

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Lifting Gear**

with type designation(s)
Lifting Lug MK-4

Issued to

Container Technics N.V.
ANTWERP, Belgium

is found to comply with
DNV GL standard DNVGL-ST-0377 – Standard for shipboard lifting appliances

Application :

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

This Certificate is valid until **2021-07-12**.

Issued at **Hamburg** on **2016-07-13**

DNV GL local station: **Antwerp**

Approval Engineer: **Stefan Heuer**

for **DNV GL**

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

Lifting lug type MK-4

Application/Limitation

Lifting of hatch covers of sizes 20ft and 40ft

- design temperature: -10°C
- SWL 16,5t (at 60° from horizontal), SWL 15,6t (at 45° from horizontal)
- hoist load coefficient (psi) $\leq 1,5$
- maximum 20.000 load cycles
- four lugs have to be used for each lift, one in each corner

Workshop test (each piece) in presence of DNV GL

- load test with 2 x SWL (2 x 16,5t at 60° from horizontal), function test

Place of production:

- Zakład Slusarski Andrzej Burakowski (Barlinek, Poland)

Type Approval documentation

Is based on the following drawings, verified with Job ID: MCADE453-P261.1C-3-1

MK-4/20-40 (4 sheets)

Rev. a

Lifting lug for hatch covers

Tests carried out

Type test witnessed by DNVGL dated 2016-06-08, report no.: N1419R30

Marking of product

Each lug shall be marked by the manufacturer with at least:

- type of loose gear
- batch number
- month/ year of construction
- nominal load(s)

Each lug shall be stamped by DNV GL surveyor. Certificate form CG 3 shall be issued.

Periodical assessment

- one lug per annum shall be destructive tested
- nondestructive material test each 50th piece (after load test)