Certificate No:
TAS000036H

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Portable Tank

with type designation(s)
CMW0340, CMW0440, CMW0540, CMW0640, CMW0740 & CMW0840

Issued to
City Machine & Welding, Inc. of Amarillo
Amarillo, TX, USA

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 :

40' ISO Multiple Element Gas Container (MEGC) for compressed gas with 3 to 8 cylinders

Max. gross mass (kg)	**30480**
Max. payload (kg)	**5270**
Tank cap. (L)	**18032**
MAWP/test pr. (bar)	**275/413 (4000/6000 psi)**
Eq. shell thk. (mm)	**N/A**

Issued at **Høvik** on **2021-09-14**
This Certificate is valid until **2026-09-13**.
DNV local station: **Houston**

for **DNV**

Approval Engineer: **Igor Antonijevic**

Zeinab Sharifi
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.

Product description

This Type approval certificate replaces expired S-8447

Container Features		
Max. Gross Mass	30480 kg	67200 lbs
Max. Payload	5270 kg	11620 lbs
Tare Mass[1)]	25210 kg	55580 lbs
Max. external dimensions (LxWxH)	12192 x 2438 x 1435 mm	40’ x 8’ x 56.5”
Size code	48	
Type code	KY[2)]	
ISO designation	1AX	

[1)] Applicable for MEGC type with 8 cylinders. Types with 3 to 7 cylinders shall be weighed for each case and shall be marked with correct values. Tare mass should be measured as sum of frame, empty cylinders and all fixed equipment. Payload is the weight of the cargo that can be filled in the cylinders. In any case the sum between tare and payload shall never exceed the max. gross mass that is stated.
[2)] reduced stacking capacity

Tube Features		
Nominal Outside Tube Diameter	558.8 mm	22’’
Nominal Length	10972 mm	36’
Nominal Weight	2781 kg	6130 lbs
Nominal Volume	2186 l	77.2 Cu.Ft.
Design Temperature	-20°C to 93°C	-4°F to 200°F
All individual elements to carry “Certificate of Conformity” issued by a Notified Body and tested as per requirement stipulated in EEC Council Directive 1999/36/EEC, through at least assessment module “G”.		

Parts	Material
Frame Structure - Rails	ASTM A500 Gr B
Frame Structure – Plates & Angles	ASTM A36
Manifold	Ref. dwg GISO-04-MANIFOLD

Application/Limitation

Approved according to 6.7.5 in IMDG/ADR/RID.
IMDG/ADR/RID/ design approval reference: N-NV/446/07/12
CSC approval reference: US-SI-006-06[3)]
Allowable stacking weight for 1,8g: 152400 kg (335984 lbs)
Racking test load value: 15240 kg (33600 lbs)
[3)] Issued by Silver/CIMS
Dangerous goods that can be transported:

UN No.	Class	Proper Shipping Name (PSN)
1002	2.2	AIR, COMPRESSED
1006	2.2	ARGON, COMPRESSED
1016	2.3	CARBON MONOXIDE, COMPRESSED
1035	2.1	ETHANE
1046	2.2	HELIUM, COMPRESSED
1049	2.1	HYDROGEN, COMPRESSED
1050	2.3	HYDROGEN CHLORIDE, ANHYDROUS
1066	2.2	NITROGEN, COMPRESSED
1072	2.2	OXYGEN, COMPRESSED
1080	2.2	SULPHUR HEXAFLUORIDE
1859	2.3	SILICON TETRAFLUORIDE
1954	2.1	COMPRESSED GAS, FLAMMABLE, N.O.S.
1956	2.2	COMPRESSED GAS, N.O.S.
1962	2.1	ETHYLENE
1971	2.1	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED with high methane content
2451	2.2	NITROGEN TRIFLUORIDE

Cargo has to be handled and inspected according to packing instruction P200.
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. CTC301).
Each manifold shall be subjected to a hydraulic pressure test to test pressure.
Each unit shall be subjected to a leakproofness test after assembly.
Containers with reduced stacking strength shall have size/type code marks on both sides, both ends and on the roof at either end, and this has to be included in each container certificate.

Type Approval documentation

Tests carried out

Prototypes tested according to requirements.

Marking of product

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 Plate according to DOT/CSC requirements including Allowable stacking load for 1.8g of 152400kg
- External marking according to CSC, ISO, IMDG/ADR/RID and DOT requirements
- “TC IMPACT APPROVED” to be marked on the data plate
- DNV decal for freight containers
- NV mark and to be hard stamped on frame

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 harmonized with other surveys and audits carried out.

END OF CERTIFICATE