BOXSOL PTY Ltd
15 Marav Court, Success, Western Australia 6164
ABN : 62158252110

1.0 DESIGN SPECIFICATION

TANK TYPE	:	20ft ISO UN CIMC BURG Frame Tank.
CAPACITY	:	25,000 litres -1, +1.5%.
FRAME (L/W/H)	:	6058/2438/2591mm
TARE MASS	:	3,650 kg nominal.
MAX GROSS MASS	:	36,000 kg.
PRODUCTS	:	General purpose liquids.
MAWP	:	4 bar.
HYDROSTATIC TEST PRESSURE	:	6 bar.
MAX EXTERNAL PRESSURE	:	0.41 bar.
VESSEL DESIGN TEMP.	:	-40℃ to 130℃.
LOADING TEMPERATURE (@atm P)	:	140℃
DESIGN CODE	:	ASME Ⅷ DIV. 1
TYPE APPROVALS	:	UN portable tank (T11 IMDG, CFR49, ADR/RID), UIC, TIR, CSC, TC, ADR L4BN.
CLASSIFICATION	:	Bureau Veritas
STACKING TEST	:	Each container is approved for 9 high stacking at 24,000kg.

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2.0 VESSEL

DESIGN CODE	:	ASME Ⅷ Div 1/EN 14025 where applicable.
MATERIAL	:	Shell Material: SANS 50028-7 1.4402. Equivalent to 316L. Max carbon content 0.03%. Min. calculated thickness 4.18mm. Corrosion allowance 0.22mm. Total thickness 4.4mm. Cold Rolled 2B finish. Ends Material: SANS 50028-7 1.4402. Equivalent to 316L. Max carbon content 0.03%.Min. calculated thickness 4.3mm. Corrosion allowance 0.2mm. Total thickness 4.5mm (after forming). Outside Hot Rolled NO.1 finish. Inside polished with 1.2μm.

WELDS	:	Shell: Longitudinal: as welded. Circular: as welded. Bottom 400mm flush and polished (180grit). Manhole neckring and bottom flange to be polished (180grit). Ends: Ground flush and polished with 180grit.
INTERNAL FINISH	:	Chemically cleaned, washed and dried. Pickled and Passivated according to procedure *CIMC SPECIFICATIONS FOR PICKLING AND PASSIVATION*.

3.0 FRAME

TYPE	:	ISO 1496/3 (1CC) without saddles. Toprails fitted.
CORNER CASTINGS	:	ISO 1161 8-off in total
MATERIAL	:	SPA-H or equivalent.
LADDER	:	Stainless steel ladders with anti-slip rungs, to be bolted to the rear end right hand side. A handgrip is fitted to the underside of the rear header. F
WALKWAY	:	2-off full length longitudinal 475mm wide aluminum type (divided into individual pieces for maintenance purpose). 2-off transverse 475mm or 400mm wide aluminum type. Provision for future fitting full walkway. Walkway is supported off spillboxes. F **Supplier: JinJiang Green**
EARTHING CONNECTION	:	2-0ff 304 stainless steel plate 42x30x3 mm with a 9 mm hole. One located at the rear of frame and other at the top, rear spill box.
HANDRAIL	:	Not fitted.

4.0 COMPONENTS

4.1)	SAFETY RELIEF ASSEMBLY	:	2½" BSP safety relief valve without gauze. Pressure only model set at +4.4 bar (63.8psi), complete with Adaptor and gauge guard. Provision is made for the future fitting of a bursting disc and manometer. The assembly is off centre on a tangential tank pad. A small stainless steel plate to indicate the function of accessory.

4.2)	MANHOLE	:	500mm low profile, 8 point fixing. The manlid is completed with TIR. A small stainless steel plate to indicate the function of accessory.	
	GASKET	:	PTFE braided seal. Supplied by FV.	C
4.3)	AIR INLET ASSEMBLY	:	DN 40 ball valve terminating with 1½" BSP connection and cap. The assembly is situated off centre on a low profile horizontal tank pad. No gauze fitted. A small stainless steel plate to indicate the function of accessory. Supplied by FV.	C
4.4)	TOP DISCHARGE PROVISION	:	DN80 stainless steel 316 tank pad with not less than 94mm hole with blind flange. The assembly is fitted off centre on a low profile horizontal tank pad. Flange to be dual drilled: 6×M12 on 168.3PCD and 4×M16 on 160PCD. A small stainless steel plate to indicate the function of accessory. Supplied by FV.	C
4.5)	SPARE CONNECTION	:	DN50 stainless steel 316 tank pad with blind flange. The assembly is fitted off centre on a horizontal tank pad. Flange to be dual drilled: 4×M10 on 100PCD and 4×M16 on 125PCD. A small stainless steel plate to indicate the function of accessory. Supplied by FV.	C
4.6)	BOTTOM DISCHARGE	:	FV: DN80 45° Univalve footvalve terminating with a 3" BSP spigot with cap and chain. Perolo: DN80 45° TWINCO footvalve terminating with a 3" BSP spigot with cap and chain. The bottom flange is a normal flange. Fitted outlet box cover. A small stainless steel plate to indicate the function of accessory. Supplied by FV.	E F
4.7)	REMOTE CONTROL	:	A 3mm plastic coated stainless steel cable is fitted to the entire length of the right hand side of the tank. 1-off emergency decals are fitted above the cable.	
4.8)	FUSIBLE LINK	:	A fusible link is fitted to the remote control cable.	
4.9)	STEAM HEATING	:	8 runs steam heating system. The vacuum rings don't be used for steam heating. Longitudinal steam channels manufactured from Duplex stainless steel. Heating provided to BDC area. Actual heating area 4.57 m2, effective heating area 9.6m2.	

	PRESSURES	:	4 bar working pressure, 6 bar test with warning decals and markings.	
	CONNECTIONS	:	1" BSP inlet, 1" BSP outlet. Stainless steel dustcaps fitted. The steam channels would be fitted with a condensation valve including an elbow.	
4.10)	SPILLBOX	:	2-off Stainless steel 304 2mm thick boxes fitted around manhole /relief valve and top discharge provision /air inlet/spare connection. Each box is equipped with 2 DN 25 surface mounted PVC drain tubes fitted to rear end of box. TIR cross wires to be fitted to drainage tubes. Stainless steel covers fitted and open to front and rear.	F
4.11)	DOCUMENT HOLDER	:	Φ110×300mm clear plastic document holder fitted to rear end frame right hand side. A drain hole is provided at the lowest point.	
4.12)	THERMOMETER	:	Dual scales analogue thermometer with two stainless steel protection bars, range from -40℃ to +160℃ and -40℉ to +320℉. Positioned on rear end left hand side.	F

5.0 INSULATION & CLADDING

5.1) INSULATION

SHELL	:	50mm Rockwool where possible. Nominal 50mm thick on aluminum foil. The aluminium foil on the insulation to be on the face of the tank.
ENDS	:	50mm Rockwool where possible to suit on aluminum foil. The aluminium foil on the insulation to be on the face of the tank.
HORIZONTAL STEAM TUBES	:	50mm Rockwool where possible. Nominal 50mm thick on aluminum foil. The aluminium foil on the insulation to be on the face of the tank.
UNDER THE CLADDING OVERLAP	:	50mm compressed rockwool where possible.

5.2) CLADDING

SUPPLIER	:	JinJiang Green.	B
SHELL	:	1.8mm thick white (RAL9010) glass reinforced plastic. Seal provided by silicone sealant. Φ10mm drain hole per panel on	

bottom centerline.
No banding.
A joint is never on the top end of the tank container but make sure joints are on the lower part of the tank. Joints should always be in an overlap with the top sheet running from the top over the sheet coming from the lower part of the tank.

ENDS	:	2.0mm thick white (RAL9010) glass reinforced plastic.
RIVETS	:	Insulated st/st rivets, custom rivets and aluminum rivets fitted. There are two rows of rivets for closing of cladding panels, and the rivets are off centre.

6.0 EXTERNAL CORROSION PROTECTION

SHOTBLAST	:	SA $2^1/_2$ to framework.
CARBON STEEL FRAMEWORK	:	Primer coat: Hempadur Zinc (1536C), 30 microns DFT. Intermediate coat: Hempadur Primer (1530C), 30 microns DFT. Top coat: Hempatex (5643C), 60 microns DFT. Total: 120 microns DFT. Color: suit to customer.
TANK	:	Tank Degreased. Hempadur (85671), 100 microns DFT (The end which covered by bottom tray paint 40 microns DFT).

7.0 MARKING

DATA PLATES	:	One set of stainless steel data plates are provided stating the requirements as per the code. Insulation K value 0.95w/m2℃ to be stamped on data plate. F
CALIBRATION	:	A calibration plate marked in litres / US Gallons is mounted to inside of the manlid spillbox. Plate to indicate top 20% of capacity in cms and thereafter 1000L steps. No dipstick or bracket fitted.
STATUTORY DECALS	:	Supplied and fitted by manufacturer.
OWNER LOGOS	:	Supplied and fitted by manufacturer.