DNV·GL

Certificate No:
TAS000010M

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Lifting Gear

with type designation(s)
MK-5

Issued to
Container Technics N.V.
Wijnegem Antwerpen, Belgium

is found to comply with
DNV GL standard DNVGL-ST-0377 – Standard for shipboard lifting appliances
ISO 3874:1997 Series 1 freight containers – Handling and securing

Application :

Product(s) approved by this certificate is/are accepted for DNV GL product certification and for installation on all vessels classed by DNV GL.

Issued at **Hamburg** on **2017-06-22**
This Certificate is valid until **2022-06-21**.
DNV GL local station: **Antwerp**

Approval Engineer: **Stefan Heuer**

for **DNV GL**

Jörg Kallies
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

Bottom Lifting Lug type MK-5 (MK-5L = left execution); (MK-5R = right execution)

Application/Limitation

Lugs for bottom lifts of series 1 freight containers (ISO 1496-1 to ISO 1496-5)

Working conditions:
- Design temperature: -10°C
- Hoist load coefficient: Ψ (psi) ≤ 1,6
- Maximum number of container per lifting operation: 1
- Position angle: from 0° to 45° (top angle of wires from 0° to 90°)
- Load cycles: maximum 2.000 load cycles
- Material: 40Cr (forged) with 3.1 certificate according to EN 10204

Workshop test (each piece):
- Load test with 2 x SWL and function test in presence of DNVGL

Periodical quality inspection
- One lug per annum shall be destructive tested
- Nondestructive material test (liquid penetration) each 50th piece

Maintenance:
Each single lifting lug shall be inspected by a qualified person before every use and shall be subjected to a thorough examination every 5 years in presence of our Surveyor. Nondestructive material tests (e.g. dye penetration) shall be carried out at 5 yearly inspections.

Manufacturer

Kunshan Lucky Sea Industrial Co., Ltd.
No. 92, Xingpu Rd, Lujia Town, Kunshan City,
Jiangsu Province 215331, P.R. China

Type Approval documentation

is based on the following drawings, verified with Ref.-no.: 13-028121/sthe dated 2013-04-22:

Drawing No.	*Rev. No.*	*Title*
MK-5	a	ISO bottom Lifting Lug
MK-5L	a	ISO bottom Lifting Lug Left
MK-5R	a	ISO bottom Lifting Lug Right
MK-5L&R	a	ISO bottom Lifting Lug Markings L & R

Tests carried out

Type test witnessed by DNVGL dated 2017-02-18

Marking of product

Each lifting lug shall be marked by the manufacturer with at least:
- name or trademark
- type of loose gear
- serial number

- year of construction
- nominal load(s) "SWL" in t or kg

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform a periodical assessment after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.