



01 PROPULSION MACHINERY

Diesel engines generate thrust to propel the vessel across water and power electrical generators that supply energy to the ship's electricity, lighting, ventilation, water desalination, feed and water distribution and refrigeration systems. A ship can have two engines to enable the voyage to continue or will have additional generators to ensure continued power supply to the systems if marine breakdown occurred. Each vessel has an on board machinery engineer responsible for all engine and mechanical operations.

02 DESALINATION & WATER STORAGE

Desalination equipment produces fresh drinking water from sea water. Additional water supplies are carried on board together with spare parts to quickly repair the system and maintain water supply if mechanical breakdown occurred.

03 HOSPITAL PENS

Sick or injured animals are moved to hospital pens for treatment, to prevent further infection and allow the animal's health to improve.

04 VENTILATION MONITORS & ALARMS

Fresh air is continuously circulated by the ship's powerful ventilation system which is constantly monitored and alarms alert the crew to any changes within the system. Additional electrical generators and spare parts enable air circulation to continue if mechanical breakdown occurred.

05 ADDITIONAL POWER SUPPLY

Enables the operations of the ship including: ventilation, lighting, water desalination, feed and water distribution and refrigeration to continue if mechanical breakdown occurred.

06 SEWAGE HOLDING TANKS

Sewage is treated and held on board a vessel prior to discharge in accordance with applicable international regulatory requirements.

07 FODDER STORE

All fodder for a voyage is manufactured to Australian standards to ensure its nutritional value and is carried on board. Additional fodder is loaded to enable adequate feed to be provided if a delay in the voyage occurs or if animals consume more feed than usual. Unused fodder can be discharged at the destination country to assist animals adapt to new diets.

08 GALLEY & MESS ROOM

The kitchen area is where food is prepared for and eaten by the ship's crew.

09 CREW QUARTERS

The accommodation area where the ship's crew sleep and store their belongings throughout a voyage. A crew is made up of specialised staff that include: the ship's captain, chief officer, boatswain, chief engineer, electrotechnical officer, assistant engineers and electrotechnicians, cooks, accredited stock people and/or accredited veterinarians. Crew generally operate on 12 hour shifts.

10 BEDDING STORES

On voyages longer than 10 days (e.g. to the Middle East) bedding such as straw, shaving or sawdust are provided for the animals to help maintain the pen environment. Pens are also regularly washed out during a voyage.

11 VETERINARY SUPPLIES

Veterinary equipment including vaccines, medicines and restraining devices are carried on board. Veterinary medicines are stored and used according to the manufacturer's directions and all treatments are recorded. Animals are attended to by an accredited stock person and/or veterinarian.

12 BRIDGE

From where the ship is navigated by the captain or officer of the watch who are experienced in handling the vessel. Vessel and livestock data are communicated by the captain simultaneously to the Australian regulator and exporter every 24 hours for voyages of 10 days or longer.

THE LIVESTOCK EXPORT JOURNEY

To maintain the health and welfare of animals the export of livestock from Australia is governed by two regulations that include the Australian Standards for Export of Livestock (ASEL) that governs from on-farm within Australian to discharge within the importing country.

The second part of the livestock export journey is governed by the Exporter Supply Chain Assurance System (ESCAS) from discharge within the importing country to processing of the animal.



Vessels that carry cattle are dedicated ships that have been specially built or modified to transport livestock. All vessels must comply with Marine Order Part 43 requirements and hold an Australian Certificate for the Carriage of Livestock (ACCL) issued by the Australian Maritime Safety Authority (AMSA).



All livestock must be healthy and fit to travel and meet the importing country requirements. On a voyage all livestock are attended to and cared for by experienced stock people and veterinarians. Each vessel carries a supply of veterinary equipment and medicines, and if an animal becomes unwell they are cared for within the ship's hospital pens or are humanely euthanased.

Mortality rates of cattle on board are very low – the average mortality rate over the past 10 years is 0.17%. Shipments with a mortality rate of over 1% are investigated and industry continues to undertake RD&E to continuously reduce mortality and morbidity on-board and throughout the supply chain. Animal comfort and health is critical to animal welfare.

Animals have constant access to clean fresh water. Some ships store water and/or have a desaliniser to produce enough water for the animals. The livestock are fed a high quality feed a number of times each day to meet their nutritional requirements.



Animals have enough space within a pen to stand up and sit down throughout the voyage (for a 360 kg steer a minimum pen area of 1.314m² is provided) with access to feed and water. Extra space is given to larger animals and in hot temperatures which is dependent upon the destination, time of year and pregnancy status. The space allowance for animals transported in hot temperatures is calculated using a program called "HotStuff".

On voyages longer than 10 days (e.g. to the Middle East) bedding is provided for the animals.



Fresh air is constantly available to animals on all ships and circulated to the animals via the ship's ventilation systems.



A ship must be completely washed down and disinfected for biosecurity before returning to Australia. Vessels are inspected by Department of Agriculture Biosecurity personnel for cleanliness. Any waste that is found - even if it is as small as a matchbox will result in the ship being forced to return to sea for a complete wash down that can cost up to \$250,000.

For further information visit the LiveCorp and MLA websites:

WWW.LIVECORP.COM.AU
WWW.MLA.COM.AU

THE LIVESTOCK EXPORT JOURNEY

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