



**南通中集罐式储运设备制造有限公司**

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**REVISION: "R0"**

**DATE: 17, Apr. 2007**

**REVISION: "R1"**

**DATE: 28, May, 2007**

**REVISION: "R2"**

**DATE: 05, Jun, 2007**

**REVISION: "R3"**

**DATE: 11, Oct. 2007**

**24,000L – 20' TANK CONTAINER**

**STANDARD SPECIFICATION**

**SPECIFICATION NUMBER: NTC-1413**

**GA DRAWING NUMBER: NTC-1413G**

**OWNER'S NUMBER: EXFU 056905 - 057004**

**PREPARED FOR**

**EXSIF**

COMPILED BY: Zhang xh 11, Oct. 2007 CHECKED BY: Chenj 11, Oct. 2007 APPROVED BY: Fu wx 11, Oct., 2007

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<b>20' TANK CONTAINER SPECIFICATION AMENDMENT</b>	CONTRACT: <b>033005</b>
	PAGE: 1 OF 1
	REVISION: R3
<b>SPECIFICATION NO.: NTC-1413</b>	DATE: 11,Oct.2007
AMENDMENTS LISTED BELOW INCORPORATE CHANGES TO THE ORIGINAL CONTAINER SPECIFICATION	

Rev. No.	DESCRIPTION OF REVISION	EFFECTIVE CONTRACT	APPROVED BY	DATE
R0	NEW DRAWING		CIMC	17, Apr. 2007
R1	Change the description of manlid's gasket.		CIMC	28, May, 2007
R2	Add top spillage box lids and bottom outlet box lid.		CIMC	05, Jun, 2007
R3	Neglect R2 edition ,Add top spillage box lids and s/s calibration charts on the center lid for EXFU 056905 - 057004 .		CIMC	11, Oct, 2007

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## **1.0 DESIGN SPECIFICATION**

TANK TYPE	:	20ft ISO UN T11 UNIVERSAL COLLAR (SET OUT) TANK.
CAPACITY	:	24,000 litres 0 +1 <sup>1</sup> / <sub>2</sub> %.
TARE	:	3,795 kg nominal.
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 130°C.
TYPE APPROVALS	:	UN PORTABLE TANK (US DOT, UK DETR, ADR/RID), UIC, TIR, CSC, FRA, AAR 600, TC.
CLASSIFICATION SOCIETY	:	Lloyds Register Industrial Division

## **2.0 VESSEL**

DESIGN CODE	:	ASME VIII Div 1 where applicable.
MATERIAL	:	Shell: DIN 17441 1.4401, max carbon content 0.03%, Cold rolled 2B finish. Min. calculated thickness: 4.28mm. Total thickness 4.6mm, corrosion allowance 0.32mm included.  End: DIN 17441 1.4401, max carbon content 0.03%, Cold rolled 2B finish. Min. calculated thickness: 5.03mm. Total thickness 5.9mm (before forming), corrosion allowance 0.2mm included.
RADIOGRAPHY OF	:	Shell: all "T" joints X-RAY.

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WELDS	Ends: 100% X-RAY.
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 (ICC) without saddles.
MATERIAL	: RHS to DIN 59411 St52-3, or equivalent
WALKWAY	: 475mm wide non-slip aluminum. Two longitudinal section walkways at the two sides , Section between longitudinals fitted 5-off 475mm wide walkway.

### **4.0 COMPONENTS**

4.1) SAFETY RELIEF VALVE	: The container is fitted with one valve mounted to the tank via a flanged connection to the tank pad. There is also a provision for a further valve in the form of a tank pad and a blank flange. These are located on either side of the upper tank centre line. The safety relief valve is a stainless steel Fort Vale 3" flanged type(FV013/16300805). To be marked with "EXSIF WW" Rating : Positive Pressure : 4.4 Bar : External Pressure : N/A No rupture disc is supplied. The valve is supplied without a flame proof gauze.
4.2) MANLID	: A manhole is provided at the top of the container near the center. This manhole has an internal diameter of 500mm. To open the cover, hinges are provided and R1 : tightening is achieved by the means of 8 swing bolts (FV8TB/7401 118P).
GASKET	: Fort Vale Composite seal with PTFE outer encapsulating EPDM inner.
DIPSTICK BRACKET	Fitted in manlid assembly(no dipstick).

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- 4.3) AIRLINE : 1 $\frac{1}{2}$ " ball valve to 1 $\frac{1}{2}$ " BSP dustcap. The weld in pad should be horizontal. To be marked with "EXSIF WW"  
Fort Vale part numbers:  
Airline valve: FV 530/0000  
Tank pad: FV 350/0037  
Blank cap c/w chain & seal: FV10300PS  
Stud kit: FV 350/1300
- 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  
Tank pad: FV 312/0065  
Gasket: FV 5005-785  
Bolt kit: FV311/3700
- 4.5) SPARE CONNECTION : 2" tank pad spare connection , dual drilling of 4 x M16 on a 125 pcd and 4 x M10 on a 100 pcd . The weld in pad should be horizontal. To be marked with "EXSIF WW"  
Fort Vale part numbers:  
Blind flange:FV 370/4239  
Tank pad: FV 355/1033  
Gasket:PTFE FV5005-360  
Bolt kit:FV 311/3700
- 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 804/4000  
Tank pad: FV 324/9000  
Gasket: PTFE FV 5005/015  
Bolt kit: FV 324/2060  
Fusible Link: FV324/5770  
Remote operating lever: FV 324/7610
- 4.7) REMOTE CONTROL : The control cable with a fusible link system (FV324/5770) is fitted along the off side of tank and can be used to close the footvalve (e.g. in case of

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emergency).

The fusible link will break when the temperature reaches 100°C(212°F), thus automatically shutting off the footvalve.

- 4.8) STEAM HEATING : 6 run steam heating system in combination with tank rings. Effective heating area 12.6 m2.
- Pressures : Design pressure 4 bar. Test pressure 6 bar.
- Connections : 1" BSP inlet, 3/4" BSP outlet. Stainless steel dustcaps fitted.
- 4.9) SPILLAGE AREAS : One spillage tray around manlid and relief valve. One spillage tray around airline, top outlet pad and 2" spare connection. Each tray manufactured from 2mm thk. stainless steel complete with plastic drain tubes. Each spillbox fitted a hinged with lockable stainless steel 304 spillbox lid. The lids have an opening angle  $\geq 130$  degrees controlled by chains. R3
- 4.10) DOCUMENT HOLDER :  $\phi 70 \times 310$  Plastic document holder fitted to rear end frame.
- 4.11) 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& ENDS : 25mm PU foam over 30mm Rockwool where possible
- UNDER THE BANDING : PU foam under the stainless steel banding.
- HORIZONTAL STEAM TUBES : 25mm PU foam over 30mm Rockwool where possible
- 5.2) CLADDING : White (RAL 9003) glass reinforced plastic over barrel and ends. Polished stainless steel banding.

## **6.0 EXTERNAL CORROSION PROTECTION**

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- SHOTBLAST : SA 2<sup>1</sup>/<sub>2</sub> to framework.
- CARBON STEEL : One coat Hempel Hempadur Zinc 1536 Primer to 40  
FRAMEWORK : microns DFT. One coat Hempel Hempatex 4641 to 80  
microns DFT. Colour :RAL 5002 blue.
- STEAM COILS : One coat Leighs Resistex M505 or equivalent heat  
resistant aluminium paint to 25 microns DFT.
- CORNER CASTINGS : One coat Hempel Hempadur Zinc 1536/1983 Primer to  
30 microns DFT. One coat Hempadur hi-build  
4520/1115 to 40 microns DFT. One coat Hempathe  
5521/5080 to 50 microns DFT(Color is red).

### 7.0 MARKING

- DATA PLATES : Consolidated data plate, customs plate. Add s/s R3  
calibration charts on the center lid.
- STATUTORY DECALS : Supplied and fitted by manufacturer.
- OWNER LOGOS : Supplied and fitted by manufacturer.

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