DNV·GL

Certificate No:
TAS000010C

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Offshore Tank Container

with type designation(s)
20ft CSC/ISO 17000L offshore tank container

Issued to
Four Lines Industries LLC
Dubai, United Arab Emirates

is found to comply with
DNV GL standard DNVGL-ST-E271 – 2.7-1 Offshore containers, August 2017
EN 12079 Offshore containers-Design, construction, testing, inspection and marking
IMO/MSC Circular 860
International Convention for Safe Containers, 1972 (CSC)
ISO 1496, Part 3: Tank Containers for Liquids, Gases and Pressurized Dry Bulk
DNV 2.7-4 Freight Containers
International Maritime Dangerous Goods Code (IMDG)
European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR)
Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID)

Application :

UN Portable Tank, Tank Instruction T4

Max. gross mass (kg)	**25000**
Max. payload (kg)	**19000**
Tank cap. (L)	**17000**
MAWP/test pr. (bar)	**1.8/2.65**
Eq. shell thk (mm)	**6.08**

Issued at **Høvik** on **2017-11-24**
This Certificate is valid until **2021-11-23**.
DNV GL local station: **Abu Dhabi**

for **DNV GL**

Approval Engineer: **Igor Antonijevic**

Inger-Helene Hals
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

20ft ISO/CSC 17000L offshore tank container

Max. external dimensions (LxWxH)	6058 x 2438 x 2591 mm
Tare mass[1)]	6000 kg
ISO designation	1CC
Size code	22
Type code	K1
Stacking test load per corner	96000 kg
Tank diameter	2050 mm
Shell thickness, shell/ends	6.0/8.0
Tank material	SA516, gr. 70
Pressure Vessel Code	ASME VIII div.1: 2015

[1)] tare mass is to be confirmed by weighing. The sum of the tare mass and the payload shall never exceed the Max. gross mass as it is stated on the front page of this certificate.

Application/Limitation

Approved according to 6.7.4 in IMDG and ADR/RID.

CSC/IMDG/ADR/RID Approval Ref No.:	N-NV/584/01/17
Metallurgical design temperature for tank:	-40°C to +50°C
Design temperature for framework:	-20°C
Setting of relief valve:	2.2 bar
Design vacuum	-0.21 bar
Allowable stacking weight for 1,8g	213316 kg
Racking test load value	15240 kg
Min. shackle bolt diameter:	37.6 mm
Lifting slings Max angle of legs from vertical:	45°
Enhancement factor:	1.104

The cargo accepted for transport is HYDROCHLORIC ACID under UN number 1789..

The cargo shall have no adverse effect on any part of the tank and meet applicable tank special provision.

DNV GL surveyor has to witness important production and test events and issue Form no. 71.08a " Certificate for Offshore Container" and Form no. 49.04x/a "Certificate for Tank Container or Portable Tank" for each container.

Production strength tests (All point lifting) to be carried out according to DNV GL 2.7-1 and after agreement with the DNV GL surveyor.

The certificates are only valid when the containers are fitted with a lifting set certified according to DNV GL 2.7-1.

Each tank should be subjected to a hydraulic pressure test to the specified test pressure.

Type Approval documentation

Tests carried out

Prototype tested according to the requirements.

Marking of product

Each container to be marked with:

- Data plate for UN tanks according to Ch. 6.7.4.15 requirements in IMDG Code, ADR and RID. Design approval number according to Application/Limitation above
- Safety approval plate according to CSC requirement including Allowable stacking load for 1.8g of 213316 kg
- Data plates according to DNV GL 2.7-1 requirements
- External marking according to DNV GL/IMDG/ADR/RID requirements and relevant parts of ISO 6346
- DNV GL decal for offshore containers
- ℒ mark to be hard stamped on frame
- Manufacture's Serial Number to be welded on frame

Periodical assessment

For retention of Type Approval, a DNV GL surveyor shall perform an assessment every 2nd year and before the expiry date of this certificate to verify that the type approval is complied with.

END OF CERTIFICATE