20' TANK CONTAINER
STANDARD SPECIFICATION
MODEL NUMBER: 24 FSTD 2
QUOTATION NUMBER

PROPOSED BY: TRENCOR TANK CONTAINERS

PREPARED FOR:
OPERATOR/ OWNER:

1. **Technical Characteristics**

1.1 **Design & Testing**
Tank – in accordance with: IMDG, CFR 49, RID/ADR and ASME VIII, Div 1
US DOT Equivalent Thickness (mm): Standard
IMDG Equivalent Thickness (mm): 6 mm

Frame – in accordance with: ISO Standard 1496/3

1.2 **ISO Type**
1CC / 22T6

1.3 **IMO Type**
1

1.4 **Nominal Capacity (-0 +1% Tolerance)**
SI 6340 US gal

1.5 **Frame Dimensions and Weight**
Max Gross Weight 36 000 kg 79366 lb.
Tare Weight (± 3% Tolerance) 3840 kg 8466 lb.
Length 6058 mm 20 ft
Width 2438 mm 8 ft
Height 2591 8 ft 6 in

1.6 **Tank Dimensions**
Internal Diameter 2321.5 mm 91.398 in
Seam to Seam 5030 mm 198.031 in
Shell Minimum Thickness 4.437 mm 0.1747 in
Shell Order Thickness 4.7 mm 0.1850 in
Head Minimum Thickness
Knuckle 5.859 mm 0.2307 in
Crown 4.488 mm 0.1768 in
Corrosion Allowance 0 mm 0.0 in
Dished Ends Torispherical

1.7 **Pressure & Temperature Rating**
Tank Design Temperature 120 °C 248 °F
RID/ADR Calculation Pressure 6.0 bar 87,0 psi
Maximum Allowable Working Pressure 4.0 bar 58,0 psi
Test Pressure 6.0 bar 87,0 psi
Vacuum Pressure 0.4 bar 5,8 psi
Steam Heating
Maximum Allowable Working Pressure 7.0 bar 101,5 psi
Test Pressure 10.5 bar 152,25 psi

1.8 **Material of Construction**
Framework EN 10210-1 S355 J2H (Hollow section)
50D or Equivalent (Tested to -40°C)
Corner Castings ISO Standard 1161
Shell DIN 171441 W1.4401 Low Carbon C ≤ 0.03%
Cold Rolled 2B (ASTM A 240-93B, 316)
Heads (Columbus Material) DIN 17440 W1.4401 Low Carbon C ≤ 0.03%
Hot Rolled, Ra ≤ 1.6 (ASTM A 240-93B, 316)
Vacuum Stiffening Rings ASTM A240 Gr. 304

Quote 24000 "R0"
2. **Finish**
Internal Welds Finish  
Longitudinal: Not ground, smooth low bead scotch brite polished  
Circumferential: Bottom ± 400 mm ground flush and polished (Ra ≤ 1.6) Circ weld roots to be scotch brite polished.  
Repairs: Ground flush and polished (Ra ≤ 1.6)

3. **Tank Fitting and Accessories**

3.1 **Manhole**
Supplier: Swift  
Dimensions: 500 mm ID, Neckring Radius 1165 mm  
Material: 316 L  
Description: 8 point fixing  
Gasket: PTFE braided (Non leaking type)

3.2 **Safety Relief Valve**
Supplier: Perolo  
Quantity: One plus provision for a second valve  
Description: 2" BSP Mega Superventix  
Specifications: +4.4 pressure only (+63.8 psi)  
Gasket: Solid PTFE  
Flanged Adaptor: Yes  
Weld In Flange: Yes

3.3 **Air Inlet Valve**
Supplier: Perolo  
Quantity: One  
Description: 1" BSP  
Gasket: PTFE  
Weld In Flange: Yes

3.4 **Top Discharge Provision**
Quantity: One  
Dimensions: DN 80 (3")  
Specification: Blank flange (4 x M16 on 160 mm PCD)  
Gasket: Klinger SIL C-4430 and PTFE  
Remarks: Provision is made for the future fitting of a clamped 3" butterfly valve and 3" syphon tube  
Guide for Syphon tube: Yes  
Weld In Flange: Yes  
Blind Flange: Yes

3.5 **Thermometer**
Supplier: WIKA  
Quantity: One  
Description: Surface type, 100 mm dial diameter  
Dual scale: -20°C to 150°C, -4°F to 302°F  
Type: Gas in metal / Contact type  
Position: Rear end (8 o’clock)

3.6 **Bottom Discharge**
Supplier: Perolo  
Dimensions: DN 80 (3") opening diameter  
Specification: Internal valve - 30° foot valve  
Gasket: Klinger SIL C-4430 / PTFE Envelope  
External valve – L.H. operated clamped butterfly valve  
Gasket: Klinger SIL C-4430 / PTFE  
3" BSP threaded connector closed by a stainless steel cap with retaining chain  
Remarks: A remote control is connected to the internal valve handle with fusible link provision  
Quote 24000 “R0”
3.7 **Spillbox (s)**
- **Quantity**: Two, manhole with safety relief and accessories
- **Position**: On centre line around Manhole and Off centre around Top Discharge
- **Dimensions**: 945 mm x 750 mm and 550 mm x 400 mm
- **Material**: ASTM A240 316L, 2 mm
- **Drain Pipes**: External
- **Material**: Reinforced plastic 25mm NB

3.8 **Steam Heating**
- **Heating area**: 6.64 m_² (effective)
- **No. of runs**: 8
- **Inlet diameter**: _ inch BSP male threaded
- **Outlet diameter**: _ inch BSP male threaded
- **Drain valve**: Yes, _ inch BSP Ball Valve
- **End cap material**: PVC

3.9 **Tank Treatment**
- **Pickling**: Internal Yes, External Welds & Heat marks
- **Passivation**: Internal Yes, External Spillboxes only
- **Anti-stress lacquer**: Whole exterior of tank including skirts

3.10 **Insulation and Cladding**
- **Material**: Mineral Wool
- **Shell**: 30 mm (min 60kg/m_³) 20 mm (min 35kg/m_³)
- **Ends**: varies (min 60kg/m_³)
- **Cladding**: 0.8mm thick pre painted aluminium (Grade Alloy 3004 H32) or equivalent

3.11 **Walkway**
- **Layout**: “T” Type
- **Width / thick**: 475 mm / 3.0 mm
- **Material**: Aluminium Grade 5042-0

3.12 **Ladder**
One ladder 300 mm (32 x 32 mm section) wide is provided on the right hand side of the rear frame. The ladder rungs are made from stainless steel and have an anti-slip surface. One handhold is provided adjacent to the ladder.

3.13 **Corner Protection**
8 off per tank located at the top and bottom frame corners.

3.14 **Earthing Connection**
One stainless steel lug 50 x 30 x 3 mm, with 15 mm hole, located at rear of tank frame.

3.15 **Document Holder**
1-off PVC document holder 90 mm diameter 300 mm long.
- **Colour**: Opaque
- **Drain hole diameter**: 6mm

3.16 **Data Plates**
One stainless steel data plate per tank as per code requirements.

3.17 **Dipstick**
- **No**: Bracket : Yes

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Quote 24000 “R0”
3.18 **Calibration**
- Actual paper chart: Yes, supplied in document holder
- Calibration plate: Yes, marked in litres and US gallons/cm, tack-welded inside the main Spillbox.
- Chart Material: 316 Stainless Steel

3.19 **Frame Treatment**
- Surface Preparation: Shot Blasting to SA 2.5 Finish

3.20 **Painting of Frame**

<table>
<thead>
<tr>
<th>Coat</th>
<th>Type</th>
<th>DFT (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer</td>
<td>Zinc Rich</td>
<td>30 micron</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Zinc Phosphate</td>
<td>40 micron</td>
</tr>
<tr>
<td>Top coat</td>
<td>CTC free chlorinated rubber</td>
<td>50 micron</td>
</tr>
<tr>
<td>Colour of frame</td>
<td>TBA (semi gloss)</td>
<td></td>
</tr>
<tr>
<td>RAL Number</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>Supplier</td>
<td>KCC</td>
<td></td>
</tr>
</tbody>
</table>

3.21 **Decals**

**Standard, Mandatory decals:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator’s Code and Serial Number</td>
<td>6</td>
</tr>
<tr>
<td>Size and Type Code “22T6”</td>
<td>3</td>
</tr>
<tr>
<td>IMO 1 / IM 101</td>
<td>2</td>
</tr>
<tr>
<td>TC Impact Approved</td>
<td>2</td>
</tr>
<tr>
<td>UIC “IC70”</td>
<td>2</td>
</tr>
<tr>
<td>Weight (Max Gross Weight 36 000kg)</td>
<td>1</td>
</tr>
<tr>
<td>RID / ADR</td>
<td>2</td>
</tr>
<tr>
<td>Warning Overhead Electrical Cables</td>
<td>1</td>
</tr>
<tr>
<td>Working Pressure “4 Bar MAWP”</td>
<td>2</td>
</tr>
<tr>
<td>Earthing</td>
<td>1</td>
</tr>
<tr>
<td>Remote Control “EMERGENCY – PULL CABLE TO CLOSE”</td>
<td>1</td>
</tr>
<tr>
<td>Nominal Capacity (24 000 /6340 US Gal)</td>
<td>1</td>
</tr>
<tr>
<td>Classification Society (Bureau Veritas)</td>
<td>1</td>
</tr>
<tr>
<td>AAR 600</td>
<td>2</td>
</tr>
<tr>
<td>Foot Valve Warning</td>
<td>1</td>
</tr>
<tr>
<td>Steam Outlet</td>
<td>1</td>
</tr>
<tr>
<td>Steam Inlet Maximum Pressure 4 Bar</td>
<td>1</td>
</tr>
<tr>
<td>Manufacturer “Trencor”</td>
<td>3</td>
</tr>
<tr>
<td>No Walking</td>
<td>2</td>
</tr>
<tr>
<td>No Forklift</td>
<td>2</td>
</tr>
<tr>
<td>UIC “Super Heavy”</td>
<td>3</td>
</tr>
<tr>
<td>MAGW for UIC Rail 34000 kg</td>
<td>1</td>
</tr>
<tr>
<td>BSLT</td>
<td>1</td>
</tr>
<tr>
<td>Steam Heating Drain Valve</td>
<td>1</td>
</tr>
<tr>
<td>Height decal (2,6)</td>
<td>2</td>
</tr>
</tbody>
</table>

**Owner's Logo's**  
*(Free Issue)*

Decal Warranty: Mandatory Decals 7 years

Quote 24000 "R0"
4. **Tests and Approvals**

4.1 These tanks containers are constructed according to an approved design.

4.2 Each production unit is subject to testing and non-destructive examination as required by ASME VIII Division 1, UIC and Suppliers own quality requirements. The independent Inspection Authority, Bureau Veritas, inspects each unit.

4.3 The tank container has been specially tested and approved for a stacking load of 86400kg per corner post, which corresponds to nine-high stacking.

4.4 The tank container fulfils the performance specification of the following International Organization’s regulations and recommendations and is supplied with their Approvals / Registrations.

   US-DOT     IMDG – (via US DOT)
   TIR (Customs)   CSC
   RID / ADR     Transport Canada
   AAR 600      UIC (IC 70)

4.5 Radiography (UW51 and UW52)
   Shell Spot
   Dished Ends 100%

5. **Documentation**

The following documentation will be provided:

5.1 Details and GA drawings with indication of the serial number
5.2 Technical data sheet
5.3 Cleanliness Certificate issued by an Independent Party (one copy in plastic pouch in document holder)
5.4 Initial Inspection Certificate
5.5 BV technical note / approvals
5.6 User’s Manual in English

Files must be prepared as specified hereafter:
1 x paper file
1 x CD ROM

6. **Products (RID / ADR)**

Approved for products in classes 3; 6.1; 8 & 9 as applicable.

Quote 24000 "R0"