

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Offshore Tank Container**

with type designation(s)

**1000L - 3100L - Horizontal Offshore Tank Containers**

Issued to

**Suretank Limited****Drogheda Co. Louth, Ireland**

is found to comply with

**DNV 2.7-1 Offshore Containers (2013)****EN 12079 Offshore containers-Design, construction, testing, inspection and marking****IMO/MSC Circular 860****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)****CAP 437 Offshore Helicopter Landing areas: Guidance on Standards****Application :****UN Portable Offshore Tank, Tank Instruction T4**

| Type                 | Max. gross<br>mass (kg) | Max. payload<br>(kg) | Tank<br>cap. (L) | MAWP/test<br>pr. (bar) | Eq. shell<br>thk (mm) |
|----------------------|-------------------------|----------------------|------------------|------------------------|-----------------------|
| 600 Gal. - ST-1990/B | 4500                    | 2650                 | 2860             | 1.77/2.65              | 5.0                   |
| 600 Gal. - ST-2110/G | 4500                    | 2800                 | 2860             | 1.77/2.65              | 5.0                   |
| 3100L - ST-3980/B    | 4500                    | 2450                 | 3100             | 1.77/2.65              | 5.0                   |
| 2900L - ST-5410/A    | 4500                    | 2800                 | 2900             | 1.77/2.65              | 5.0                   |
| 1000L - ST-5480      | 2000                    | 1000                 | 1000             | 1.77/2.65              | 5.0                   |
| 2700L - ST-7670      | 4500                    | 2750                 | 2700             | 1.77/2.65              | 5.0                   |
| 2900L - ST-8630      | 4500                    | 2800                 | 2900             | 1.77/2.65              | 5.0                   |
| 2900L - ST-6700      | 4500                    | 2800                 | 2900             | 1.77/2.65              | 5.0                   |
| 2900L - ST-8750      | 4500                    | 2700                 | 2900             | 1.77/2.65              | 5.0                   |
| 2900L - ST-9020      | 4500                    | 2800                 | 2900             | 1.77/2.65              | 5.0                   |
| 2900L - ST-9000      | 4500                    | 2800                 | 2900             | 1.77/2.65              | 5.0                   |
| 2900L - ST-9080      | 4500                    | 2800                 | 2900             | 1.77/2.65              | 5.0                   |

This Certificate is valid until **2020-06-30**.Issued at **Høvik** on **2016-07-11**for **DNV GL**DNV GL local station: **Manchester**Approval Engineer: **Igor Antonijevic**

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**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.



Job Id: **262.1-005966-16**  
Certificate No: **TAS00000JN**

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The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

## Manufactured by

DNV GL id number 1214516

DNV GL id number 10117481<sup>1)</sup>

<sup>1)</sup> the type approval will not become valid for this place of manufacture before they have built and tested a prototype.

Suretank Limited takes responsibility that both design and production are in compliance with the Rules, Standards and/or Regulations listed on page 1 of this Type Approval Certificate.

## Product description

This Type Approval Certificate replaces S-7047.

Design approved according to IMDG Code, Edition 2014 Amdt. 37-14.

| Type      | Max.external dimensions<br>(LxWxH) | Tare<br>mass | Pressure vessel<br>code, tank | Tank<br>diameter<br>(Internal) | Tank material                                                                |
|-----------|------------------------------------|--------------|-------------------------------|--------------------------------|------------------------------------------------------------------------------|
| ST-1990/B | 2150 x 1900 x 2281 mm              | 1850 kg      | ASME VIII Div.1               | 1550 mm                        | A240 316 <sup>2)</sup>                                                       |
| ST-2110/G | 2150 x 1900 x 2331 mm              | 1700 kg      | ASME VIII Div.1               | 1550 mm                        | A240 316 <sup>2)</sup> ;<br>EN 10028-7, 1.4401                               |
| ST-3980/B | 2150 x 1900 x 2381 mm              | 2050 kg      | ASME VIII Div.1               | 1550 mm                        | A240 316 <sup>2)</sup>                                                       |
| ST-5410/A | 2100 x 1900 x 2352 mm              | 1700 kg      | ASME VIII Div.1               | 1550 mm                        | A240, 316/316L;<br>EN 10028-7,<br>1.4401/1.4404                              |
| ST-5480   | 2100 x 1220 x 1424 mm              | 1000 kg      | ASME VIII Div.1               | 920 mm                         |                                                                              |
| ST-7670   | 2080 x 1830 x 2390 mm              | 1750 kg      | ASME VIII Div.1               | 1550 mm                        | SA-240 gr. 316 ;<br>EN 10028-7,<br>1.4401/1.4404;<br>SANS 50028-7,<br>1.4402 |
| ST-8630   | 2150 x 1900 x 2331 mm              | 1700 kg      | ASME VIII Div.1               | 1550 mm                        | EN 10028-7,<br>1.4401/1.4404<br>(316/316L);<br>SANS 50028-7<br>1.4002        |
| ST-6700   | 2150 x 1900 x 2331 mm              | 1700 kg      | ASME VIII Div.1               | 1550 mm                        |                                                                              |
| ST-8750   | 2150 x 1900 x 2331 mm              | 1800 kg      | ASME VIII Div.1               | 1550 mm                        |                                                                              |
| ST-9020   | 2150 x 1900 x 2331 mm              | 1700 kg      | ASME VIII Div.1               | 1550 mm                        |                                                                              |
| ST-9000   | 2150 x 1900 x 2331 mm              | 1700 kg      | ASME VIII Div.1               | 1550 mm                        |                                                                              |
| ST-9080   | 2150 x 1900 x 2331 mm              | 1700 kg      | ASME VIII Div.1               | 1550 mm                        |                                                                              |

<sup>2)</sup> with specified minimum tensile strength  $R_m = 530 \text{ N/mm}^2$  and elongation 40 % at Room Temperature. The actual tensile strength  $R_m$  and the yield strength  $R_e$ , attested by material certificates, must be at least 15% higher than the minimum values specified in the material standards. Verification shall be carried out by the surveyor.

## Application/Limitation

IMDG/ADR/RID design approval number<sup>3)</sup>

N-NV/410/07/08  
IRL-NV/410/07/08  
GB-DNV/410/07/08

| Type      | Metallurgical design temp. for tank | Design temp. for frame work | Min shackle bolt diameter | Max angle of legs from vertical | Enhancement factor | Setting of relief valve |
|-----------|-------------------------------------|-----------------------------|---------------------------|---------------------------------|--------------------|-------------------------|
| ST-1990/B | -40°C to +65°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-2110/G | -40°C to +70°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-3980/B | -40°C to +65°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-5410/A | -40°C to +70°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-5480   | -40°C to +70°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 3.500              | 2.23 bar                |
| ST-7670   | -40°C to +70°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-8630   | -40°C to +50°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-6700   | -40°C to +50°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-8750   | -40°C to +50°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-9020   | -40°C to +70°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-9000   | -40°C to +65°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |
| ST-9080   | -40°C to +60°C                      | -20 °C                      | 21.6 mm                   | 45°                             | 2.067              | 2.23 bar                |

<sup>3)</sup> only one of these numbers shall be used. Suretank Limited is responsible for proper using of numbers. Products accepted for carriage:

- Liquids with the following Tank Instructions in the IMDG and ADR/RID code: T1, T2, T3 and T4. DNV GL surveyor has to witness important production and test events and issue Form no. 49.07a "Certificate for Offshore Container" and Form no. 49.04x/a "Certificate for Tank Container or Portable Tank" for each container. For tank container with GB approval ref. number, certificate MDG10 also has to be issued.

Production strength tests (All point lifting) to be carried out according to DNV 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 2.7-1.

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

## Type Approval documentation

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## Tests carried out

Prototypes tested according to Rules.

## Marking of product

Each container to be marked with:

- Data plates for UN tanks according to IMDG Code Ch. 6.7.2.20. Design approval number according to Application/Limitation above
- Data plates according to DNV / EN requirements
- External marking according to IMDG / DNV / EN requirements
- DNV GL decal for offshore containers
- NV mark to be hard stamped on frame
- Manufacturer's Serial Number to be welded on frame

## Periodical assessment

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

END OF CERTIFICATE