Safe Handling!
The Benefits of Safe Handling of Tank Containers

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Davlris is a Container Inspection Company Specialising in Tanks in the Chinese region
Safety

Typical 20Ft ISO Tank Container
The ISO Portable Tank

- A standard ISO UN Portable Tank Container is suitable for the carriage of the majority of hazardous liquid products.
- The products permitted to be carried are listed in the UN portable tank table.
- This table designates the tank type and any additional provisions which are required for the cargo.
ISO Portable Tanks

- ISO UN Portable Tank containers are constructed to a very high standard and can withstand extreme incidents.
- Each hazardous tank is rigorously tested and approved by a classification society during construction.
- The regulations which are applicable to building tank containers ensures that the standards are maintained irrespective of the country of manufacture.
Tank Accidents Are Very Rare

There have been a few severe accidents but the tanks did not leak
Handling

• To maintain the safety and integrity of the tank container it is essential that they are lifted, handled, transported and secured using only ISO approved equipment

• Tank containers must be filled to levels permitted by the appropriate regulations

• It is very dangerous to transport tank containers which are not filled to the correct levels
Types of Equipment for Transportation and Handling
Maintaining the Hazardous Designation by Testing

- All hazardous tanks must comply with the regulations for prototype, initial and periodic testing
- Periodic tests and inspection take place every 5 years with intermediate inspections every 2.5 years
- These tests are witnessed by a classification society and the tank must pass to maintain the hazardous classification
- CSC Inspections must take place at the appropriate intervals
Empty Unclean Tanks

- Empty unclean tanks have been responsible for the majority of accidents and fatalities in our industry
- It is absolutely essential that empty unclean tanks are treated in as if they were loaded with the last hazardous product
- **Under no circumstances should a tank be entered until all safety checks are completed**
Entry into Tank Containers

• It is essential that only fully trained personnel are permitted to enter tank containers.
• Tank containers are confined spaces and the rules for atmosphere measurement and venting must be observed.
Trained Tank Surveyor
Reliability

- Tank containers have few moving parts
- The vast majority are manufactured from stainless steel which has a high corrosion resistance
- All the valve must be approved by the appropriate authorities.
Environment

• Over the last 25 years instances of leakage from tank containers in transit have been very rare
• Provided the cargo is discharged correctly the residual of cargo in the tank is approximately 0.04% which reduces the disposal of the product as “waste” when the tank is cleaned
• The tanks are fully intermodal and can be used on railroads to reduce the environmental impact of road transportation
Tank containers are a versatile very long life items of equipment which can be loaded with a variety of cargoes thereby reducing the need for empty positioning.

They offer safety with minimal chance of leakage if the tank container is physically damaged. Drums in a damaged dry freight Container are more likely to leak.
Environment 3

- The risk of spillage is greatly reduced at Filling and Discharge in comparison to multiple fill/discharge operation required for the equivalent drum volume.
- Single load and discharge for up to 26,000 litres of product in one Tank Container
- Greater volume per container slot reducing container movements
Drums
Hazardous Inefficient Expensive

1) Transportation of bulk liquids from the factory to the customer is costly.

2) Filling the equivalent number of drums is expensive, time-consuming, and risky due to spillage.

3) Storage of drums is expensive. Spillage is a danger if damage occurs.

4) Shipping of drums is difficult and costly. The potential for damage and spillage due to multiple handling is high.

5) Unloading drums awaiting suitable transportation to the end user for unloading is prone to handling damage and possible tampering and contamination.

6) Disposal of drums is difficult. Reuse is limited. Disposal is expensive and environmentally unfriendly.

6 reasons Why NOT to Choose drums
Drums
Hazardous Inefficient Expensive

1) Transportation of bulk liquids from the factory to the customer is costly.

2) Filling of drums is expensive, time-consuming, with a risk of spillage.

3) Storage of drums is expensive; spillage is a danger if damaged.

4) Shipping of drums is difficult and costly; the potential for damage and spillage due to multiple handling is high.

5) Unloading drums awaiting suitable transportation to the end user for unloading are prone to handling damage and possible tampering and contamination.

6) Disposal of drums is difficult to clean; reuse is limited; disposal is expensive and environmentally unfriendly.

6 reasons Why NOT to Choose drums.
Drums

Hazardous Inefficient Expensive

1) Transportation of bulk liquids from the factory to the customer is costly, hazardous, inefficient, and expensive.

2) Filling: The filling of the equivalent number of drums is expensive, time-consuming, with a risk of spillage.

3) Storage: Storage of drums is expensive. Spillage is a danger if damage occurs.

4) Shipping: The transport of drums is difficult and costly. The potential for damage and spillage due to multiple handling is high.

5) Unloading: Drums awaiting suitable transportation to the end user for unloading are prone to handling damage and possible tampering and contamination.

6) Disposal: Drums are difficult to clean. Reuse is limited. Disposal is expensive and environmentally unfriendly.

6 reasons Why NOT to Choose drums
Drums

Hazardous Inefficient Expensive

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of bulk liquids from the factory to the customer the use of drums is costly

2) Filling
The Filling of the equivalent number of drums is expensive time consuming with a risk of spillage

3) Storage
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The transport of drums is Difficult and costly. The potential for damage and spillage due to multiple handling is high

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   The transport of drums is difficult and costly. The potential for damage and spillage due to multiple handling is high

5) Unloading
   Drums awaiting suitable transportation to the end user for unloading are prone to handling damage and possible tampering and contamination

6) Disposal
   Drums are difficult to clean. Reuse is limited. Disposal is expensive and environmentally unfriendly

6 reasons Why NOT to Choose drums
1) Transportation of bulk liquids from the factory to the customer is costly.

2) Filling
The Filling of the equivalent number of drums is expensive, time-consuming, and carries a risk of spillage.

3) Storage
Storage of drums is expensive. Spillage is a danger if damage occurs.

4) Shipping
The transport of drums is difficult and costly. The potential for damage and spillage due to multiple handling is high.

5) Unloading
Drums awaiting suitable transportation to the end user for unloading are prone to handling damage and possible tampering and contamination.

6) Disposal
Drums are difficult to clean. Re-use is limited. Disposal is expensive and environmentally unfriendly.

6 reasons Why NOT to Choose drums

Drums
Hazardous Inefficient Expensive
Problems to Avoid
Tanks
Safe Efficient Cost Effective

The reasons to choose a *Tank*

Reliable Factory to Factory Operation

Simple efficient Straightforward Transfer between road, rail and sea
Risk of loss or Contamination eliminated

Tank Containers The right Choice
Tanks
Safe Efficient Cost Effective

The reasons to choose a Tank

Reliable Factory to Factory Operation
Simple efficient Straightforward Transfer between road, rail and sea
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Tank Containers The right Choice
The filling transporting, shipping and discharging of a tank container makes the greatest economic sense to you and our environment
Reduction in Costs

• Standard ISO 20 ft Tank containers have capacities up to 26,000 Litres
• 26,000 Litre Tanks can transport the equivalent of 123 drums - 205 Litres.
• It would take approximately 1.6 standard 20ft ISO dry boxes to transport 123 drums
• The time and manpower to load and discharge tank containers is less than the equivalent volume in drums
Reduction in Costs

- Cleaning costs are reduced
- Cargo residual is less therefore disposal costs reduced when cleaning
What ITCO Has Achieved for Members

- Produced a standard acceptable container condition document
- Established a Working at Height Protocol
- Working with ICHCA to produce a world standard for the Safe Handling of Tank Containers in port areas
- Worked with the European Marine division to establish safe handling after the Annabella Incident
What ITCO Has Achieved For Members

• Working with the Rotterdam terminals for risk assessment associated with tank containers in the Rotterdam area
• Two meetings are arranged each year for members to meet and network
• Organised a tank village at the Munich logistic show for members to meet and greet their clients
What ITCO Has Achieved For Members

- Interfacing with the regulatory authorities on issues affecting the use of tank containers
- Agreed with Italian Port Captains to eliminate the need to produce certificates for each shipment into Italian Ports
- Removal of Japanese Fire Station approval beurocracy and costs
ITCO's mission is for tankcontainers to be the preferred method for transporting bulk liquids, focusing on quality, safety and environmental issues.
Presentation

• If you require a copy of this presentation email graham.wood@davlis.biz and a copy will be sent to you