

TYPE APPROVAL CERTIFICATE

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

with type designation(s)

64 Cylinder MEGC Offshore Unit - PB9667G

Issued to

**David Ritchie (Implements) Ltd.
Forfar, Angus, United Kingdom**

is found to comply with

DNV GL standard DNVGL-ST-E271 – 2.7-1 Offshore containers, August 2017**ISO 10855-1:2018 Offshore containers and associated liftings sets – Part 1: Design,
manufacture and marking of offshore containers****IMO/MSC Circular 860****NORSOK Standard R-002 Lifting equipment, Edition 3, March 2017****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 :****Multiple-Element Gas Container (MEGC) for compressed gases**

Max. gross mass (kg)	8010
Max. payload (kg)	1670
Tank cap. (L)	3200
MAWP/test pr. (bar)	300/450
Eq. shell thk (mm)	N/A

Issued at **Høvik** on **2019-08-30**This Certificate is valid until **2024-08-29**.for **DNV GL**DNV GL local station: **Aberdeen**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.



Job Id: **262.1-031973-1**
Certificate No: **TAS000025A**

Manufactured by

Offshore frame produced by:

Manifold manufactured by:

Assembly of MEGC:

Local office: DNV GL Aberdeen

Product description

Offshore container and Multiple-Element Gas Container (MEGC) according to IMDG/ADR/RID Chapter 6.7.5 with 64 elements connected through a manifold.

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

IMDG/ADR/RID approval ref. no. : N-NV/610/08/19

Working temperature (°C) : -20 to +65

Min. shackle bolt diameter (mm) : 24.9

Enhancement factor : 1.632

MAWP/test pr.(bar)²⁾ : 300/450

²⁾ maximum allowable working pressure for the MEGC shall not be higher than the maximum allowable working pressure for the elements.

Elements

Height (mm) : 1490

Diameter (external) (mm) : 229

Volume (l) : 50

Weight (kg) : 62

UN No.	Class	Propper Shipping Name (PSN)
1072	2.2	OXYGEN, COMPRESSED
1006	2.2	ARGON, COMPRESSED
1066	2.2	NITROGEN, COMPRESSED
1046	2.2	HELIUM, COMPRESSED
1956	2.2	COMPRESSED GAS, N.O.S.
3156	2.2	COMPRESSED GAS OXIDISING N.O.S

Cargo to be handled and inspected according to packing instruction P200.

The removable guard must be securely fitted during all lifting and transportation activities.

The DNV GL surveyor to witness important production and test events and issue Form no. 71.08a

"Certificate for Offshore Container" and Form no. CTT101 "Tank Container Certificate" 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.

Only elements of proper size and type that are certified by authorised body shall be used.

Each tank container should be leak tested after assembly.

Type Approval documentation

Tests carried out

Prototype tested according to DNV GL 2.7-1, IMDG Ch. 6.7.

Marking of product

Job Id: **262.1-031973-1**
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Each container to be marked with:

- Data plate for UN tanks according to Ch. 6.7.5.13 requirements in IMDG, ADR and RID. Design approval number according to Application/Limitation above
- Data plates according to DNV GL / ISO requirements
- External marking according to DNV GL / ISO requirements
- DNV GL emblem for offshore containers
- ∇ mark to be hard stamped on frame
- Manufacture's Serial Number to be welded on frame
- Frame to be stencilled with words to the effect of "Removable front guard to be fitted during lifting and transportation activities"

Periodical assessment

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out according to DNVGL-SE-0284 at 2 and 3.5 year intervals. Periodical assessments will, when possible, be harmonised with other surveys and audits carried out.

END OF CERTIFICATE