

REVISION:“G2”

DATE: 29.Aug.2018

21,000L – 20' TANK CONTAINER

SPECIFICATION NUMBER: PCF01-00469

GA DRAWING NUMBER: PCF01-00469

OWNER'S NUMBER: EXFU823341-823344

PREPARED FOR

EXSIF

COMPILED BY: Zhou Y 29.Aug.2018 CHECKED BY: Cao X 29.Aug.2018 APPROVED BY: Fu WX 29.Aug.2018

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1.0 DESIGN SPECIFICATION

TANK TYPE	:	20ft ISO UN CIMC BURG Frame Tank.	
CAPACITY	:	21,000 litres 0 +1 ¹ / ₂ %.	
TARE	:	3,520 kg nominal.	F
MAX GROSS	:	36,000 kg.	
PRODUCTS	:	General purpose liquids.	
MAWP	:	4 bar.	
TEST PRESSURE	:	6 bar.	
EXTERNAL PRESSURE	:	0.41 bar.	
VESSEL DESIGN TEMP.	:	-40°C to 140°C.	E
TYPE APPROVALS	:	UN portable tank (T11 IMDG, CFR49, ADR/RID), UIC, TIR, ADR L4BN, CSC, TC.	
CLASSIFICATION SOCIETY	:	BV.	

2.0 VESSEL

DESIGN CODE	:	ASME VIII Div 1/EN14025 where applicable.
MATERIAL	:	Shell: SANS 50028-71.4402/1.4404, max carbon content 0.03%, Cold rolled 2B finish. Min. calculated thickness: 4.18mm Corrosion allowance 0.42mm. Manufacture thickness 4.6mm. End: SANS 50028-71.4402/1.4404, max carbon content 0.03%, hot rolled, polished. Min. calculated thickness: 4.4mm Corrosion allowance 0.2mm. Manufacture thickness 4.6mm.

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RADIOGRAPHY	:	Shell: spot(including all “T” joints); Ends: 100%
SURFACE POLISH	:	Base 400 mm of circumferential seams ground flush. Fillet welds on tank fitting ground smooth, not coarser than 120 grit.
INTERNAL FINISH	:	Chemically cleaned, washed and dried.

3.0 FRAME

TYPE	:	ISO 1496/3 (1CC) without saddles.
MATERIAL	:	SPA-H or equivalent.
WALKWAY	:	475mm and 400mm wide non-slip aluminum. Two longitudinal section walkways (divided into three individual pieces for maintenance purpose) at the two sides, Section between longitudinal fitted full walkways.
HANDRAIL	:	Provision for future fitting a collapsible handrail on the right handside.

4.0 COMPONENTS

4.1) SAFETY RELIEF VALVE	:	1 x 3" flanged pressure only valve set at 4.4 bar complete with provision for a second valve. To be marked with “EXSIF WW” Fort Vale part numbers: Fort Vale: Relief valve: FV 043/1630082S+E Tank pad: FV 176/3125 Gasket: PTFE FV 5005-930 M16 stud kitM16: FV311/3710
4.2) MANLID	:	500mm dia. hinged 8 point manlid,with 8 stainless steel G2 wing nuts.
GASKET	:	To be marked with “EXSIF WW” Composite seal with PTFE outer encapsulating EPDM inner.
DIPSTICK BRACKET	:	No fitted. Fort Vale part numbers: Man/Neck assembly: FV E4D/8511025AT+E

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Gasket: SUPER TANKTYT SEALS FV FV5005-860EP

- 4.3) AIRLINE : **1 1/2" BSP ball valve terminating with DN40 Airline remote line fitted from valve to rear end right hand side terminating with 1.5" BSP dustcap, The pipe over the cladding. Fitted with cable activation mechanism to lower right hand side of rear end frame. The weld in pad should be horizontal. To be marked with "EXSIF WW".** G2
Fort Vale part numbers:
Airline valve: FV 530/0000+E
Tank pad: FV 350/0037
Blank cap c/w chain & seal: FV10300PS+E
- 4.4) TOP OUTLET : 3" NB tank pad top outlet should also be dual drilled to 6 x M12 on a 168.3 pcd and 4 x M16 on a 160 pcd complete with a 4-holes blank flange. To be marked with "EXSIF WW"
Fort Vale part numbers:
Blind flange: FV360/8096+E
Tank pad: FV 312/0065
Gasket: FV 5005-785
Bolt kit: FV311/3710
- 4.5) SPARE CONNECTION : 3" low profile tank pad top outlet should also be dual drilled to 6 x M12 on a 168 pcd and 4 x M16 on a 160 pcd complete with blank flange. The tank pad should be horizon mounted. To be marked with "EXSIF WW"
Fort Vale part numbers:
Blind flange: FV 360/8096+E
Tank pad: FV S0609
Gasket: PTFE FV5005-785
Bolt kit: FV 311/3710
- 4.6) BOTTOM OUTLET : 3" NB 45 ° highlift Univalve footvalve to 3" BSP stainless steel dustcap. Footvalve complete with CIMC remote closure system and fusible link. To be marked with "EXSIF WW"
Fort Vale part numbers:
Foot valve: FV 804/4000A+E
Tank pad: FV 324/9000
Gasket: PTFE FV 5005/015
Bolt kit: FV 324/2080
Fusible Link: FV324/5771

Remote operating lever: FV 324/7610

- 4.7) STEAM HEATING : 8 runs steam heating system, the tank vacuum rings not used for steam heating. Longitudinal steam channels manufactured from Duplex stainless steel. Effective heating area 10m². E
- Pressures : Design pressure 4 bar. Test pressure 6 bar.
- Connections : 1" BSP inlet, 3/4" BSP outlet. Stainless steel dustcaps fitted.
- 4.8) SPILLAGE AREAS : One spillage tray around manlid and relief valve. One spillage tray around airline, top outlet pad and 3" spare connection. Each tray manufactured from 2mm thk. stainless steel complete with plastic drain tubes. Hinges are fitted for the future fitting of top spillage lids (opening angle 180 degree). E
- 4.9) DOCUMENT HOLDER : φ 75x325 Plastic document holder fitted to rear end frame.
- 4.10) THERMOMETER : Glycerine filled Analogue thermometer, range -40°C to +160°C. To be marked with "EXSIF WW" .

5.0 INSULATION & CLADDING

- 5.1) INSULATION BARREL : 50mm Rockwool where possible. D
- ENDS : 50mm glasswool where possible.
- UNDER THE CLADDING OVERLAP : Compress rockwool under the cladding overlap. G
- HORIZONTAL STEAM TUBES : 50mm Rockwool where possible D
- 5.2) CLADDING : White (RAL 9003) glass reinforced plastic over barrel and ends.

6.0 EXTERNAL CORROSION PROTECTION

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SHOTBLAST	:	SA 2 ¹ / ₂ to framework.
CARBON STEEL FRAMEWORK	:	Primer coat: Epoxy zinc rich primer, 30 microns DFT. Intermediate coat: Epoxy primer, 40 microns DFT. Top coat: PU, 50 microns DFT. Total: 120 microns DFT. Colour :RAL 5002 blue.
Heating system	:	Anti-stress corrosion paint 60um applied Heating system G as deemed appropriate by CIMC.
CORNER CASTINGS	:	Primer coat: Epoxy zinc rich primer, 30 microns DFT. Intermediate coat: Epoxy primer, 40 microns DFT. Top coat: polyurethane, 50 microns DFT. Total: 120 microns DFT. Colour :red.

7.0 MARKING

DATA PLATES	:	Consolidated data plate, customs plate.
STATUTORY DECALS	:	Supplied and fitted by manufacturer.
OWNER LOGOS	:	Supplied and fitted by manufacturer.
THE TEMPERATURE WARNING DECALS	:	Supplied and fitted by manufacturer.