SINGAMAS

TANK CONTAINERS

Revision Status: 2
Revision date: 8 September 2015

®2	**CLIENT**	**: FFA**
®2	**SPECIFICATION NO**	**: FF3A 26-T11- FFA 15-S3562 Rev.1 – Food**
	TANK TYPE	**: Full Frame T11 UN Portable tank**
	DATE	**: 14 July 2015**
®1	**SINGAMAS JOB No**	**: P15043**
®1	**TANK PREFIX No's**	**: STCU 152651 – STCU 152660 (10_off)**

1. General Parameters

1.1	Design Code	ASME VIII DIV. 1
1.2	Maximum Gross Mass	36000 kg
1.3	Nominal Capacity	26000 litre (+/- 0,75%)
1.4	Design Temperature (frame & tank)	-40 to +130 °C
1.5	Maximum Product Loading Temperature (Atmospheric)	140 °C
1.6	Maximum Allowable Working Pressure	4.00 bar
	Hydrostatic Test Pressure	6.00 bar
	Maximum External Pressure	0.41 bar
1.7	Tare Mass (TBC)	3700 kg (± 3%)
1.8	Frame (length / width / height)	6058 / 2438 / 2591mm

2. Tank Details

2.1	Shell:	Material	SANS 50028-7 Type 1.4402/1.4404 (C≤0.03%)
		Thickness	4.2 + 0.2 (CA) = 4.4mm
		Finish	Cold Rolled 2B
2.2	Ends	Material	SANS 50028-7 Type 1.4402/1.4404 (C≤0.03%)
		Thickness	4.7 +0.2 (CA) = 4.9mm A/F
		Finish	Hot / cold Rolled and polished with 180 grit
2.3	Welds	Shell	Longitudinal: as welded Circular: As welded,Bottom 400mm flush and polished(180grit)
		Ends	Ground flush and polished with 180 grit
2.4	Stiffening Rings		Stainless steel 304 channel section
2.5	Radiography		As per code requirements
2.6	Steam Heating		8 runs 110mm x 4700mm stainless steel 304 1" BSP inlet, ¾" BSP outlet both with captive caps and cable 4 bar working pressure, 6 bar test with warning decals and markings. A condensate drain valve is fitted at lowest point.
2.7	Insulation	Shell	Rockwool (50kg/m³) 50mm thick on aluminium foil. Insulation to be trimmed on sides and ends to fit inside ISO-limits.
		Ends	Rockwool (50kg/m³) thickness to suit on aluminium foil

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Tank Details Cont'd

	2.8	Cladding	Shell	1.8mm GRP prepainted whitie (RAL9010) with lapped joints. Seal provided by silicone sealant. 10mm drain hole per panel on bottom centreline.
			Ends	2mm thick GRP one piece end (RAL 9010) GRP ends fitted directly to the frame diaphragm plates.
®2	2.9	Spillbox		2-off Stainless steel 304 2,0mm thick boxes fitted around Manhole / Relief valve (Centre spillbox) and Top Discharge provision / Air Inlet (Rear spillbox). Each box is equipped with 2_off DN 25 surface mounted PVC drain tubes fitted to rear end of box. Provision for the future fitting of lids is provided.

3. Frame Details

	3.1	Type		Full frame beam design (ISO 1496-3 Type 1CC) with hollow section bottom rails.
	3.2	Corner castings		ISO 1161 8-off in total
	3.3	Top rails		Integral in frame design
	3.4	Protection	Top	4-off triangular per tank, 1 per corner on top rail and header
			Bottom	Raised bottom rail, front and rear sill.
	3.5	Ladder		300mm stainless steel fitted to the rear end right hand side. Ladder rungs to be antislip type. Fastenings to be stainless steel.
	3.6	Walkway		1-off full length longitudinal and 2_off transverse 475mm wide aluminium type (F-style). Walkway supported off spillboxes and end frames using stainless steel fastenings with nylock nuts.
®2	3.6A	Collapsible Handrail		Not Fitted.
	3.7	Earthing Protection		1-off stainless steel lug fitted to rear end bottom of frame.
®2	3.8	Painting		Carbon steel shotblasted to Sa 2½ profile

First layer	SC Zinc	(0425009)	30 microns min DFT
Second layer	SC Primer	(0586350)	40 microns min DFT
Final layer	ACRIC SC	(0349257)	50 microns min DFT
Total			120 microns min DFT

Colour – RAL 5002

No anti stress corrosion lacquer is applied.

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4. Tank Fittings

4.1	Manhole	Fort Vale 500mm low profile, 8 point fixing with TIR pin. Sweet White Rubber Foodgrade gasket.
4.2	Safety Relief Assembly	1-off Fort Vale DN80 flanged Supermaxi Highflow, 013/163008SL, Pressure only model set at +4.4 bar (63.8psi). Provision is made for the future fitting of a bursting disc and manometer . The assembly is off centre on a tangential tank pad in centre spillbox.
4.3	Air Inlet assembly	Fort Vale DN 40 ball valve, terminating with 1 ½" BSP connection and cap. The assembly is situated off centre on a tangential tank pad on RHS in rear spillbox.
4.4	Top Discharge Prov.	A Dual drilled 4xM16 PCD160 and 6xM12 PCD168.3 DN80/3"stainless steel 316 tank pad with **95mm** hole terminating with blind flange. The assembly is fitted off centre on a horizontal recessed tank pad inside rear spillbox.
4.5	Bottom Discharge	DN80 Fort Vale 45° Cleanflow Internal footvalve with clamped DN80 butterfly valve terminating with a 3" BSP spigot with cap and chain.
4.6	Remote Control	A 5mm 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.
4.7	Fusible Link	Provision for future fitting only.
4.8	Thermometer	A surface mounted analogue type is fitted to the rear end dished end of the tank. Dual scale -20°C to +160°C / 0°F to 320°F. The thermometer is fitted with a protection bar.
4.9	Document holder	A clear plastic document holder ø 110mm is fitted to the rear right hand side beam. A drain hole is provided at the lowest point.
4.10	Decals	One set of mandatory decals is fitted. Customer logo by client and applied by manufacturer.
4.11	Data Plates	One set of stainless steel data plates are provided stating the requirements as per the code.
4.12	Calibration	A calibration plate marked in cm/litres is fitted on the spillbox side wall. No calibrated stainless steel grade dipstick fitted.
®2 4.13	Bottom Cabinet	One stainless steel cabinet is fitted around bottom discharge assembly. No floor plate or lid is fitted.

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5. General

5.1 The tank is degreased, pickled, passivated and neutralised. A cleaning certificate will be provided in the document holder.

5.2 Each container will be inspected and certified by the independent Inspection Authority in accordance with the code requirements.

5.3 Each container is approved for 9 high stacking as per ISO 1496-3.

5.4 Each container will be supplied with following approvals:
UN Portable Tank – T11
IMDG – T11 (appraisal only)
US DOT CFR 49 – AAR600 (appraisal only)
RID/ADR-L4BN
CSC
TC
TIR / Customs
UIC

5.5 Documentation:

On completion of the tank:

1. Initial Inspection Certificate
2. Calibration Chart
3. Cleanliness Certificate
4. As built drawings

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Compiled by : _____

CUSTOMER APPROVAL : _____

BY : _____

DATE : _____

Revision History:

From Original spec to Rev.1 (6 August 2015)

1) **Added job number and tank prefix numbers in heading (Heading)**

From Rev.1 to Rev.2 (8 September 2015)

1) **Removed spillbox covers, handrail and bottom cabinet floor/door (2.9, 3.6A, 4.13)**
2) **Revised Kansai paint codes (3.8)**