



Milk Tankers and It's Unloading

Agenda

1. Milk Tanker

2. General Specification

3. ISI Standards

4. Trucks and Trailers

5. Construction

6. Accessories

7. Milk Tanker Unloading

8. Conclusion

1. Milk Tankers



- Milk may be received at the dairy plants for processing either in cans direct from producers or in tankers from a milk chilling centres.
- Handling the milk in cans is slow and laborious when the larger quantities are to be handled.
- Road truck/ trailers or rail tankers are convenient options in such cases.

2. General Specifications

- Capacity: 500 to 12000 litres.
- The size and the type depend upon:
 - Amount of milk to be transported
 - Road condition
 - Comparative cost



3. ISI Standards

- **GENERAL DESCRIPTION**

- The tanks shall consist of the inner vessel, insulation outer casing, fittings and mountings, and supports for mounting the tank on the truck chassis or semi-trailer.

- **CAPACITY**

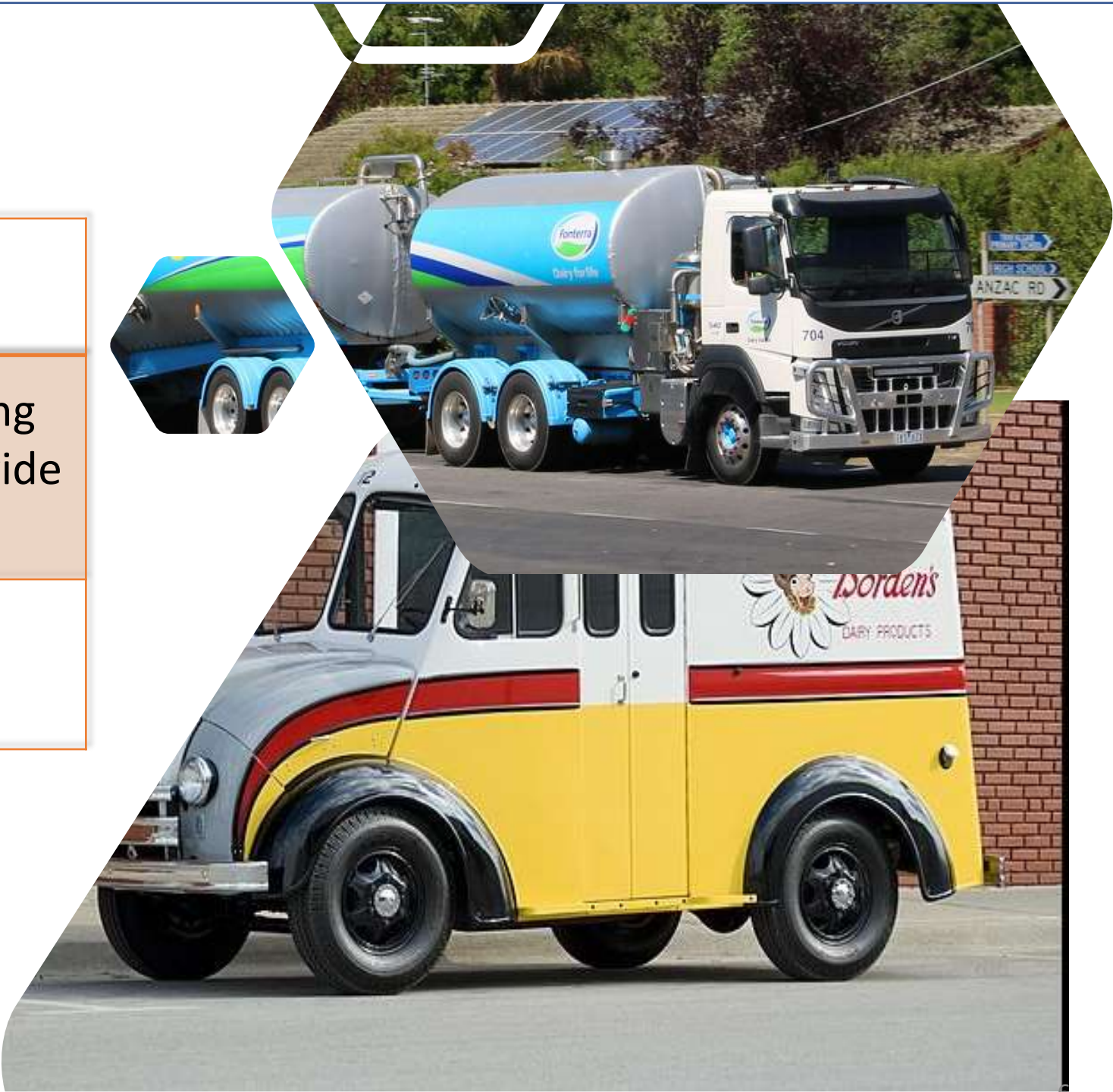
- The nominal brimful capacity of rigid truck chassis-mounted tanks shall be 8 000 to 8500 liter, depending on the use of single compartment, double compartment and triple compartment.
- The nominal brimful capacity of the semi-trailer mounted tanks shall be 12 500 to 13 000 liters depending on the use of single compartment, double compartment and triple compartment.

- **SHAPE**

- Inner vessel and outer casing shall be of horizontal cylindrical, elliptical shape with dished or conical ends.
- The mountings should be such that each compartment shall have a, positive slope towards its outlet for ensuring complete drainage of the contents from the compartment.

6. Trucks and Trailers

Truck	Trailer
Easy to travel in tighter places	Suitable for long distances and wide roads.
Carry less	Pull more.



5. Construction



The milk tankers generally have similar type of construction, with some modifications.

Material of construction:

- Inner shell- Stainless Steel (18% chromium, 8% Nickel)
- Smooth welding
- Polished surface
- Rounded corners & edges
- Insulation- cork, plastic, foam, mineral wool.
- Outer jacket—ordinary carbon steel, Aluminum, S.S.

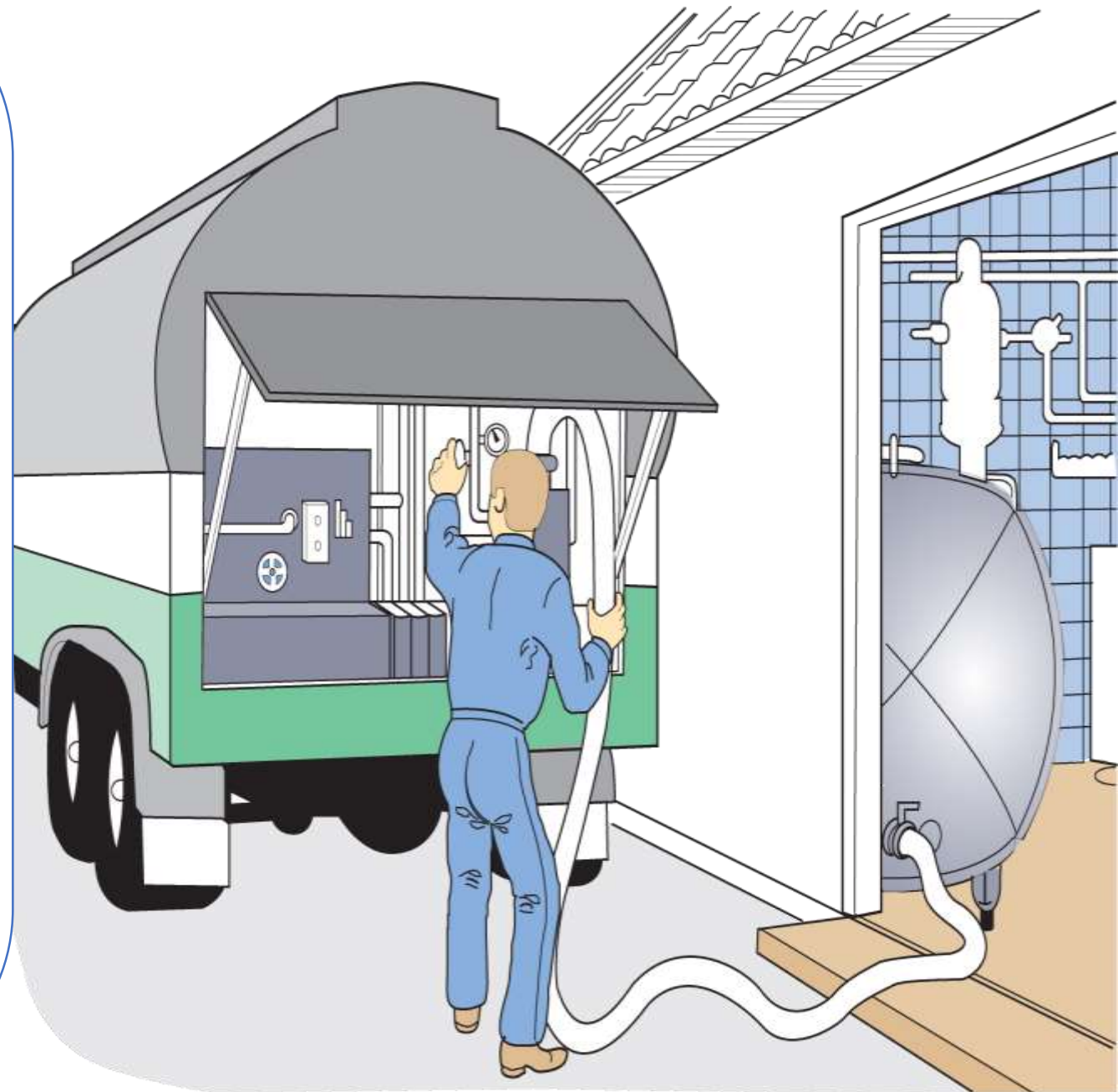
6. Accessories

- Manhole, air vent and cover assembly required for inspection
- Sanitary cover is having sanitary rubber gasket and locking device.
- Air vent → to “breath” → prevent pressure and vacuum during loading or unloading.
- Outlet valve with covered cabinet which can be sealed properly.
- Ladder- to climb on tank for cleaning or inspection
- Hoses - Rubber or translucent Plastic, Puncture & collapse resistant, sanitary cap/Plug at dead end



7. Milk Tanker Unloading

- Raw milk received in road milk tankers (RMT)
- Weighment of RMT at Weigh Bridge after entering all particulars of dispatch challan (DC).
- After weighment, RMT arrive at receipt dock.
- Milk sampling done by Quality Control Personnel and if found unsatisfactory with respective quality parameter tanker will be returned to union or chilling center.
- Unloading of milk from Tanker is done.
- Chilling of milk is carried out below 4°C.
- Storage of milk in raw milk storage tanks



8. Conclusion

- Milk Tankers have changed the phase of dairy industry.
- The economical advantage it has added to the whole dairy industry across the globe is huge
- Now, with the advent of refrigerated(BMC) tankers, the quality and safety parameters of dairy products have improved tremendously.
- The spoilage and wasted has decreased.
- Tankers and BMCs are the life savers of dairy industry



About PMG Engineering

We deliver End-to-End Engineering Design and Construction Management Projects in Food and Beverage Industry.



Meeting Global Benchmarks

In ENGINEERING DESIGN and PROJECT MANAGEMENT
for FOOD and BEVERAGE Industry with SINGLE POINT ACCOUNTABILITY

Process Engineering | Project Management | Mechanical | Electrical | Automation | Food Safety

People Delivering Results

Safe-by-Choice. First Time Quality. Maximize Value.
Objectivity. Ownership. Reliable and Trustworthy Business.

