where necessary, a saw screen of sanitary construction using approved materials should be provided.

23.19 Carcass washing station

23.19.1 Adequate carcass washing facilities should be provided.

23.19.2 For large species requiring both high and low washing stations, the high washing station should precede the low washing station.

23.19.3 The washing area should be separately curbed and drained and, where necessary, fitted with screens of sanitary construction to confine overspray.

23.20 Hose points

23.20.1 Hot and cold wash-down points should be provided.

23.21 Work stations

23.21.1 Adequate work stations suitably equipped should be provided for all operators to be carried out, together with approved handwash and steriliser facilities suitable for cleaning and sterilising knives, saws and other equipment used.

23.22 Equipment

23.22.1 Equipment should be in accordance with Chapter 42.

23.23 Inedible material

23.23.1 Inedible material should be handled and disposed of in an approved sanitary manner in rooms/areas set aside for that purpose.

23.24 Pet food removal

23.24.1 Where pet food is to be recovered, the method of handling and conveying this material to the pet food room should be described.

23.24.2 The pet food room should be in accordance with 18.1.

23.24.3 Where both pet food and edible material are handled by an operator, access to a nearby handwash and steriliser unit should be available.

23.24.4 The only pet food material permitted to be handled on game preparation premises is that derived from carcasses submitted and assessed for human consumption and this should be understood when developing a proposal.

23.25 Condemned material disposal

23.25.1 Condemned carcasses and parts should be directed to a condemn room which should be capable of being held under security.

23.25.2 The condemn room should contain adequate facilities for denaturing the meat, by either chemical or mechanical means.

23.25.3 The method of conveying condemned carcasses or parts to the room should be described.

23.26 Skin room

23.26.1 A separate room or area should be provided to receive skins before their removal from the plant.

23.27 Hook and roller cleaning room

23.27.1 The premises should contain a room for cleaning hooks and rollers.

23.27.2 The room should be in accordance with 15.5.

23.28 Dressed carcass holding chiller

23.28.1 Where dressed carcasses are not passed directly to the boning or cutting room, a chiller constructed in accordance with Chapter 20 should be provided.

23.29 Boning or cutting room

23.29.1 A separate room should be provided for boning or cutting and wrapping game meat.

23.29.2 The room should be equipped in accordance with Chapter 25.

23.30 Packing room

23.30.1 A separate room, or area temperature controlled at no more than 10°C should be provided to receive wrapped product from the boning or cutting room, for packaging into cartons.

23.30.2 The wall separating the boning or cutting room from the packing room should be full height.

23.31 Carton and wrapping materials store

23.31.1 A carton and wrapping materials store complying with 15.7 should be provided.

23.32 Blast freezing facilities

23.32.1 Freezing facilities complying with Chapter 21 should be provided on the premises.

23.33 Cleaning materials store

23.33.1 Facilities of adequate size complying with 15.6 should be provided.

23.34 Truck wash area

23.34.1 Facilities complying with Chapter 8 should be provided for vehicles used in transporting game carcasses.

24 Rabbits and hares

24.1 Introduction

24.1.1 This chapter deals with the structural and equipment requirements for processing rabbits and hares that have been killed and partially eviscerated in the field.

24.2 Site

24.2.1 Approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

24.3 Surrounds

24.3.1 Surrounds should be in accordance with Chapter 4.

24.4 Basic construction

24.4.1 Basic construction requirements should be in accordance with Chapter 6.

24.5 Specific construction requirements

24.5.1 The operations of skinning, deheading and feet removal should be separated from the boning and packing operations by full-height walls, except for the necessary accessways for product and personnel.

24.5.2 Where furred rabbits or hares are graded and packed at premises, a separate room should be provided for these operations.

24.6 Load-in, load-out areas

24.6.1 Load-in, load-out areas should be in accordance with Chapter 22.

24.7 Refrigerated storage rooms

Adequate refrigerated storage space should be provided to hold all carcasses awaiting dressing and packaged meat likely to be on the premises at any one time.

24.7.1 Separate chillers should be provided for receipt of skin-on carcasses where skin-off carcasses where skin-off carcasses are held on the premises.

24.7.2 Chillers and freezers should be in accordance with Chapters 20 and 21 respectively.

24.8 Temperature controlled rooms

24.8.1 Rooms used for the following operations should be capable of being temperature controlled at or below 10°C:

- skinning, deheading and feet removal
- boning and packing
- furred rabbit or hare grading and packing

24.9 Inspection facilities

24.9.1 A table, lighting and a handwash and steriliser unit should be provided.

24.10 Carton store

24.10.1 Dust and vermin proof facilities of adequate size should be provided.

24.10.2 Rust resistant shelving with the bottom shelf raised a minimum of 300 mm above the floor should be provided.

24.11 Gear storage area

24.11.1 An area should be provided for the storage of aprons and gear when employees are not in the room.

24.12 Handwash facilities

24.12.1 An adequate number of approved handwash facilities operated by pedal or thigh should be provided in the room.

24.13 Sterilisers

24.13.1 Adequate steriliser facilities should be provided in the room.

24.14 Carton and wrapping material storage

24.14.1 The storage and dispensing facilities provided in the processing room should be detailed.

24.15 Inedible material

24.15.1 The method used to hold heads, skins, feet and other inedible materials before disposal should be indicated.

24.15.2 The proposed method of disposal should be described.

24.16 Equipment

24.16.1 Equipment should be in accordance with Chapter 42.

24.17 Equipment wash

24.17.1 Where necessary, provision should be made for equipment wash facilities. These should be supplied with hot water and cold water hose points, drained as for other wash areas; and provided with steam removal equipment.

24.17.2 Where the wash area is in a processing room, provision should be made to prevent splash onto edible product, and exhaust steam and vapour to the outside atmosphere.

24.18 Carcase conveyor

24.18.1 Provision should be made for continuous cleaning of hooks, by means of a cold, hot (82°C), cold water cycle.

24.19 Water supply

24.19.1 An adequate supply of water for the proposed operations should be available.

24.19.2 The water supply should be in accordance with Chapter 5.

24.20 Waste disposal

24.20.1 Waste disposal and drainage should be in accordance with Chapter 5.

24.21 Cleaning materials store

24.21.1 Facilities of adequate size for storing cleaning materials should be provided.

24.21.2 Where the store opens onto edible product areas, the door should be of a solid panel, full-height, self-closing type.

24.21.3 The cleaning materials storeroom should be separately drained, adequately ventilated and fitted with shelving.

25 Boning room

25.1 Introduction

25.1.1 This chapter is applicable to premises preparing bone-in and boneless meat.

25.1.2 This chapter refers to the following 'types' of boning systems:

- on-rail boning
- side boning
- quarter boning
- table boning
- belt conveyor boning



Side boning
see 25.1



Quarter boning
see 25.1

25.2 Permitted methods

25.2.1 Large stock carcasses may be quartered and cropped at a properly equipped station outside the boning room.

25.2.2 Carcasses and piece-meat intended for further preparation to bone-in or boneless meat should be subjected to one of the following procedures:

- conventional boning or cutting
- hot boning or cutting
- thaw boning or cutting

25.2.3 Unless the boning room has entirely separate production lines, only one of the methods in 25.2.2 will be permitted to be used in the boning room at any one time, and this should be recognised at the design stage.

25.2.4 Where a boning room has two or more entirely separate production lines, one of the methods in 25.2.2 may be used on each line, provided the layout facilities inspection supervision of the operations.

25.2.5 In hot boning operations, carcasses etc. intended for hot boning/fabrication are required to be transferred by an interconnected rail system from the slaughter floor to the boning room or boning room staging chiller.

25.2.6 In hot boning operations, provision may be made for carcasses to be quartered and cropped en route to the boning room, or in the boning room staging chiller, provided facilities for this are made available.

25.2.7 The staging chiller should be constructed and equipped to the standard required for an active chiller.

25.2.8 Certain importing countries may place additional constraints on hot boning/fabrication. For example, at the time of preparation of this guideline, the EC (European Community), permits no operation, such as the part chilling of carcasses, before hot boning in a room eligible to prepare meat for that market.

25.3 Design considerations

25.3.1 Consideration should be given to the operations and flow of materials associated with boning or cutting to ensure a smooth product flow, and facilitate inspection.

25.3.2 Equipment, walls and floors should be capable of being easily cleaned.

25.4 Security

25.4.1 Chillers and the premises should be capable of being secured.

25.5 Site

25.5.1 For independent premises, approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

25.6 Location

25.6.1 The boning room should be in an edible product section of the establishment and suitably separated for inedible rendering departments and such things as stock pens.

25.7 Surrounds

25.7.1 Surrounds should be in accordance with Chapter 4.

25.8 Basic construction

25.8.1 Basic construction requirements should be in accordance with Chapter 6.

25.9 Specific construction requirements

25.9.1 The minimum distance measured from the floor to the wall plate or ceiling of a boning room should be 3 m.

25.9.2 Rails should be high enough that the lowest part of the carcase, side or quarter is at least 300 mm from the floor.

25.10 Load-in, load-out area

25.10.1 Where a load-in, load-out area is provided, it should be in accordance with Chapter 22.

25.11 Chillers

25.11.1 The premises should contain a room or rooms constructed and equipped in accordance with Chapter 20 for keeping under refrigeration all the meat likely to be on the premises at any one time.

25.11.2 Where thaw boning or cutting are conducted, a separate chiller constructed and equipped in accordance with Chapter 20 should be provided for thawing.

25.11.3 Ageing chillers should be constructed and equipped in accordance with Chapter 20.

25.12 Pre-trim area

25.12.1 A separate pre-trim area maintained at not more than 10°C should be provided between the chillers and the commencement of boning or cutting.

25.12.2 Access to handwash and steriliser units should be provided.

25.12.3 Where necessary, stands for high and low trim should be provided and be large enough to allow inspection staff to monitor trimming.

25.12.4 Where rails are used the rail at the pre-trim area for side boning should be high enough that the neck area is clearly visible for inspection.

25.13 Brisket removal and separation

25.13.1 A separate brisket removal station should be provided, with access to sterilising facilities.

25.13.2 The boning, slicing and packing of brisket meat is normally required to be separate from other operations.

25.14 Fat and bone removal

25.14.1 Provision should be made for the removal for disposal of fat and bones on a continuing basis to a separate room or area outside the boning room.

25.14.2 The room or area used for storing fat and bones should be insect proofed.

25.14.3 Where fat and bones are to be further treated as an edible product, they should be handled in accordance with Chapter 17.

25.15 Inspection facilities

25.15.1 A table large enough to hold four cartons should be provided.

25.15.2 Approved lighting facilities with intensity of 600 Lux should be provided at the table.

25.15.3 There should be ready access to a handwash and steriliser unit.

25.16 Handwash facilities and sterilisers

25.16.1 Sufficient numbers of approved pedal or thigh operated basins or troughs, liquid soap dispensers and approved hand drying systems should be at personnel entrances to the boning room.

25.16.2 Handwash basins, liquid soap dispensers, and sterilisers should be strategically located in processing rooms.

25.17 Vacuum packaging operations

25.17.1 Where steam producing heat treatment systems are used, they should be vented direct to the outside atmosphere.

25.18 Other operations

25.18.1 Space should be provided for any other proposed operations which should be also indicated on the drawings.

25.19 Temperature control

25.19.1 Equipment should be provided capable of maintaining the room at not more than 10°C during boning and packing.

25.19.2 Defrost drainage from refrigeration equipment should be confined and directed to the drainage system in accordance with 20.11.4 to 20.11.7 inclusive.

25.19.3 A thermometer must be provided to indicate room temperature. Certain importing countries require that a boning room be equipped with a recording thermometer or recording telethermometer and the fitting of such equipment during initial construction should be considered.

25.19.4 Cold air distribution and velocity should be arranged so as not to cause employee discomfort.

25.20 Ventilation during cleaning

25.20.1 A mechanical exhaust system should be provided to remove the vapour generated during cleaning operations.

25.21 Carton and wrapping materials store

25.21.1 A carton and wrapping material store should be provided and be in accordance with 15.7.

25.22 Storage and packing material in the boning room

25.22.1 Facilities for holding packing materials for immediate use during production in the boning room should be provided.

25.23 Hooks and skids

25.23.1 The method of collection and removal of hooks and skids should be specified.

25.23.2 The method used should keep noise to a minimum.

25.24 Employees' gear and equipment

25.24.1A separate room with facilities should be provided for washing gear and equipment.

25.24.2 Hot water and cold water hose points should be provided.

25.24.3 Drainage should be as for other wash areas.

25.24.4A facility outside the processing room should be provided for sharpening knives and storing aprons and gear.

25.25 Truckways

25.25.1 Truckways within boning rooms where rails are used should be arranged so the truckways do not pass under the rails. There should be a space of at least 2.1 m between the vertical of the rail on which meat is hung and the wall or any item of equipment.

25.25.2 Truckways in boning rooms where there are no rails should be at least 1.5 m wide.

25.26 Hose points

25.26.1 Hot and cold hose points should be provided in accordance with 6.17.

25.27 Construction of equipment

25.27.1 Equipment should be in accordance with Chapter 42.

25.28 Water supply

25.28.1 An adequate supply of water for the proposed operations should be available.

25.28.2 The water supply should be in accordance with Chapter 5.

25.29 Cleaning materials store

25.29.1 Adequate facilities should be provided for storing cleaning materials.

25.29.2 Where the store opens into edible product areas, a solid panel, full-height, self-closing door should be fitted to the opening.

25.29.3 The storeroom should be separately drained, adequately ventilated and fitted with shelving with the bottom shelf at least 300 mm above floor level.

25.30 Work stations

25.30.1 These should be clearly indicated on plans.

25.31 Waste disposal

25.31.1 Waste disposal and drainage should be in accordance with Chapter 5.

26 Canneries

26.1 Introduction

26.1 This chapter deals with the structural and equipment requirements for premises producing canned meat either shelf stable or pasteurised.

26.2 Site

26.2.1 For independent premises, approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

26.3 Location

26.3.1 A cannery should be in an edible product section of the premises.

26.4 Surrounds

26.4.1 Surrounds should be in accordance with Chapter 4.

26.5 Basic construction

26.5.1 Basic construction requirements should be in accordance with Chapter 6.

26.6 Specific construction requirements

26.6.1 The area used for the operations of mixing and filling should be separated from retorting areas by full height walls, leaving only the necessary access ways for product and personnel.

26.6.2 Rooms and areas used for mixing and cooking hot pack products should be separated from a room used for mixing cold pack products.

26.6.3 A separate room or area should be provided for cooling retorted cans.

26.6.4 Subject to 26.6.5, where raw unprocessed vegetables are used, areas or rooms separate from those for meat must be provided for their receipt, storage and preparation.

26.6.5 Where washed, peeled and diced vegetables are received on the premises in a form suitable for incorporation in the product mix, a separate room or area is not necessary.

26.6.6 The minimum distance from the floor to a wall plate or ceiling in the following rooms or areas should be as follows:

- retorting - 4.8 m
- cooking - 4.8 m
- mixing and filling - 3 m

26.6.7 Retorts should be in a separately curbed and drained area.

26.6.8 Where cooling water from retorts is recirculated the method adopted should be approved and the specifications should contain complete details.

26.7 Load-in, load-out areas

26.7.1 The load-in, load-out area should be in accordance with Chapter 22.

26.7.2 Where raw unprocessed vegetables are received, a load-in area separate from that for meat must be provided.

26.8 Empty can warehouse

26.8.1 Dust and vermin proof facilities of adequate size should be provided for storing empty cans.

26.9 Finished goods warehouse

26.9.1 Dust and vermin proof facilities of adequate size separate from the empty can warehouse, should be provided for storing finished products.

26.10 Carton store

26.10.1 Dust and vermin proof facilities of adequate size should be provided for storing empty cartons.

26.10.2 Rust resistant shelving with the bottom shelf at least 300 mm above the floor should be provided.

26.11 Cleaning materials store

26.11.1 Facilities of adequate size should be provided for storing cleaning materials.

26.11.2 Where the store opens onto edible product areas, a solid panel, full-height, self-closing door should be fitted to the opening.

26.11.3The store room should be separately drained, adequately ventilated and fitted with shelving.

26.12 Ingredient room

26.12.1A separate room or rooms should be provided for storing and mixing ingredients and additives intended to be used in the product.

26.12.2Provisions should be made for ingredients to be stored in approved containers which are clearly labelled as to contents.

26.12.3Rust resistant shelving with the bottom shelf at least 300 mm above the floor should be provided.

26.12.4The ingredient room should be equipped for locking.

26.12.5Facilities should be provided for storing restricted additives under security.

26.13 Refrigerated storage rooms

26.13.1Adequate refrigerated storage space should be provided for meat, meat products, other perishable ingredients and perishable finished products likely to be on the premises at any one time.

26.13.2Chillers and freezers should be in accordance with Chapters 20 and 21 respectively.

26.13.3Where raw unprocessed vegetables are to be stored on the premises, a refrigerated storage area or room separate from meat should be provided.

26.14 Meat thawing and tempering rooms

26.14.1Full details of the tempering or thawing operation used should be provided and should include the initial and final product temperature duration of the operation and the operating temperature.

26.14.2Where thawing is by immersion in water, the rate of change of water should ensure that the mass of water exchanged in a unit of time is at least equal to the mass of meat treated in the same time, and the rate of change of water in L per minute should be stated.

26.14.3Thawing and tempering chillers should be constructed in accordance with Chapter 20.

26.14.4The method of disposal of any used cartons and wrappings should be stated.

26.15 Meat preparation room

26.15.1Where meat is to be prepared by boning, slicing mincing or the like, a separate room should be provided.

26.15.2The meat preparation room should be constructed in accordance with Chapter 25, except that where meat is held so as not to rise above 7°C, the room used need not be temperature controlled.

26.16 Brining and pickling rooms

26.16.1 Where provided, these rooms should be constructed in accordance with 27.13.

26.17 Boning rooms

26.17.1 Equipment to ensure that the temperature of these rooms can be controlled at or below 10°C as required.

26.18 Incubation room

26.18.1 A room or rooms of adequate size should be provided for incubating samples from each batch of each retort, or at least 0.1 per cent of cans from a continuous retorting operation, for 10 days at a temperature of between 28°C and 52°C.

26.18.2 An incubation room must be equipped for locking and should be provided with adequate rust-resistant shelving. The room should be equipped with a 7 day recording thermometer, which must be accurate to at least plus or minus 1°C and the chart timing device of which must be accurate to within plus or minus 1 per cent. A means of preventing unauthorised adjustments must be provided. Facilities provided must ensure free circulation of air within the room.

26.19 Handwash facilities and sterilisers

26.19.1 Approved foot or thigh operated basins or troughs, liquid soap dispensers and approved hand drying systems should be at personnel entrances to the processing areas.

26.19.2 Handwash basins, liquid soap dispensers and approved hand drying systems should be strategically located in processing rooms.

26.19.3 Adequate numbers of handwash basins together with liquid soap dispensers should be provided at hand filling lines.

26.20 Empty can wash

26.20.1 Approved empty can wash or jet vacuum devices complying with Chapter 42 should be provided on each filling line.

26.21 Pre-retort can wash

26.21.1 After filling and closing, each filling line should be provided with a can washing device capable of effectively removing matter from the outer can surface.

26.22 Can elevators and races

26.22.1 Can elevators and races should not dent or otherwise damage can.

26.23 Product contacting equipment

26.23.1 All product contacting equipment should be in accordance with Chapter 42.

26.24 Can filling and closing equipment

26.24.1 Can filling and closing equipment should be of sanitary construction and be approved.

26.25 Equipment wash areas

26.25.1 Where equipment wash areas are provided, they should be supplied with hot and cold wash points and drained as for other wash areas.

26.25.2 Where the area is within a processing room, provision should be made to prevent splash onto edible product and to exhaust steam vapour to the outside atmosphere.

26.26 Gear storage area

26.26.1 An area should be provided for the storage of aprons and gear when employees are not in processing areas.

26.27 Truckways

26.27.1 Where rails are used, truckways should have a space of at least 2.1 m between the vertical of a rail on which meat is hung and a wall or item of equipment.

26.27.2 In other cases the minimum width of a truckway should be 1.5 m.

26.28 Retort room or area

26.28.1 Adequate segregation between retorted and unretorted containers should be provided.

26.28.2 Adequate means of extracting steam and vapour from this room to the outside atmosphere should be provided.

26.28.3 Atmospheric cookers, batch retorts and continuous retorts should be in accordance with Chapter 42.

26.29 Labelling and packing room or area

26.29.1 The location of these operations should not constitute a hazard to recently retorted cans that have yet to cool and dry.

26.30 Waste disposal

26.30.1 Waste disposal and drainage should be in accordance with Chapter 5.

26.31 Product details

26.31.1 Details of the range of product types to be produced, the filling lines involved and the mixing and retorting procedures to be used should accompany submissions for cannery approval.

27 Smallgoods

27.10 Introduction

27.10.1 This chapter covers processed meat products other than canned meat, frozen cooked meat and meat pasty/meat vegetable products and includes the following:

- cured meat
- smoked meat
- meat containing approved additives
- meat products which have been subjected to processes designed to achieve and preserve commercial sterility

27.11 Site

27.11.2 For independent premises, approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

27.12 Location

27.12.3 Smallgoods operations should be in an edible product section of the premises.

27.13 Surrounds

27.13.4 Surrounds should be in accordance with Chapter 4.

27.14 Basic construction

27.14.5 Basic construction requirements should be in accordance with Chapter 6.

27.15 Specific construction requirements

27.15.6 Separate rooms should be provided for the following operations:

- drying and smoking ham, bacon or other meat
- boning, cutting and trimming ham, bacon or other meat
- curing ham, bacon or other meat
- washing and cooking meat
- filling casings with meat

27.15.7 The minimum distance from the floor to a wall plate or ceiling in the following rooms or areas should be as follows:

- cooking - 3.6 m
- boning - 3 m

- filling - 3 m

27.16 Load-in, load-out area

27.16.8 The load-in, load-out area should be in accordance with Chapter 22.

27.17 Carton store

27.17.9 Dust and vermin proof facilities of adequate size should be provided.

27.17.10 Rust resistant shelving with the bottom shelf at least 300 mm above the floor should be provided.

27.18 Cleaning materials store

27.18.11 Facilities of adequate size should be provided.

27.18.12 Where the store opens into edible product areas, a solid panel, full height, self-closing door should be fitted to the opening.

27.18.13 The storeroom should be separately drained, adequately ventilated and fitted with shelving.

27.19 Ingredient room

27.10.1 A separate room or rooms should be provided for storing and mixing ingredients and additives intended to be used in the product.

27.10.2 A separate room or rooms should be provided for storing and mixing ingredients and additives intended to be used in the product.

27.10.3 Ingredients should be stored in approved containers which are clearly labelled as to contents.

27.10.4 Rust resistant shelving with the bottom shelf at least 300 mm above the floor should be provided.

27.10.5 The room should be equipped for locking.

27.10.6 Facilities should be provided for storing restricted additives under security.

27.20 Refrigerated storage rooms

27.20.14 Adequate refrigerated storage space should be provided for all meat, meat products, other perishable ingredients and perishable finished products likely to be on the premises at any one time.

27.20.15 Chillers and freezers should be in accordance with Chapters 20 and 21 respectively.

27.21 Meat thawing and tempering rooms

27.12.1 Full details of the tempering or thawing operation used should be provided.

27.12.2 Where thawing is by immersion in water, the rate of change of water should ensure that the mass of water exchanged in a unit of time is at least equal to the mass of meat treated in the same time, and the rate of change of water in L per minute should be stated.

27.12.3 Thawing and tempering chillers should be constructed in accordance with Chapter 20.

27.12.4 The method of disposal of used cartons and wrappings should be stated.

27.22 Meat preparation room

27.13.1 Where meat is to be prepared by boning, slicing, mincing or the like a separate room should be provided.

27.13.2 The meat preparation room should be constructed in accordance with Chapter 25, except that where meat is held so as not to rise above 7°C the room need not be temperature controlled.

27.23 Brining and pickling rooms

27.14.1 The temperature of a room used for curing bacon and ham should be capable of being controlled at or below 4°C.

27.14.2 Where other brining or pickling operations are carried out, a separate room, capable of being temperature controlled at or below 10°C, should be provided.

27.14.3 Pickling tubs should be of sanitary construction and of approved design.



Cooking cabinets

see 27.23

27.24 Mixing and filling room

27.15.1A separate room capable of being temperature controlled at or below 10°C should be provided for mixing and filling product into casings.

27.25 Conditioning rooms

27.16.1Conditioning rooms should be constructed as for other edible product areas.

27.26 Handwash facilities and sterilisers

27.17.1Approved foot or thigh operated basins or troughs, liquid soap dispensers and approved hand drying systems should be located at personnel entrances to processing areas.

27.17.2Handwash basins, liquid soap dispensers and approved hand drying systems should be strategically located within processing rooms.

27.17.3Adequate numbers of handwash basins, together with liquid soap dispensers, should be provided in association with hand filling operations.

27.27 Product contacting equipment

27.18.1Product contacting equipment should be in accordance with Chapter 42.

27.28 Equipment wash areas

27.19.1Where equipment wash areas are provided, they should be supplied with hot and cold wash points drained as for other wash areas and supplied with facilities to exhaust steam and vapour to the outside atmosphere.

27.19.2Where the area is within a processing room, provision should be made to prevent splash onto edible product and exhaust steam and vapour to the outside atmosphere.

27.29 Gear storage area

27.20.1An area should be provided for the storage of aprons and gear when employees are not in processing areas.

27.30 Truckways

27.21.1Where rails are used, truckways should have a space of at least 2.1 m between the vertical of a rail on which meat is being hung and a wall or item of equipment.

27.31 Vacuum packaging operations

27.22.1Vacuum packaging operations should be conducted in an area capable of being temperature controlled at or below 10°C.

27.22.2Steam producing shrink tunnels should be vented direct to the outside atmosphere.

27.32 Smoke rooms

27.23.1 Where smoke rooms are not individually drained, the floor should slope at a minimum gradient of 1:50 to a floor waste or wastes immediately outside the room.

27.23.2 An adequate method of extracting smoke to the outside atmosphere should be provided.

27.33 Cooking room

27.24.1 An adequate method of extracting steam and vapour produced by cooking vessels and dipping vats should be provided.

27.24.2 Cooked product from the cook room should not enter raw product areas.

27.34 Packing room or area

27.25.1 The method of dispensing wrapping material and storing cartons within the room should be detailed.

27.35 Water supply

27.26.1 A supply of water adequate for the proposed operations should be available.

27.26.2 The water supply should be in accordance with Chapter 5.

27.36 Waste disposal

27.27.1 Waste disposal and drainage should be in accordance with Chapter 5.

27.37 Product details

27.28.1 Details of the range of products to be produced and any cooking, conditioning or other treatment used should accompany submissions for smallgoods establishment approval.

28 Prepared meat with pastry and meat with vegetable products

28.1 Introduction

28.1.1 The products covered by this chapter include pies, pasties, sausage rolls, pizzas and TV dinners.



28.2 Site

28.2.1 For independent premises, approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

28.3 Location

28.3.1 Operations associated with product preparation should be in an edible product section of the premises.

28.4 Surrounds

28.4.1 Surrounds should be in accordance with Chapter 4.

28.5 Basic construction

28.5.1 Basic construction requirements should be in accordance with Chapter 6.

28.6 Specific construction requirements

28.6.1 Areas used for receiving, storing and preparing meat should be separated by full height walls from other operations, leaving only the necessary accessways for product and personnel.

28.6.2 Subject to 28.6.3, where raw unprocessed vegetables are used, separate areas or rooms should be provided for receiving, storing and preparing them.

28.6.3 Where washed, peeled and diced vegetables are received on the premises in a form suitable for incorporation in the product mix, a separate room or area is not necessary.

28.6.4 Separate chillers should be provided for meat, for fish and for poultry brought to the premises chilled.

28.6.5 Where meat, fish and poultry products are to be prepared simultaneously, separate temperature controlled preparation rooms should be provided.

28.6.6 The minimum distance from the floor to a wall plate or ceiling in the following rooms or areas should be as follows:

- mixing - 3 m
- filling - 3.6 m
- cooking - 3.6 m.

28.7 Load-in, load-out area

28.7.1 The load-in, load-out area should be in accordance with Chapter 22.

28.7.2 Where raw unprocessed vegetables are received, a load-in area separate from that for meat must be provided.

28.8 Meat preparation room

28.8.1 A room, capable of being temperature controlled at or below 10°C, should be provided for meat preparation except that where meat is held so as not to rise above 7°C the room would not need to be temperature controlled.

28.8.2 The room should be constructed in accordance with Chapter 25.

28.9 Drainage

28.9.1 Vegetable and meat preparation areas, chillers, and pastry filling areas should be provided with drainage that will effectively and rapidly remove waste water from the floor.

28.9.2 Areas where operations other than vegetable and meat preparation takes place should be provided with drainage outlets. The method of cleaning the area should be specified.

28.10 Carton store

28.10.1 Dust and vermin proof facilities of adequate size should be provided for storing empty cartons.

28.10.2 Rust resistant shelving with the bottom shelf at least 300 mm above the floor should be provided.

28.11 Cleaning materials store

28.11.1 Facilities of adequate size should be provided for storing cleaning materials.

28.11.2 Where the store opens onto edible product areas, a solid panel, full-height, self-closing door should be fitted to the opening.

28.11.3 The storeroom should be separately drained, adequately ventilated and fitted with shelving.

28.12 Ingredient room

28.12.1 A separate room or rooms should be provided for storing and mixing ingredients and additives intended to be used in the product.

28.12.2 Ingredients should be stored in approved containers clearly labelled as to contents.

28.12.3 Rust-resistant shelving with the bottom shelf at least 300 mm above the floor should be provided.

28.12.4 The ingredient room should be equipped for locking.

28.12.5 Facilities should be provided for holding restricted additives under security.

28.13 Refrigerated storage rooms

28.13.1 Adequate refrigerated storage space should be provided for meat, meat products, other perishable ingredients and perishable finished products likely to be on the premises at any one time.

28.13.2 Chillers and freezers should be in accordance with Chapters 20 and 21 respectively.

28.13.3 Where raw unprocessed vegetables are to be stored on the premises, a refrigerated storage area or room separate from meat should be provided.

28.14 Meat thawing and tempering rooms

28.14.1 Full details of the tempering and thawing operation used should be provided.

28.14.2 Where thawing is by immersion in water, the rate of change of water should ensure that the mass of water exchanged in a unit of time is at least equal to the mass of meat treated in the same time, and the rate of change of water in L per minute should be stated.

28.14.3 Thawing and tempering chillers should be constructed in accordance with Chapter 20.

28.14.4 The method of disposal of used cartons and wrappings should be detailed.

28.15 Handwash facilities and sterilisers

28.15.1 Approved foot or thigh operated basins or troughs, liquid soap dispensers and approved hand drying systems should be at personnel entrances to processing areas.

28.15.2 Handwash basins, liquid soap dispensers, and approved hand drying systems should be strategically located within processing rooms.

28.15.3 Adequate numbers of handwash basins together with liquid soap dispensers should be provided in association with hand filling operations.

28.16 Product contacting equipment

28.16.1 Product contacting equipment should be in accordance with Chapter 42.

28.17 Water supply

28.17.1 An adequate supply of water for the proposed operations should be available.

28.17.2 The water supply should be in accordance with Chapter 5.

28.18 Waste disposal

28.18.1 Waste disposal and drainage should be in accordance with Chapter 5.

28.19 Product details

28.19.1 Details of the range of products to be produced and any cooking, conditioning or other treatment used should accompany submissions for approval.

29 Frozen cooked meat

29.1 Introduction

29.1.1 This chapter details the requirements for establishments producing frozen cooked meat.

29.2 Site

29.2.1 For independent premises, approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

29.3 Location

29.3.1 Cooked meat should be prepared in an edible-product section of the premises.

29.4 Surrounds

29.4.1 Surrounds should be in accordance with Chapter 4.

29.5 Basic construction

29.5.1 Basic construction requirements should be in accordance with Chapter 6.

29.6 Specific construction requirements

29.6.1 Separate rooms should be provided for the following operations:

- cooking
- trimming (rebagging)
- packing into cartons

29.6.2 During cooking operations, the only access permitted from the cooking area to other processing areas is by an opening large enough to permit the entry of product prepared for cooking. Design should take account of this. Other openings should be capable of being locked.

29.6.3 A change room should be provided for supervisory personnel and Departmental officers to change their outer garments before entering the meat cooking areas.

29.6.4 Two lockers at least 300 mm x 450 mm x 1.5 m, per employee should be provided for personnel in the cooking area change room.

29.6.5 Access to persons entering or leaving the cooking area should be through the change room.

29.6.6 The minimum distance from the floor to a wall plate or ceiling in the following rooms should be as follows:

- preparation - 3 m
- cooking - 3.6 m
- trimming (rebagging) - 3 m
- packing - 3 m.

29.7 Load-in, load-out area

29.7.1 The load-in, load-out area should be in accordance with Chapter 22.

29.8 Carton store

29.8.1 Dust and vermin proof facilities of adequate size should be provided for storing empty cartons.

29.8.2 Rust resistant shelving with the bottom shelf at least 300 mm above the floor should be provided.

29.9 Cleaning materials store

29.9.1 Facilities of adequate size should be provided for storing cleaning materials.

29.9.2 Where the store opens onto edible-product areas, a solid panel, full-height, self-closing door should be fitted to the opening.

29.9.3 The store room should be separately drained, adequately ventilated and fitted with shelving.

29.10 Ingredients room

29.10.1A separate room should be provided for storing and mixing ingredients and additives intended to be used in or on the product.

29.10.2Ingredients and additives should be stored in approved containers which are clearly labelled as to contents.

29.10.3Rust resistant shelving with the bottom shelf at least 300 mm above the floor should be provided.

29.10.4The ingredients room should be equipped for locking.

29.11 Refrigerated storage rooms

29.11.1Adequate refrigerated storage space should be provided for fresh meat and frozen cooked meats likely to be on the premises at any one time.

29.11.2The freezer room should be capable of operating at a temperature below -18°C.

29.11.3Chillers and freezers should be in accordance with Chapters 20 and 21.

29.12 Meat thawing and tempering rooms

29.12.1Full details of any tempering or thawing operation used should be provided.

29.12.2Where thawing is by immersion in water, the rate of change of water should ensure that the mass of water exchanged in a unit of time is at least equal to the mass of meat treated in the same time, and the rate of change of water in L per minute should be stated.

29.12.3Thawing and tempering chillers should be constructed in accordance with Chapter 20.

29.12.4The method of disposal of used cartons and wrappings should be stated.

29.13 Cooked meat chilling facilities

29.13.1Where provided, cooked meat chilling facilities should be capable of reducing the temperature of cooked meat at its centre to 20°C within 5 hours and then to 7°C within a further 3 hours.

29.13.2Active chillers should be in accordance with Chapter 20.

29.13.3Where water cooling of the cooked meat is used, full details of the process used, including the rate of change of water in L per minute and the equipment involved, should be provided.

29.14 Meat preparation room

29.14.1 Where provided, the meat preparation room should be constructed in accordance with Chapter 25.

29.15 Handwash facilities and sterilisers

29.15.1 Approved foot or thigh operated basins or troughs, liquid soap dispensers and approved hand drying systems should be at personnel entrances to the processing areas.

29.15.2 Handwash basins, liquid soap dispensers, approved hand drying systems and sterilisers of a size to accommodate product contacting implements should be strategically located in processing rooms.

29.16 Cooking area

29.16.1 Adequate means of extracting steam and vapour to the outside atmosphere should be provided.

29.17 Trimming/rebagging room

29.17.1 Where cooked meat is to be unbagged, trimmed and rebagged, the operation should be in a separate room capable of being temperature controlled at or below 10°C.

29.17.2 Facilities should be provided to contain and dispose of meat juices and to hold used wraps before disposal.

29.17.3 The wrapping of meat product handled in this manner is required to be sealed before the product enters the carton packing room and the design should take account of this.

29.18 Cooked meat handling

29.18.1 The equipment used in handling exposed cooked meat should be detailed.

29.19 Laboratory

29.19.1 Bacteriological monitoring of frozen cooked meat production is required. It is recommended that a laboratory equipped for routine bacteriological examinations adjoin the cooked meat section.

29.20 Product contacting equipment

29.20.1 Product contacting equipment should be in accordance with Chapter 42.

29.21 Gear storage area

29.21.1 An area should be provided for storing aprons and gear when employees are not in the room.

29.22 Packing room

29.22.1A separate room, temperature controlled at or below 10°C, should be provided for packing wrapped meat into cartons.

29.22.2The method of holding cartons within the room should be detailed.

29.22.3Employees in this area may use amenities provided for employees in the raw meat area.

29.23 Equipment wash areas

29.23.1Where provided, equipment wash areas should be supplied with hot water and cold water hose points and drained as for other wash areas.

29.23.2Where the area is located within a processing room, provision should be made to prevent splash onto edible product and exhaust steam and vapour to the outside atmosphere.

29.24 Establishment water supply

29.24.1An adequate supply of water for the proposed operation should be available.

29.24.2Provision should be made for water used for cooling cooked meat to be chlorinated to a level of at least 2 ppm of free residual chlorine after 20 minutes in contact. The method of achieving this should be detailed in the specifications.

29.24.3The water supply should be in accordance with Chapter 5.

29.25 Waste disposal

29.25.1Waste disposal and drainage should be in accordance with Chapter 5.

29.26 Product details

29.26.1Details of the range of products to be produced and the cooking process to be used should accompany submissions seeking approval for frozen cooked meat premises.

30 Meat depots

30.1 Introduction

30.1.1 This chapter deals with the structural requirements for premises receiving, storing, and dispatching meat to other premises for further processing.

30.2 Site

30.2.1 Approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

30.3 Surrounds

30.3.1 Surrounds should be in accordance with Chapter 4.

30.4 Basic construction

30.4.1 Basic construction requirements should be in accordance with Chapter 6.

30.5 Load-in, load-out area

30.5.1 The load-in, load-out area should be in accordance with Chapter 22.

30.6 Storing products other than meat

30.6.1 Where commodities other than meat are handled at the premises a complete list of these should be provided. The design should ensure that such other products are not a source of contamination to meat and meat products.

30.7 Refrigerated storage rooms

30.7.1 Adequate refrigerated storage space should be provided for meat, meat products and other perishable products likely to be on the premises at any one time.

30.7.2 Chillers and freezers should be in accordance with Chapters 20 and 21 respectively.

30.7.3 Chillers should be equipped with facilities that allow product to be held under security.

30.8 Handwash facilities and sterilisers

30.8.1 Approved foot or thigh operated basins or troughs, liquid soap dispensers, approved hand drying systems and sterilisers of a size to accommodate product contacting implements should be in close proximity to the operations within the premises.

31 Container system unit depots

31.1 Introduction

31.1.1 This chapter deals with the structural requirements for premises packing meat into container system units before shipping.



Loading a container system unit

see 31.1

31.2 Site

31.2.1 Approval of the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

31.3 Surrounds, outside facilities and services

31.3.1 Surrounds, outside facilities and services should be in accordance with Chapter 4.

31.4 Basic construction

31.4.1 Details of the proposed form of construction should be supplied.

31.4.2 Basic construction requirements should be in accordance with the applicable parts of Chapter 6.

31.5 Packing area

31.5.1 An area in which meat is packed into, or unpacked from a container system unit, should be under a cover.

31.6 Storing products other than meat

31.6.1 Where products other than meat are handled at the premises, a complete list of these should be provided. The design should ensure that such other products are not a source of contamination to meat or meat products.

31.7 Container system unit wash and sterilisation area

31.7.1 An area should be provided either on site or nearby for washing and sterilising container system units.

31.7.2 Where located on the premises, the area should be paved, drained and provided with hot water and cold water host points.

31.8 Amenities

31.8.1 Employee amenities should comply with the relevant State or local authority requirements and documentary evidence in this regard should be provided.

31.9 Meat examination facilities

31.9.1 Adequate access to a meat examination facility, for example at a nearby registered cold storage establishment, must be demonstrated.

32 Airport meat handling facilities

32.1 Introduction

32.1.1 This chapter deals with the structural requirements for airport terminals packing meat into container system units or storing container system units packed with meat, before shipping as air cargo.

32.2 Site

32.2.1 Approval of the site in accordance with 2.1 through 2.4 and Chapter 3 should be obtained before proceeding with construction.

32.3 Surrounds, outside facilities and services

32.3.1 Surrounds, outside facilities and services should be in accordance with Chapter 4.

32.4 Basic construction

32.4.1 Details of the proposed form of construction should be supplied.

32.4.2 Basic construction should be in accordance with the applicable parts of Chapter 6.

32.5 Packing area

32.5.1 An area in which cartoned or packaged meat is packed into or unpacked from a container system unit, needs to be under cover.

32.5.2 When chilled meat carcasses or quarters are to be packed into or unpacked from a container system unit, provision must be made for this to be done within the warehouse or enclosed area where the product will not be exposed to contamination.

32.6 Systems of meat handling

32.6.1 The different systems of handling meat at airports, which require registration as a prerequisite, are as follows:

- chilled or frozen meat loaded direct from a refrigerated transport vehicle into a container system that is then loaded straight onto an aircraft;
- chilled or frozen meat transferred direct from a refrigerated transport vehicle into a container system unit that is then held under refrigeration before being loaded onto an aircraft;
- chilled or frozen meat loaded direct into a container system unit at another registered establishment and transferred and held at the airport prior to loading; and
- chilled or frozen meat transferred from a refrigerated transport vehicle into a chiller or freezer at the airport before being packed into a container system unit for loading straight onto an aircraft.

The application for registration should indicate which of the above systems are to be use.



Air freighted container units

see 32.6

32.7 Storage of products other than meat

32.7.1 Where other products are assembled at the premises, these other products will be required to be handled so as not to be a source of contamination to meat or meat products and this should be taken into consideration in the design.

32.8 Container system unit wash and sterilisation area

32.8.1 An area should be either on site or nearby for washing and sterilising container system units.

32.8.2 Where located on the premises, the area should be paved, drained and provided with hot water and cold water hose points.

32.9 Meat examination facility

32.9.1 Adequate access to a meat examination facility, for example at a nearby registered cold storage establishment, should be demonstrated.

33 Container system unit terminals

33.1 Introduction

33.1.1 This chapter deals with the information to be submitted to register a premises for storing container system units fully packed with meat awaiting shipment.

33.2 Submission details

33.2.1 The submission should include a locality plan showing the site in relation to the local area, a site plan indicating sealed roadways, paved areas, where export container system units are stored and methods of maintaining temperatures where refrigerated products are held.

33.2.2 Employee amenities should comply with the relevant State or local authority requirements and documentary evidence in this regard should be provided.

34 Canned meat stores

34.1 Introduction

34.1.1 This chapter outlines the facilities required for premises wishing to store canned meats before export.

34.2 Site

34.2.1 Approval for the site, in accordance with 2.1 through 2.4 and Chapter 3, should be obtained before proceeding with construction.

34.3 Surrounds

34.3.1 Surrounds should be in accordance with Chapter 4.

34.4 Basic construction

34.4.1 The building should be of sound construction and be rodent and vermin proof.

35 Meat carrying vehicles

35.1 Introduction

35.1.1 This chapter applies to the construction of vehicles or container systems units used for carrying meat and meat products by road, rail, sea and air, whether under their own propulsion or not.

35.2 Internal construction

35.2.1 Internal surfaces of the vehicles should be constructed from rust resistant metal or approved non-toxic plastic substances.

35.2.2 Internal wall and ceiling surfaces should be finished smooth.

35.2.3 Floors may be constructed from checker-plate or T bars.

35.2.4 Internal surfaces should be rigidly secured to a solid backing.

35.2.5 The wall to floor joint and wall to wall joints should be coved with a minimum radius of 25 mm.

35.2.6 Joints between sheets of metal lining the wall, floor and ceiling should be continuously welded. Where pop rivets are used they should be of the blind variety.

35.2.7 Internal surface joints should be smooth or flashed.

35.2.8. Meat carrying vehicles should be effectively insulated with stable insulating material.

35.3 Door construction

35.3.1 When doors are closed an effective seal should be provided which is insect and dust proof and prevents the loss of temperature.

35.3.2 The doors should not be capable of being used as loading ramps.

35.3.3 Ramps, where provided, should be designed so they cannot be stowed within the vehicle.

35.3.4 Door openings should be at least 1.35 m wide.

35.3.5 Doors should be provided with facilities that will allow the transport of product under security.

35.4 Drainage

35.4.1 The vehicle should be constructed so that it is capable of being effectively drained.

35.5 Rails

35.5.1 Where meat is transported as a hanging load, rails and rail supports of approved materials should be provided.

35.5.2 The rails should be high enough that the lowest part of the load is at least 150 mm from the floor.

35.6 Refrigeration

35.6.1 Refrigeration by whatever means provided should be such that it is capable of maintaining a suitable temperature throughout the period of transport.

35.6.2 Where refrigeration is by forced draft units inside the vehicle, the units should be provided with drip trays drained to the exterior of the vehicle.

35.7 Lighting

35.7.1 Where lighting is supplied, the light source should be covered by shatterproof shields.

36 Employee amenities

36.1 Provision of amenities

36.1.1 Amenities for employees should be provided on registered premises in accordance with this chapter.

36.1.2 Living accommodation, where provided for employees, should be off the site.

36.2 Location and access

36.2.1 Amenities for employees should be convenient to the workplace in an area free from undue noise and odour.

36.2.2 Access to the amenities must not cause employees from edible product departments to pass through inedible product departments or vice versa.

36.2.3 Paved walkways should be provided from the workplace in the amenities.

36.2.4 It is recommended that where practical, the walkways be covered.

36.3 Separation

36.3.1 Amenities for male employees should be separate and distinct from those of female employees, except that common dining rooms may be provided.

36.3.2 Separate amenities should be provided for employees working in edible product processing rooms and those working in inedible product areas.

36.4 Basic construction

36.4.1 Walls, floors and ceilings should be constructed of durable materials that are easy to clean.

36.4.2 Walls and ceilings should be of light colours that will reflect light and give a bright appearance to the rooms.

36.4.3 The wall to wall and wall to floor junctions in rooms should be covered.

36.4.4 Internal ledges should be sloped at an angle of 45°.

36.4.5 Exterior openings must be insect proof and construction should ensure that rodents and other vermin are excluded.

36.4.6 If mechanical ventilation is installed it should be capable of providing at least 4 air changes an hour.

36.4.7 Fresh air intake for mechanical ventilation should be located in such a way that air is not contaminated.

36.5 Required facilities

Dining room

36.5.1 Where common dining rooms have a direct connection with change rooms, entrances to the change room must be provided with full height doors and privacy screens.

Toilet rooms

36.5.2 A floor waste of suitable size should be provided in water closets and urinal rooms.

36.5.3 Water closets and urinals should not be in shower rooms.

36.5.4 Doors leading to toilet rooms should be full height, completely fill the opening and be self-closing.

36.5.5 Toilet rooms without means of natural ventilation should be effectively mechanically ventilated to the outside air.

36.5.6 Where mechanical ventilation is used, it should be activated by a common switch with the artificial lighting in the area.

36.5.7 Toilet rooms which are mechanically ventilated should have a louvred section at least 300 mm x 300 mm in the lower panel of the door.

36.5.8 Toilet rooms may not be entered directly from a work room, but entrance through an intervening dressing room or ventilated toilet room vestibule is permitted.

36.5.9 Toilet rooms should not be entered through a shower room.

36.5.10 Toilets rooms for female employees should be provided with facilities for the disposal of personal hygiene items.

Shower room

36.5.11 Each shower cubicle should be provided with partitions to effectively confine water to that cubicle.

36.5.12 The drainage from each cubicle should be such that water from one cubicle does not flow over the floor of another.

36.5.13A curb or suitable water restraining device should be provided at the shower entrance.

36.5.14 Shower rooms should not be entered through a toilet room.

36.5.15 An adequate supply of hot water and cold water should be connected to showers and a method provided to remove vapour from shower rooms.

Change rooms

36.5.16 A separate change room equipped with clothes lockers and seating and having direct access to showers should be provided.



Change room

see 36.5

36.6 Furniture and fittings

36.6.1 Lunch tables should be provided with smooth impervious tops and edges and be constructed so the tables can be readily cleaned.

36.6.2 Adequate seating which can be readily cleaned should be provided in lunch rooms.

Handwash basins

36.6.3 Handwash basins must be provided in sufficient number in close proximity to the toilet room entrance. The basins must be operated by pedal or thigh mechanisms and supplied with liquid soap dispensers.

36.6.4 Approved hand drying systems and receptacles for used towels must be provided.

36.6.5 An adequate supply of warm water must be connected to the basins. Lockers and seating

36.6.6 Lockers should have dimensions of at least 375 mm x 450 mm x 1.5 m, and have 45° sloping tops

36.6.7 Lockers should be mounted 400 mm clear of the floor.

36.6.8 Seating at least 300 mm wide should be provided in association with the lockers.

36.6.9 The minimum aisle width between lockers should be 2.1 m.

36.6.10 Where lockers face a wall, the lockers should be at least 1.15 m from the wall.

37 Authorised officer amenities

37.1 Provision of amenities

37.1.1 Amenities for male and female Departmental officers is to be provided on the premises in accordance with this chapter.

37.1.2 Living accommodation, where required to be provided for Departmental officers, must be off the registered premises.

37.2 Location and access

37.2.1 The location of, and access to, amenities for Departmental officers is to be in accordance with 36.2.

37.3 Separation

37.3.1 Amenities for Departmental officers must be separate from those for employees but may be located within the same building.

37.3.2 Amenities for male Departmental officers must be separate from those of female Departmental officers, except that a common dining room may be provided.

37.4 Basic construction

37.4.1 Basic construction requirements should be in accordance with 36.4.

37.4.2 Suitable emergency exits should be provided within the authorised officer amenities where necessary in accordance with the relevant State requirements.

37.5 Office space

37.5.1 A well located and lockable office having dimensions of at least 3 m x 3 m must be provided and must be equipped with the following items:

- a telephone
- a desk for each Departmental officer using the office
- a chair for each Departmental officer using the office
- a metal cabinet equipped for locking
- an approved locker for each Departmental officer using the office
- floor covering of an acceptable type

- handwash facilities where these are not conveniently located nearby

37.5.2 At premises where both veterinary officers and meat inspectors are present, separate offices must be provided for the veterinary officer and the senior meat inspector.

37.5.3 The offices for the veterinary officer and senior meat inspector required under 37.5.2 must be equipped in accordance with 37.5.1.

37.5.4 The office for the veterinary officer located at a slaughtering establishment must have a shower and toilet attached to the veterinary officer's office.

37.5.5 Where more than one veterinary officer is stationed at the premises, the office provided under 37.5.2 must be increased in size by at least 6.6m² for each additional veterinary officer.

37.5.6 Where more than one veterinary officer is located at a slaughtering establishment a change room and shower, and a separate toilet shall be attached to the Veterinary Officer's office.

37.6 Required facilities

37.6.1 Where more than two Departmental officers are stationed at a premises, and at all premises where slaughtering or game processing is carried out, separate dining room, change room, rest room, shower and toilet facilities in accordance with 37.6.3 to 37.6.24 inclusive must be provided.

37.6.2 The amenities for Departmental officers under 37.6.1 must be in addition to the office or offices required under either 37.5.1 or 37.5.2.

Dining room

37.6.3 The area required in the Departmental officers' dining room is calculated on the basis of 15 m² of unencumbered floor area for 3 to 15 officers. For the calculation of unencumbered floor area, chairs and tables are included as part of the unencumbered area.

37.6.4 For each additional officer, 1.3 m² of additional space should be provided.

37.6.5 The floor of the Departmental officers' dining room is to have an acceptable floor covering.

37.6.6 The minimum dining area required is calculated on the total number of officers likely to occupy the facilities at any one time.

37.6.7 Where common dining rooms have a direct connection with change rooms, entrances to the change room must be provided with full height doors and privacy screens.

37.6.8 Adequate exhaust ventilation should be provided to remove such things as vapours and cooking odours.

Toilet rooms

37.6.9 Separate toilet facilities must be provided for male and female officers.

37.6.10 The number of water closets to be provided for officers of the same sex is calculated on the following basis:

- 1 to 15 officers 1 unit
- 16 to 35 officers 2 units
- 36 to 55 officers 3 units
- 56 to 80 officers 4 units
- for each additional 30 persons or part thereof 1 additional unit.

37.6.11 Urinals may be substituted for toilet bowls for male officers, but only to the extent of one third of the total number of bowls stated.

37.6.12 A floor waste of suitable size should be provided in water closet and urinal rooms.

37.6.13 Where one or two Departmental officers are stationed at a premises, it is sufficient if, in addition to the office required under 37.5.1, access to toilet facilities is provided.

37.6.14 The access to the toilet facilities for an officer under 37.6.12 must not pass through any employee amenities.



Dining room

see 37.6

Shower rooms

37.6.15 The number of cubicles required for Departmental officers should be calculated on the basis of 1 shower to each 8 officers.

37.6.16 Each shower cubicle must be provided with partitions to effectively confine water to that cubicle.

37.6.17 The drainage from each cubicle must be such that water from one cubicle does not flow over the floor of another.

37.6.18 A curb or suitable restraining device is to be provided at the shower entrance.

37.6.19 Shower rooms must not be entered through a toilet room.

37.6.20 An adequate supply of hot water and cold water must be connected to showers.

37.6.21 A method should be provided to remove vapour from shower rooms.

Change rooms

37.6.22 A separate change room equipped with lockers and seating and having direct access to showering facilities must be provided.

37.6.23 Separate change rooms must be provided for male and female Departmental officers.

37.6.24 The area of the change room must be 11 m² of unencumbered space for 3 to 15 officers, and an additional 0.7 m² for each additional officers.

Rest rooms

37.6.25 Where female authorised officers are stationed at premises, access to rest rooms is to be available.

37.7 Furniture and fittings

37.7.1 Lunch tables should be provided with smooth impervious tops and edges and be constructed so the tables can be readily cleaned.

37.7.2 Adequate seating which can be readily cleaned must be provided in lunch rooms.

Handwash basins

37.7.3 Handwash basins must be provided in sufficient number in close proximity to the toilet room entrance. The basins must be operated by pedal or thigh and supplied with liquid soap dispensers.

37.7.4 Approved hand drying systems and receptacles for used towels must be provided.

37.7.5 An adequate supply of warm water must be connected to the basins.

37.8 State authorities

37.8.1 Where State inspection staff are present on the premises, additional separate amenities are necessary and should be approved by the appropriate State authority.

37.9 Remote locations

37.9.1 Where premises are in a remote area, separate living accommodation may be required for Departmental officers.

37.9.2 The living accommodation for Departmental officers must be suitably separated from any plant, employees' living accommodation and the premises.

37.9.3 Accommodation provided must contain the following:

- individual bedrooms
- air conditioning
- private shower and toilet
- hot and cold water
- bed
- lounge chair
- curtained window(s)
- wardrobe and desk
- carpeted floors except in the toilet and shower

37.9.4 Facilities separate from those provided for employees are to be available for providing prepared meals or for preparing meals.

37.10 Meeting/recreational room

37.10.1 An air-conditional communal meeting/recreational room should be provided where more than 2 officers are stationed at a premises.

37.11 First aid facilities

37.11.1 Access to adequate first aid facilities must be provided.

37.12 Laboratory facilities

37.12.1 Laboratory facilities consisting of a separate room attached to the Authorised Officer amenities and having a floor area measuring at least 5 m x 3 m must be provided on slaughtering establishments.

37.12.2 The room shall be equipped with the following:

- stainless steel sink and drainboard
- impervious bench top
- suitable height stool or chair
- power points
- illuminating of 600 lux

38 Retail business on registered premises

38.1 Introduction

38.1.1 This chapter outlines the structural requirements for a meat retail outlet located on a registered establishment.

38.2 Basic construction requirement

38.2.1 Where a meat retail business is conducted on the registered establishment, the retail business must be constructed so that the public does not have access to the registered establishments.

38.3 Conditions

38.3.1 Where it is intended to separate a portion of a registered establishment to operate for the domestic market, the following conditions must be met:

- complete physical separation from the registered establishment by:
 - solid full-height walls
 - a fence at least 2 m high on the outside of the premises
 - separate road access; and
 - separate employee amenities

38.3.2 Water, steam and electricity services may be shared.

39 Meat examination room

39.1 Introduction

39.1.1 This chapter deals with the structural and equipment requirements which must be provided for undertaking the following operations before export:

- collecting samples for required analysis
- rebagging meat
- recartoning meat
- visual examination of meat for compliance with trade description
- defrost inspection

39.2 Provision of room

39.2.1 Registered premises from which meat, edible offal, game meat, edible game offal and game meat products are loaded out for export should, subject to 39.2.2, contain a meat examination room complying with this chapter.

39.2.2 At a container system unit depot or premises at an airport, access to a meat examination room demonstrated in the specifications or notations accompanying the plans submitted for approval is sufficient.

39.3 Hygiene

39.3.1 The same standards of hygiene should apply as in other edible product areas.

39.4 Basic construction

39.4.1 The basic construction of the meat examination room should be to the standard detailed in Chapter 6.

39.5 Specific construction requirements

39.5.1 Where this is a food examination room already on registered premises, the room may be used as a meat examination room, provided it meets the construction and equipment requirements detailed in this chapter.

39.5.2 The meat examination room should be commensurate in size with the volume of meat to be examined, but in no case should the room measure less than 3 m x 3 m.

39.5.3 The meat examination room should be capable of being maintained at a temperature of not more than 10°C during operations.

39.5.4 The meat examination room should be capable of being held under security in the absence of an authorised officer from the premises.

39.6 Required facilities

39.6.1 An examination table or tables should be provided and should be of approved design, constructed of approved materials and of sufficient size to hold at least 2 cartons, or 2 large portions of piece meat.

39.6.2 Facilities for storing product awaiting inspection should be provided and should consist of the following:

- racks of approved design and constructed from approved materials for thawing product, or, alternatively, complete details describing the proposed thawing methods should accompany submissions
- hanging rail or rails to suspend carcase or quarter for examination

39.6.3 An approved handwash basin and steriliser supplied with liquid soap dispenser, approved hand drying system and used towel container should be within the room.

39.6.4 Facilities for storing used cartons and other wrapping materials before their removal from the meat examination room should be provided.

39.6.5 Facilities for securing rejected product before its removal from the meat examination room should be provided.

39.6.6 In addition to the normal secured storage area for product, a separate and secure facility should be provided for storing samples awaiting delivery to a laboratory and product from which the samples are drawn.

39.6.7 The facility in 39.6.6 should be large enough to store the samples and the actual product until the product is cleared for export.

39.6.8 A thermometer should be provided in the room.

39.6.9 An electrical power point should be provided.

39.6.10 A desk or table constructed from approved materials should be provided in the room for use by an authorised officer.

39.6.11 Space should be allocated for hand operated or mechanical strapping machinery.

39.7 Meat examination area for meat processing establishments

39.7.1 Establishments preparing meat or meat products for export should provide an area that can be used for the examination of meat or edible offal to be used in the manufacture of meat products. The area should be provided with lighting at the level or illumination specified for inspection areas, and with a power point.

39.7.2 Such establishments should also provide a secure storage area within a cold store that should be of sufficient size to store samples of meat or edible offal awaiting delivery to a laboratory, and the actual meat or edible offal from which the samples were drawn until clearance for use is obtained.

40 Effluent disposal systems

40.1 Introduction

40.1.1 The nature of the operations carried out in most meat plants requires the use of large quantities of water results in an effluent having high concentrates of suspended and dissolved solids, fat and biochemical oxygen demand (BOD).

40.1.2 These effluents are amendable to treatment by physical and biological processes.

40.1.3 On average, the abattoir industry uses 15 m³ of water for every tonne of dressed carcase processed. This varies ranging from about 4 to 40 rrrVtonne.

40.1.4 The level of pollutants in the effluent is variable throughout the day, and from plant to plant. The following would be a typical average analysis of raw abattoir effluent:

- biochemical oxygen demand - 3000 mg/L
- suspended solids (SS) - 1400 mg/L
- total fat - 500 mg/L

40.1.5 The approach to the problem of effluent treatment begins within the plant, not at the save- all. It is easier and less costly to reduce the quantity of water used and to prevent gross contamination of the water than it is to treat the effluent leaving the plant.

40.2 Primary treatment

40.2.1 Primary treatment involves removal of settleable, floating and suspended solids by mainly physical means such as screening, flotation and settling.

40.2.2 Settling is generally carried out in a save-all, a rectangular settling basin wherein the velocity of the liquid is reduced to allow gravitational forces to separate fat and solids from the effluent.

40.2.3 Dissolved air flotation involves pressurising a portion or the whole of the effluent stream and releasing the air saturated effluent into a flotation tank. The air is released from the liquid as fine bubbles and carried the fat and suspended solids to the surface for removal by scrapers.

40.2.4 Fat and solids produced in a primary treatment plant may be recovered for inedible rendering.

40.2.5 Primary treatment with dissolved air flotation should prove the following removal efficiencies:

- BOD - 50 per cent
- SS - 70 per cent
- fat - 90 per cent

40.3 Secondary treatment

40.3.1 Where effluent cannot be disposed of direct to a municipal sewerage system, further treatment will normally be essential to avoid pollution of receiving waters such as rivers and harbours.

40.3.2 There are several methods of secondary treatment suitable for abattoir effluent. The correct choice depends on many factors, including abattoir size, land area available, local discharge regulations and costs.

40.3.3 The two most common methods of secondary treatment are anaerobic/aerobic pond systems and the activated sludge process.

40.3.4 A system of anaerobic ponds followed by aerobic ponds has the advantage of low operating costs, but requires a large area of land. A well designed pond system should remove 95 - 98 per cent of the BOD and suspended solids.

40.3.5 The activated sludge process requires much less land area than do the pond systems, but it has high running costs due to the power requirements of aerators. The BOD and SS removal efficiency is similar to that of a pond system.



Effluent treatment

see 40.3

40.4 Tertiary treatment

40.4.1 Following secondary treatment the effluent would have typically 30 - 70 mg/L BOD and 30 - 40 mg/L SS. This is above the most commonly applied limits of 20 mg/L BOD and 30 mg/L SS required for discharge into rivers or streams.

40.4.2 One simple method of achieving tertiary treatment is by spray or flood irrigation onto land. The grass and soil provides a habitat for micro-organisms which remove the last traces of organic matter from the effluent.

41 Cleaning and sanitation

41.1 Introduction

41.1.1 It is essential that each establishment and its facilities be maintained in a clean and hygienic condition.

41.1.2 All necessary precautions must be taken at all stages to prevent contamination of meat.

41.1.3 It is not sufficient that meat be free of visible contaminants. Meat should also be free of contamination by foreign and toxic substances and pathogenic organisms that could prove harmful to the consumer.

41.1.4 A good standard of hygiene pays dividends as meat or meat products with low numbers of bacteria have a potentially long storage life. In addition, good hygiene standards are important in supplying an international market that is increasingly discriminating about the microbiological status of the meat it purchases.

41.1.5 For the above reasons it is important that cleaning and sanitation be seen as an essential part of the quality assurance program. This can be facilitated by the right construction and equipment.

41.2 Potential sources of contamination

41.2.1 Many potential sources of contamination can develop over a period of time in an establishment. It is important, therefore, that consideration be given at the design stage to eliminating many of the problems - for example, by the following methods:

- selecting equipment constructed of materials and in a manner which aids cleaning;
- using construction techniques and materials which can resist the corrosive and erosive environment of a meat plant;
- protecting walls and pillars in processing departments where it is planned to use trucks to transport material;
- sealing floors of catwalks and platforms in processing departments to prevent possible fallout of dust or dirt; and
- ensuring that all pipes and tubes used in equipment or facilities in processing areas have the ends sealed.

41.3 Hazardous materials

41.3.1 Material which may be considered a hazard to hygiene must be used and stored so as to prevent possible contamination of edible products. This is an important consideration in design.

41.3.2 The following rooms or areas should be effectively separated from and have no air connection with processing departments:

- those where spray equipment is used for branding cartons;
- those where cleaning equipment for rollers, gambrels and other gear is installed and in which strong acid or other cleaning materials are used; and
- those where other similar hazardous operations are performed.

41.3.3 Carton wiring and metal stapling machines must be located far enough from unpackaged meat to ensure that loose cut off ends of wire or staples cannot contaminate the product.

41.4 Routine cleaning of establishment and equipment

41.4.1 All sections of the establishment must be maintained in a clean and tidy condition.

41.4.2 Floors, walls, doors and soiled areas of ceilings in processing areas, together with equipment used in preparing both edible and inedible product, must be cleaned at the end of the day's operations. A more frequent clean-up may be required in some circumstances.

41.4.3 The cleaning of an establishment is demanding in terms of labour, water, energy and chemicals.

41.4.4 Clean-up can be made easier if the proper equipment and services are available. These should include the following:

- receptacles for collecting and transporting waste materials accumulated during the dry clean-up;
- a method of transporting waste materials to the rendering department for disposal;
- an adequate supply of water at the required temperature;
- a convenient bulk store for chemicals and cleaning aids;
- an effective method of distributing the detergent and sanitiser over work surfaces – for example, foamer or fogger with adequate electricity and air for its operation; and
- wash tanks of a convenient and proper size for cleaning individual items of equipment such as cutting boards.

41.5 Control of vermin

41.5.1 Preventing access to edible and packaging materials by vermin is essential.

41.5.2 Joints between materials used in the construction of walls and ceilings must be effectively sealed against the entry of insects.

41.5.3 Cracks, crevices and openings around pipes and other services passing through walls and floors must be eliminated.

41.5.4 Any openings, such as windows and doorways, that may allow rodents, birds, flies and other pests to enter must be effectively screened or otherwise treated to prevent this.

41.5.5 Air curtains may be used as an added precaution against entry of insects into buildings, but air curtains are effective only if the room they protect has a positive air pressure. A negative pressure is likely to suck flying insects into the room.

41.5.6 Air curtains should be fitted to completely cover the opening.

41.5.7 The air curtain should be at least 50 mm thick and the air stream velocity should be at least 8 m/second measured 90 mm above the floor for overhead mounted units and across the entire opening for side mounted units.

41.5.8 Open drainage lines emerging from buildings must be provided with an effective rodent proof screen or flap.

41.5.9 Drain screening covers must be effectively and always maintained in position to prevent rodents from entering rooms from drainage lines.

41.5.10 The open ends of vent stacks must be effectively screened against the entry of birds and rodents.

42 Equipment

42.1 Introduction

42.1.1 Equipment should be designed to help achieve a good standard of hygiene. Equipment should be suitable for the intended use and constructed of such materials and in such a way as to be easily cleaned and properly maintained.

42.1.2 The design, construction, installation and use of equipment must preclude the adulteration of product with lubricant, metal fragments, contaminated water or other contaminants.

42.1.3 Materials used which directly contact the product should be non-absorbent non-toxic odourless and unaffected by the product and cleaning compounds.

42.1.4 Equipment should be selected and designed to contribute to a good working environment, with careful attention being given to factors such as safety, noise, vibration and heat.

42.2 Acceptable materials

42.2.1 Product contacting equipment should be constructed from approved material.

Metal

42.2.2 Metal used in the construction of equipment should be rust resistant.

42.2.3 Galvanised steel may be used for certain applications, provided the galvanising is to the standard of 'high quality' and 'smooth finished' commercial hot dip.

Plastics and resins

42.2.4 Plastic and resinous materials should be resistant to abrasion and heat, shatterproof and non-toxic. In addition the material must not contain a constituent that will migrate to meat or other products in contact with it.

42.3 Unacceptable materials

42.3.1 Copper, including its usual alloys, is not acceptable for equipment which contacts edible product. Copper water pipes are acceptable.

42.3.2 Aluminium is not acceptable on any area of equipment that may come in contact with meat. Work stands constructed of aluminium may be satisfactory where there is only intermittent product contact.

42.3.3 Cadmium is not acceptable in any manner or form in equipment used for handling edible product.

42.3.4 Lead may not be used in equipment contacting edible product, except that it may be used in dairy solder in an amount not exceeding 5 per cent.

42.3.5 Painted surfaces are not acceptable on any equipment area that may contact edible product.

42.3.6 Enamel and porcelain are not acceptable where there is any possibility of product contact.

42.4 Design and construction

42.4.1 All parts of the product contact areas must be readily accessible to sight and reach or be capable of being dismantled to permit cleaning and inspection.

42.4.2 Interior corners in the product zone must be coved, having a minimum radius of 6 millimetres.

42.4.3 Welding within the product contact area should be continuous, smooth and flush with adjacent surfaces.

42.4.4 All parts of the product contact area should be free of recesses, open seams, gaps, crevices, protruding ledges, inside threads, bolts, rivets and dead ends.

42.4.5 Gasketing and packing materials should be non-toxic, non-porous, non-absorbent and unaffected by food products and cleaning compounds.

42.4.6 Seals and bearings should be located outside the product contact area.

42.4.7 Equipment requiring lubrication should be designed so that product is not contaminated by lubricant. Removable drip trays should be provided where necessary.

42.4.8 Where necessary, equipment should be self draining or capable of being drained.

42.5 Installation

42.5.1 Where permanently installed equipment, or equipment not readily movable, is not completely and effectively sealed to the floor or wall in away that precludes the entrance of moisture between the equipment and the floor or wall, the equipment should be mounted at least 300 mm above the floor or from any wall.

42.5.2 Water wasting equipment should be connected directly to the establishment drainage system to ensure that the water does not flow over the floor.

42.5.3 Drainage connections from equipment used for processing edible product should be connected to the drainage system by an interrupted connection.

42.5.4 Anti-back siphonage devices or other measures must be provided to prevent back siphonage of water to equipment.

42.5.5 Where electrical control cabinets and exposed conduit are not completely and effectively sealed to the wall, control cabinets should be mounted at least 100 mm clear of the wall and conduit should be mounted at least 25 mm clear of the wall.

42.5.6 Where exposed plumbing services are not completely and effectively sealed to a wall, column or ceiling, they should be mounted at least 25 mm clear of walls, columns or ceilings.

42.5.7 The cladding of pipes in edible product areas should be suitably protected to prevent contamination of edible product.

42.5.8 Lighting must be installed so that surface mounted or recessed light fittings preclude dust and dirt accumulation. Suspended light fittings must have a 45° sloping

cap and the suspension apparatus must not allow the accumulation of dirt. Light fittings in processing or storage areas must be provided with shatterproof shields or covers. The light produced should not distort colours.

42.6 Ultraviolet lights

42.6.1 Ozone producing ultraviolet lights should be used only in accordance with 42.7.

42.6.2 Ultraviolet lights which do not produce ozone may be used in any area, provided the lights are shielded to prevent personnel from being exposed to direct or reflective ultraviolet rays. An alternative is for rooms where unshielded units are used to have light switches identified by the words 'Ultraviolet Lights' at entry points so that the units may be switched off before entry.

42.7 Ozone

42.7.1 The use of ozone producing equipment should be restricted to ageing chillers.

42.7.2 Where ozone producing equipment is operating, the ozone concentration in the air should not exceed 0.1 ppm.

42.8 Compressed air

42.8.1 Where compressed air is used in any equipment that allows the air to come into direct contact with edible product, possible contamination from moisture and oil from the compressor must be prevented by providing an effective drain in the compressed air storage tank and an effective filter located as near as possible to the outlet in the air discharge line.

42.8.2 Air filters should be capable of frequent cleaning.

42.8.3 The air exhaust ducts must be directed away from edible product and, where possible should be discharged to the outside atmosphere.

42.9 Tables

42.9.1 Tables on which edible product is handled or otherwise treated should, where necessary, be provided with suitable splash backs.

42.9.2 Tables having water on their working surfaces should be provided with turned up edges and be self-draining.

42.9.3 Draining tables should be fitted with removable perforated trays.

42.10 Working platforms and stands

42.10.1 Work platforms should be of rust resistant metal or concrete construction.

42.10.2 Where material could fall from the platform onto edible product underneath, the floor of the platform should be solid and provided with turned-up edges.

42.10.3 Platforms should be located so that any unprotected part of a carcass does not before inspection, come into contact with any part of the platform during dressing or other operations.

42.10.4 Where necessary to protect exposed edible product, platforms should be provided with a kick plate at least 150 mm high.

42.10.5 Mobile platforms may be used for such operations as trimming or inspection of carcasses.

42.10.6 Where necessary, stands should be effectively drained in order to prevent accumulation of water during operations and the possible contamination of product.

42.10.7 High platforms and rise and fall platforms at inspection stations should be fitted with safety rails.

42.10.8 The motion in operations of rise and fall platforms should be smooth and steady.

42.10.9 Rise and fall platforms should be mounted with adequate clearance from adjacent fixed objects.

42.10.10 Foot stands should be constructed of rust-resistant metal, approved plastic or other approved material.

42.10.11 Wooden duck boards or mats of absorbent materials are not permitted in edible product processing areas.

42.10.12 Stands for preventing edible product containers from contacting the floor should be of rust-resistant metal or other approved material and raise the containers at least 300 mm from the floor.

42.11 Wash and saw screens

42.11.1 Screens provided in carcase washing and carcase splitting areas should be of rust-resistant metal or other approved material.

42.11.2 To prevent the accumulation of dirt between the screen and the frame, installation should be such that screens are completely sealed to the supporting framework, spaced at least 25 mm from the frame or completely removable.

42.12 Head washing equipment

42.12.1 Where heads are spaced on a moving head chain or head rail at less than 2.4 m centres, a cabinet, a series of baffled compartments travelling with the chain, or other means should be provided to prevent wash water from splashing the adjacent heads.

42.12.2 Where heads are handled on a stationary system, the head wash facilities should consist of a cabinet having the dimensions of about 1.8 m x 900 mm x 900 mm. The head hook should be positioned about 1.5 m above the floor of the cabinet.

42.13 Individual offal washing equipment

42.13.1 Units for individual washing products such as cheeks and tongues should be installed. The products should be washed before their aggregation.

42.13.2 The units should consist of a removable perforated metal rack positioned in a special sink or other container in such a way that product is prevented from contacting the bottom of the container.

42.13.3 An overhead spray system should be provided supplying potable water at sufficient pressure to effectively clean the product.

42.13.4 Wash water should not be able to accumulate in the container.

42.13.5 Where automatic washing facilities are provided, they should be constructed of acceptable materials and operated in a way which ensures that a continual flow of potable water is maintained.

42.14 Handwash facilities

42.14.1 Handwash basins on slaughter floors or in processing rooms must be constructed from approved materials and comply with the following:

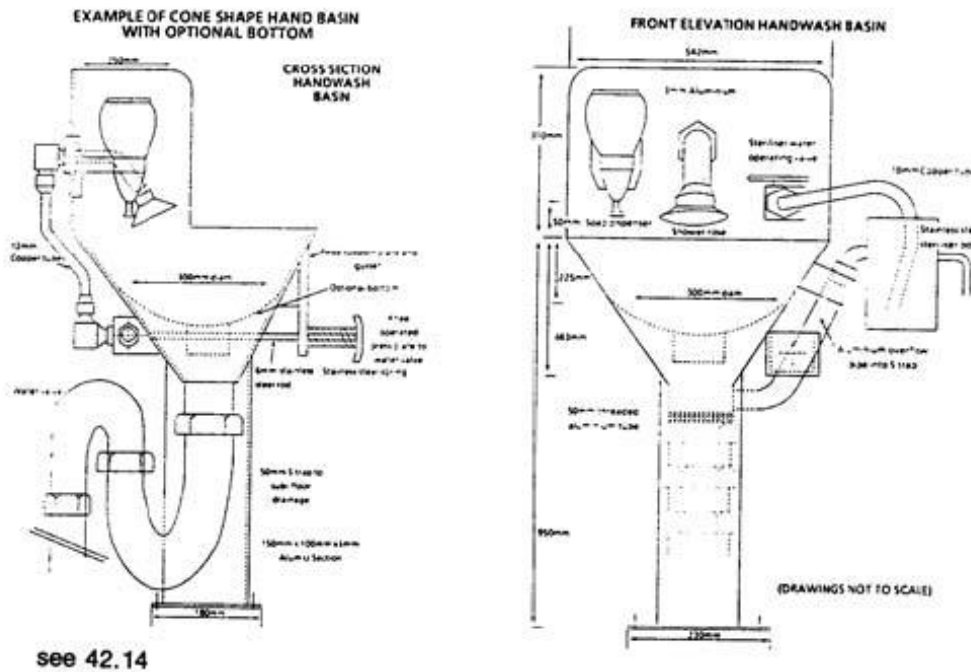
- the bowl size should be at least 400 mm x 400 mm x 225 mm;
- the faucet should be no more than 150 mm above the top of the bowl and fixed in position;
- where a drinking fountain is incorporated on the unit, it should be positioned so that splash from the drinking faucet to the main faucet cannot occur;
- where necessary, splash guards should be provided to prevent contamination of edible product;
- units must be supplied with liquid soap dispensers;
- units must be supplied with potable water delivered through a single faucet at a temperature of 35°C and 45°C; and
- the unit must be thigh or pedal operated, and in the case of a thigh operated unit, the lever is to be below the rim of the bowl

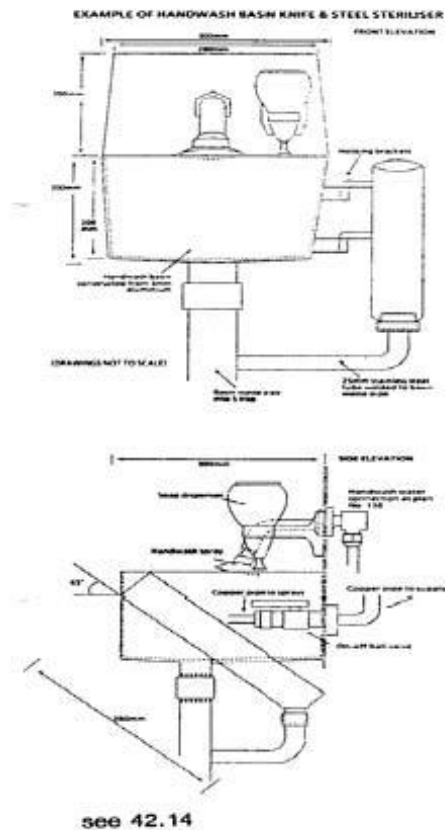
42.14.2 Where work stations require only hands be washed between operations, handwash basins of smaller dimensions may be used and must meet the following requirements:

- bowl size at least 300 mm x 300 mm x 225 mm;
- the faucet no more than 50 mm above the rim of the bowl;
- where a drinking fountain is incorporated on the unit, the drinking fountain should be positioned so that splash from the drinking faucet to the main faucet cannot occur;
- where necessary, splash guards should be provided to prevent contamination of edible product;
- units must be supplied with liquid soap dispensers;
- units should be supplied with potable water delivered through a single faucet at a temperature of between 35°C and 45°C; and
- the unit should be thigh or pedal operated, and in the case of a thigh operated unit, the lever is to be below the rim of the bowl

42.14.3 Handwash troughs must be constructed from approved materials, be thigh or pedal operated and comply with the following:

- the troughs should be at least 400 mm wide and at least 225 mm deep;
- faucets should be spaced at 400 mm centres, except that the end faucets may be not less than 200 mm from the end of the trough;
- liquid soap dispensers must be provided in association with the handwash troughs;
- the troughs must be supplied with potable water delivered through each faucet at a temperature of between 35°C and 45°C; and
- in the case of thigh operated troughs, the lever should be below the rim of the trough





42.15 Hand drying facilities

42.15.1 Handwash basins and troughs in or adjacent to amenity rooms, toilets and processing rooms should be supplied with disposable paper towels.

42.15.2 Receptacles for used towels should be provided.

42.15.3 Where hot air hand drying equipment is provided, it should not be of the hand operated type.

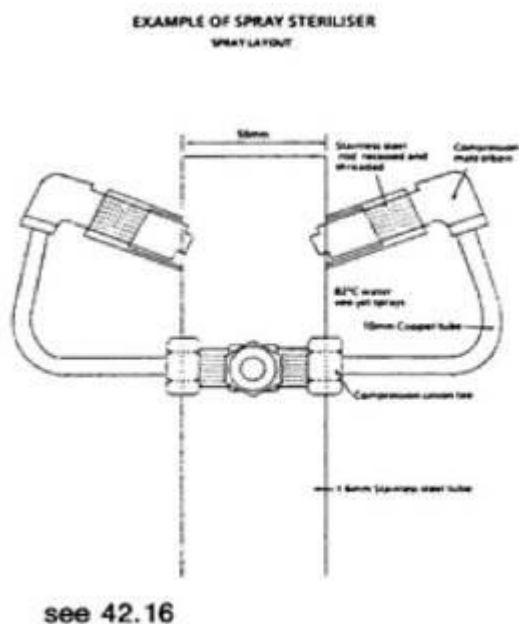
42.16 Sterilisers

42.16.1 Sterilisers must be of suitable size to allow product contacting surfaces of the equipment to be sterilised.

42.16.2 Where equipment is sterilised by sprays the following applies:

- The unit should contain an adequate number of sprays correctly positioned and delivering potable water at a sufficient pressure and temperature to effectively clean and sterilise product contacting surfaces of the equipment
- The sterilising unit must be designed so as to prevent overspray from reaching adjacent edible product
- The overflow from the unit is to be drained direct to the drainage system
- A thermometer is to be fitted at the point of use to show water temperature

42.16.3 Where immersion type sterilisers are used the hot water inlet line should be as close as possible to the bottom of the unit in order to maintain correct temperatures and provide a continuous flow. In addition anti-back siphonage devices must be fitted where required. Units using heating coils are acceptable, provided the coils can be removed for cleaning.



42.17 Animal restrainers

42.17.1 Knocking boxes, restraining cradles and restrainer conveyors should be constructed from materials that can be maintained in a rust free condition.

42.17.2 The equipment must be capable of being operated efficiently and humanely.

42.17.3 Restrainer conveyors should, where necessary, be adjustable to accommodate the size of stock being slaughtered.

42.18 Dressing cradles

42.18.1 Cradles used in bed dressing systems should be constructed of rust resistant material and be designed to prevent the neck of the carcass from contacting the floor during dressing.

42.19 Chutes, slides and pipelines

42.19.1 Chutes, slides and pipelines should be constructed from stainless steel or other approved materials and be accessible for cleaning.

42.19.2 Chutes should be circular or approximately circular in cross section.

42.19.3 Long chutes should have covered inspection ports placed at intervals not greater than 6 m and at each change of direction. These ports should be as large as practical to facilitate interior cleaning and inspection.

42.19.4 Chutes penetrating floors should be provided with curbing and coving to exclude the entry of seepage of floor drainage.

42.19.5 Where chutes pass through a wall, the chutes should be tight fitting and leave no cracks or crevices between the sides of the chute and the wall.

42.19.6 Edible product chutes should have their receival end raised at least 300 mm above floor level.

42.19.7 Inedible product chutes connecting an edible product and enclosed inedible product area should at their load-in end be hooded, flapped and vented to the atmosphere.

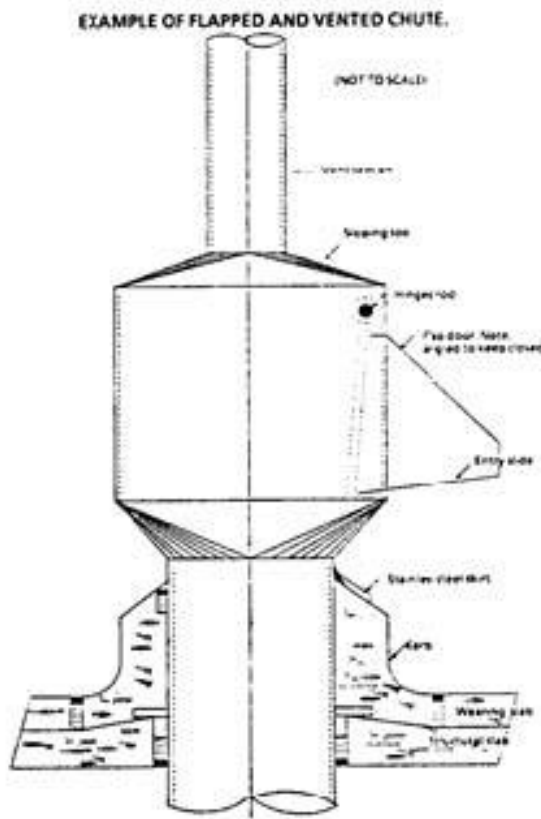
42.19.8 Where an inedible product chute connects an edible product area with an open inedible product area, the discharge end should be provided with a counterbalance flap. Where this is provided hooding and venting of the load-in end will not be necessary.

42.19.9 All chutes, including flaps, should be designed so that they are capable of being cleaned.

42.19.10 The inspection plates of chutes conveying condemn or pet food materials through edible product departments should be equipped for locking. The chutes must be constructed to preclude air connection between the room and the interior of the chute.

42.19.11 Where a chute connects an edible product section to an inedible product, pet food or condemned area, the chute needs to be constructed so that material cannot pass back into the edible product area.

42.19.12 Lines used for conveying edible meat should be capable of being dismantled for cleaning.



see 42.19

42.20 Containers and barrows

42.20.1 Containers and barrows must be constructed from approved materials.

42.20.2 Containers and barrows for edible product need to be fitted with dust proof lids where the containers and barrows are used for transport outside edible product areas.

42.20.3 Containers and barrows used for inedible product should be positively identified.

42.40.4 Dump trucks should be designed so that when they are in the tipping position, product cannot be contaminated by the wheels on the bottom of the container.

42.21 Conveyors

42.21.1 Screw conveyors should be constructed in such a way that the unit is capable of being easily cleaned and effectively drained.

42.21.2 Screw conveyors in edible product processing areas should be of stainless steel or hot dipped galvanised.

42.21.3 Where wearing strips to prevent the metal to metal contact are incorporated in a screw conveyor, the wearing strips must not contaminate the product.

42.21.4 Conveyor belting used for conveying exposed edible product should be of stainless steel or other approved non-toxic, non-absorbent materials.

42.21.5 Conveyor belts in edible departments must have vulcanised or welded joints.

42.21.6 Conveyor belt guides and splash guards should be of open construction, or removable to enable easy cleaning.

42.22 Viscera barrows

42.22.1 Viscera barrows should be constructed from stainless steel and contain an inspection pan of at least 600 mm x 650 mm x 75 mm for thoracic viscera.

42.22.2 The inspection pan should be approximately 850 mm above floor level.

42.22.3 A compartment designed to hold abdominal viscera should be provided beneath the inspection pan. The bottom of this lower compartment should be at least 300 mm above floor level.

42.23 Viscera handling equipment

Stationary pan system

42.23.1 Where a stationary pan system is used, facilities for the inspection of viscera should include a metal stand capable of taking pans for at least two sets of viscera.

42.23.2 The size of pans used in a stationary pan system should be in accordance with 42.23.9.

42.23.3 Facilities are to be provided for rinsing and sterilising the inspection pans.

42.23.4 The inspection pans should have handles to enable the pans to be fully immersed in the steriliser and the steriliser should be large enough to permit this.

Moving top viscera tables

42.23.5 Moving top viscera tables should have flights or pans constructed from stainless steel, with the framework of the unit constructed from rust-resistant material.

42.23.6 Moving top viscera tables should be supplied with the following:

- At the distal end of all units, a series of cold potable water sprays delivering potable water at sufficient pressure to remove blood, tissue and other matter.
- At the proximal end of all units, an enclosed sterilising compartment housing a bank of hot potable water sprays delivering hot potable water at no less than 82°C across the entire width of the flights or pans followed by a bank of cold potable water sprays to cool the metal.
- At the proximal end of beef viscera tables, facilities for the eviscerator consisting of:
 - a platform
 - a handwash basin and knife steriliser unit
 - a boot and apron washing and sterilising cabinet
 - a boot storage rack.

42.23.7 The sterilising compartment required at the proximal end should be:

- equipped with doors or easily removable plates to enable inspection of the sprays;
- vented by means of a 250 mm minimum diameter vent to the outside atmosphere;
- provided with a dial face thermometer on the hot water line which should be in full view of the inspection staff at the viscera table; and
- separately drained, with a gradient to the inlet of at least 1:25.

42.23.8 Moving top beef viscera tables should be at least 1.5 m wide.

42.23.9 Pans used on moving top viscera tables should comply with the following:

- sheep, lamb and calf pan sizes:
 - abdominal 600 mm x 600 mm x 75 mm
 - thoracic 600 mm x 300 mm x 75 mm
- pig viscera pan sizes:
 - abdominal 750 mm x 600 mm x 75 mm
 - thoracic 750 mm x 300 mm x 75 mm
- where composite slaughter floors for smallstock are used, the larger pans should be installed.

42.23.10 The surface of viscera tables should be about 850 mm above the floor or platform levels as the viscera inspection station.

42.23.11 Guard rails on moving pan tables should be omitted from the section of the table opposite the eviscerator's platform.

42.23.12 Moving top tables should be located over a separately drained floor area, with the gradient to the inlet being at least 1:25.

Moving viscera pan conveyor systems

42.23.13 Where a moving viscera pan conveyor system is used, a means of sterilising product contacting equipment and implements associated with the evisceration should be provided.

42.23.14 Resultant spray and wash water should be contained and a means should be provided for removing steam to the outside atmosphere.

42.23.15 A dial face thermometer in full view of the inspection staff should be provided on the potable hot water line to the sterilising facility.

42.24 Pig scalding equipment

42.24.1 Scald tanks should be of adequate size for the proposed throughput and constructed to allow them to be fully drained for cleaning.

42.24.2 Scald cabinets for the on-rail system may use recirculated water, provided the applicable requirements of 5.7 are met.

42.24.3 A temperature control device should be provided.

42.25 Pig dehairing equipment

42.25.1 Where this equipment is continuous, recirculated water may be used, provided the applicable requirements of 5.7 are met.

42.26 Paunch emptying equipment

Large stock

42.26.1 Paunch emptying equipment for large stock should be constructed of rust resistant material.

42.26.2 The paunch emptying table should drain directly into a trough without causing retention of water around the paunch during opening and emptying.

42.26.3 Where an upslope has been incorporated into the design of the table, the table should be provided with drainage holes at its lowest part.

42.26.4 The table tops should be at least 2.4 m in length and project several millimetres over the trough.

42.26.5 The trough should be from 1.05 m to 1.2 m deep, with a sloping bottom and a drainage outlet about 200 mm in diameter.

42.26.6 Where paunches are saved for edible purposes, a rust resistant spigot pipe combined with umbrella and sprays should be provided to clean the paunch.

Smallstock

42.26.7 Paunch emptying tables for smallstock should be constructed as detailed in 42.26.1 through 42.26.6, except that the tables' edges should be turned up a minimum of 50 mm and the tables should be of adequate size.

42.26.8 A perforated spigot mounted centrally in a trough drained by a drainage outlet about 150 mm in diameter should be provided.

42.27 Can cleaning equipment

42.27.1 Empty can washes should be constructed to allow cans to be washed in an inverted position with water at a temperature of 82°C and then drained.

42.27.2 Drainage should be confined and, where necessary, steam and vapour should be vented to the outside atmosphere.

42.27.3 A suitably located dial face thermometer should be fitted to the washing chamber.

42.27.4 Jet vacuum devices should be fitted with an alarm to indicate any failure in operation.

42.27.5 The air supplied to the jet should be clean and free of oil or other contaminants.

42.27.6 Exhausted air should be discharged to the outside atmosphere.

42.28 Cooking vessels

42.28.1 Where cooking vessels are constructed of mild steel, the vessels should be capable of being maintained rust free.

42.28.2 Cookers, whether designed to cook in water or otherwise, under pressure or otherwise should be equipped with automatic time and temperature recorders when used for processing canned meat.

42.28.3 Equipment for thermally processing low acid foods in hermetically sealed containers should comply with Australian Standard AS2478-1981, 'Equipment for the Thermal Processing of Low-Acid Foods in Hermetically Sealed Containers - Essential Design Features and Performance Requirements'.

42.29 Air curtains

42.29.1 Where air curtains are used as a precaution against the entry of insects into buildings, the air curtains should conform to the following requirements:

- the air curtain should cover the full height and width of the opening and should be not less than 50 mm deep; and
- the air stream velocity should not be less than 8 m per second, measured 900 mm above the floor for overhead mounted units and across the entire opening for side mounted units

42.30 Insect electrocution devices

42.30.1 Insect electrocution may be used as an aid to insect control.

42.30.2 Insect electrocution devices are not permitted to be used in processing areas or when unprotected product is present, and this should be a consideration in their installation.

42.31 Electrical stimulation treatments and equipment

42.31.1 The following details relative to proposed carcase stimulation installations should be submitted:

- the method and duration of stimulation and details of electrical parameters to be used;
- a plan showing the intended location of the equipment together with an estimate of the
- time elapsing between stunning and commencement of stimulation, including any delays, for the production rates used;
- details of any fixed equipment;
- details of the method of sterilising carcase contacting electrodes; and

- a statement to the effect that the equipment complied with Australian Standard AS3000 - 1981, 'The Electrical Installations of Buildings, Structures and Premises (known as the SAA Wiring Rules)'

42.31.2 The equipment must be of sanitary design and constructed of approved materials.

42.31.3 High voltage cabinets should incorporate the safety features outlined in 'Electrical Stimulation of Beef Carcasses and Sides - Industry Guidelines' - update January 1985 - CSIRO Division of Food Research, Meat Research Laboratory, PO Box 12, Cannon Hill, Queensland 4170.

The cabinets may be fitted with observation windows which should be shatterproof.

42.31.4 Where electrodes are applied to an exposed meat surface before carcass disposition, provision should be made for the electrodes to be sterilised between carcasses.

42.31.5 Where electrodes are applied to an exposed meat surface after carcass disposition, provision should be made for the electrodes to be sterilised periodically.

42.31.6 The equipment should be designed so as not to include the spray sterilisation of live electrodes.

42.32 Carcass decontamination cabinets

42.32.1 Where it is intended to install carcass decontamination cabinets on dressing lines, the following information should be provided:

- construction details
- the proposed method of removing steam to the external atmosphere
- the temperature of potable water used in decontamination
- the duration of the decontamination process
- the method of preventing excessive spray decontamination when the dressing conveyor is stopped

42.32.2 A dial face thermometer should be fitted to the supply water line.

42.32.3 Recirculation of water is not permitted.

43 Safety

43.1 Introduction

43.1.1 This chapter deals with the safety requirements that should be considered on registered meat establishments to ensure a safe working environment is available for all persons located on the plant.

43.2 Design considerations

43.2.1 In designing new establishments or alterations and additions to existing plants every effort should be made to eliminate safety hazards that may place persons on the plant at risk.

43.2.2 Proposals submitted to the Australian Quarantine and Inspection Service should show details of all safety aspects that are to be taken into consideration to ensure a safe working environment.

43.3 Scope

43.3.1 Safety aspects dealt with in this chapter include those relating to the following areas:

- site
- construction
- plant
- work stations
- services
- amenities

43.4 Site

43.4.1 Chapter 3 deals with site selection and approval and includes the consideration of sanitary aspects which are directly related to safety requirements.

43.5 Construction

43.5.1 Materials known to be hazardous to health should not be used in building construction.

43.5.2 Internal surface finishes that are acceptable for sanitary construction are usually not hazardous to health or risk the safety of personnel when sound building practices are met.

43.5.3 Lighting intensity for work stations is defined in Chapter 6.16 and suitable lighting intensity should also be provided in the following areas:

- stairways
- exit doorways
- corridors
- airlocks

43.6 Plant

43.6.1 Plant includes all equipment, fixtures, fittings, machinery, chains, work stands and platforms.

43.6.2 Chapter 42 relates to the sanitary construction of equipment, fixtures, fittings, work stands and platforms, however, the following safety aspects must be considered during the design stage:

- The use of safety guards or covers may be required over drive wheels, or chain driven sprockets where a potential safety hazard exists.
- Foot pedal handwash and steriliser units should have the foot pedal apparatus located under the unit to prevent persons from tripping over the foot pedal apparatus.
- Equipment, when installed should:
 - be firmly fixed to prevent vibrations and movement of the equipment during operations;
 - be fitted with safety lids or hatches where person's safety is at risk during the operation of the equipment;
 - be wired, connected and operated in accordance with the appropriate State or Territory electricity authority requirements.
- High inspection stands for authorised officers should be fitted with safety rails around their entire perimeter.
- Where rise and fall platforms are located within access ways, they should be surrounded by suitable safety barriers.
- Rise and fall platforms should be mounted with adequate clearance from adjacent fixed objects.
- Carcase splitting saws that move in line with the carcase chain should either be enclosed or be provided with suitable safety barriers.

43.7 Work stations

43.7.1 Entrances and exits to and from work stations should be such, that where possible, persons do not cross through carcase lines or other work stations.

43.7.2 Where the authorised officer's inspection station is likely to be encroached upon, suitable barriers should be provided to define the inspection station and prevent encroachment.

43.7.3 Authorised officer inspection stations should not be located below handwash steriliser units where splash from the handwash steriliser units is likely to occur.

43.8 Services

43.8.1 The provision of services should be in accordance with Chapter 5.

43.8.2 Installation and maintenance of electrical services including wiring, fittings and fixtures should be in accordance with the relevant State or Territory authority requirements.

43.8.3 Hot water lines within reach of personnel should be protected with suitable insulation.

43.8.4 Gas services including gas lines, fittings and fixtures should be installed and maintained in accordance with the relevant State or Territory authority requirements.

43.8.5 Steam lines should be installed according to approved engineering practices and all exhaust and blow off lines, safety valves and bleed lines should be located so as not to be a hazard to personnel.

43.8.6 Where premises have in-plant chlorination facilities, the chlorine feeder apparatus should be located in well ventilated areas and preferably outside of any enclosure.

43.8.7 Ammonia flow and return lines should not pass through production areas unless directly connected to a unit within that area

43.9 Amenities

43.9.1 Chapter 36 and Chapter 37 deal with the requirements relating to employee and authorised officer amenities.

43.9.2 Authorised officer amenities and offices should be located away from areas where authorised officers may be exposed to harmful physical agents including ammonia gas storage areas, and ammonia gas safety or pressure relief valves, noise, vibration, extremes of temperature or radiation.

44 Noise

44.1 Introduction

44.1.1 The Department of Primary Industries and Energy has responsibilities to its staff to ensure that they are not exposed to excessive noise. It is well known that hearing loss is possible when prolonged exposure to excessive noise occurs at the workplace.

44.1.2 Maximum permissible noise exposures are defined in the relevant State and Territory legislation.

44.1.3 The Australian Standard AS 1269 – 1983, section 4 gives guidance on the principles of engineering noise reduction.

44.2 Design considerations

44.2.1 At the planning stage consideration should be given to the potential occupational noise problems that may occur in new structures or building alterations and additions.

44.2.2 Reduction of noise output from machines, drive chains and equipment should be considered at their design stage as it is generally difficult to reduce the noise output of existing machines and equipment.

44.2.3 Effective planning is the primary step to implement an engineering noise program, and aspects dealt with in this chapter relate to construction and equipment

particularly where excess noise is caused by vibration, friction, percussion, blast and impact.

44.3 Construction

44.3.1 Internal structures of solid construction are usually highly reflective and noise levels can be increased by up to 10dBA.

44.3.2 Acceptable acoustic type ceilings and treated walls will help to minimise increases in sound levels caused by reflection.

44.3.3 Partitions and other building components of high sound insulation should be considered in separating noisy and quiet areas.

44.3.4 Attention should be paid to reducing noise from indoor building services such as heating, cooling, ventilation and plumbing.

44.4 Equipment

44.4.1 In the design of equipment consideration should be given to reducing operational noise levels as much as possible.

44.4.2 Wherever possible metal to metal impact should be eliminated.

44.4.3 Vibration, whether from the external surfaces of the equipment or from its mountings should be reduced or eliminated.

44.4.4 Complete enclosure of noisy equipment is an alternative that may need to be considered when all other factors have been taken into account.

44.5 General

44.5.1 Engineering noise reduction provides the ideal solution to excessive noise exposure. This is a specialist field beyond the scope of these guidelines and may require a long-term program for successful implementation. However, at the design stage consideration should be given to engineering noise reduction.