Certificate no.:
TAS00003RU

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Portable Tank

with type designation(s)
20ft CSC/ISO portable tank container - 1-IC-925

issued to
Indian Oil Corporation Limited
Nashik, Maharashtra, **India**

is found to comply with
International Convention for Safe Containers, 1972 (CSC)
ISO 1496, Part 3: Tank Containers for Liquids, Gases and Pressurized Dry Bulk
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)
Code of Federal Regulations 49
Transport Canada: 4g Impact Test Requirement for Tank Containers

Application:

UN Portable Tank, Tank Instructions T75

Max. gross mass (kg)	**36633**
Max. payload (kg)	**28483**
Tank cap. (L)	**20100**
MAWP/test pr. (bar)	**16.82 / 23.2**
Eq. shell thk. (mm)	**10.8 / 10.7 (shell / ends)**

Issued at **Høvik** on **2026-01-26**

This Certificate is valid until **2031-01-25**.

for **DNV**

DNV local unit: **Mumbai**

Approval Engineer: **Igor Antonijevic**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

20ft CSC/ISO vacuum multi-layer insulated cryogenic tank container

Max. external dimensions (L x W x H)	6058 x 2438 x 2591 mm
Tare Mass[1)]	8150 kg
Nominal thickness (shell/heads)	8.0 / 10.0 mm
Tank internal diameter	2140 mm
ISO Freight container designation	1CC
Size code	22
Type code	K7
Tank material (inner vessel)	SA-240 gr. 304
Pressure Vessel Code	ASME VIII Div. 1

[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 stated on the front page of this certificate.

Application/Limitation

Approved according to IMDG/ADR/RID Ch. 6.7.4. and US DOT 49 CFR requirements

CSC/IMDG/ADR/RID/ design approval reference number	N-NV/644/10/22
US DOT design approval number[2)]	SI-0100-26-USA
Setting of relief valve	16.82 bar
Design temperature range	-196°C to + 50°C
Design vacuum	1 bar
Allowable stacking load for 1,8g	213360 kg
Racking test load value	150 kN
Effectiveness of the insulation system (heat influx)	145 W (for NITROGEN REFRIGERATED LIQUID)

[2)] issued by SilverCims

Dangerous goods that can be transported and holding times

UN No.	Class	Proper Shipping Name (PSN)	Holding time (from 1.0 to 16.82 bar @30°C)
1038	2.1	ETHYLENE, REFRIGERATED LIQUID	106 days (8868 kg)
1073	2.2	OXYGEN, REFRIGERATED LIQUID	86 days (17896 kg)
1951	2.2	ARGON, REFRIGERATED LIQUID	69 days (21794 kg)
1961	2.1	ETHANE, REFRIGERATED LIQUID	114 days (8478 kg)
1972	2.1	NATURAL GAS, REFRIGERATED LIQUID	83 days (6561 kg)
1977	2.2	NITROGEN, REFRIGERATED LIQUID	63 days (11855 kg)
2201	2.2	NITROUS OXIDE, REFRIGERATED LIQUID	158 days (19837 kg)
3136	2.2	TRIFLUOROMETHANE, REFRIGERATED LIQUID	137 days (22267 kg)
UN No.	Class	Proper Shipping Name (PSN)	Holding time (from 10.0 to 16.82 bar @30°C)
2187	2.2	CARBONDIOXIDE, REFRIGERATED LIQUID	42 days (20766 kg)

DNV surveyor has to witness important production and test events and issue Form no. CTT101 “Tank Container Certificate” for each container. In addition to this freight container certificate has to be issued (form no. CTF301 Type Certificate for Container).
Each tank should be subjected to a hydraulic pressure test to 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.
- Data plate according to US DOT and CSC requirements including Allowable stacking load of 213360 kg.
- External marking according to CSC, IMDG/ADR/RID and US DOT requirements
- NV mark to be hard stamped on frame.
- Marking in accordance with other applicable codes
- “TC IMPACT APPROVED” to be marked on the data plate

Periodical assessment

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out according to DNV-SE-0284 at 2 and 3.5 year intervals. Periodical assessments will, when possible, be harmonized with other surveys and audits carried out. To check the validity of this certificate, please look it up in https://approvalfinder.dnv.com

END OF CERTIFICATE