DNV·GL

Certificate No:
**TAS00000TX**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Anchoring Equipment**

with type designation(s)
**Anchor swivel shackles from ø22 to ø152 according to Chinese standard**

Issued to
**Qingdao Anchor Chain Co., Ltd.**
**Qingdao, China**

is found to comply with
**DNV GL rules for classification – Ships**

## Application :

**Approved for use as connection link between anchors and corresponding anchor chains with sizes and grade up to VL K3 Quality as per current DNVGL Rules.**

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

**Max. break. load/SWL according to rule reference for size chosen**

This Certificate is valid until **2020-12-12**.

Issued at **Høvik** on **2016-12-13**

for **DNV GL**

DNV GL local station: **Qingdao**

Approval Engineer: **Chi Wan Bang**

**Aldo Matteucci**
**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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Job Id:
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## Product description

Anchor Swivel Shackles are designed for connecting anchors to anchor chain in compliance with requirements of DNVGL Rules for classification - Ships for anchor chain.

- Swivel Shackle A-Type from ø22 to ø152 (VL K2 and VL K3)
  Is applicable to be connected with anchor directly or with an anchor shackle.

- Swivel shackle B-Type from ø22 to ø152 (VL K2 and VL K3)
  An approved anchor shackle is to be used between anchor and swivel.

## Application/Limitation

- The relevant size of swivels is defined by the number suiting the diameter of the actual anchor chain.
- Each swivel shackle is to be delivered with its own product certificate issued by DNVGL according to Pt.3 Ch.1 Sec.3 [3]. The certificate is to contain following particulars:
  a) Purchaser's name, order number and vessel identification, when known
  b) Manufacturer's name and order number
  c) Accessory description and grade of chain it suits
  d) Reference to reports for material testing including heat treatment
  e) Proof test load and reference to breaking test or its alternative procedure
  f) Statement to the effect that dimentional measurements, visual inspection and non-destructive examination, as far as relevant, are satisfactory
  g) Identification mark and position.
- Material quality is to comply with Pt.3 Ch.11 [5.2] and Pt.2 Ch.2, and is to be delivered with certificate as specified in Pt.3 Ch.1 Sec.3 [3].
- Welding procedure for the nut to male part of swivel is understood established based upon the heat treatment given to the parts.

## Type Approval documentation

## Tests carried out

Type testing is not carried out.
Production testing shall be as follows:

- Each swivel shall be proof load tested according to Pt.3 Ch.11 Sec.1 [5.4] and Table 6.
- Samples of swivels shall be breaking load tested according to Pt.3 Ch.11 Sec.1 [5.5] and Table 6.
- Samples of swivels shall be mechanical tested according to Pt.3 Ch.11 Sec.1 [5.6].

## Marking of product

Each swivel shackle shall be stamped according to Rules Pt.3 Ch.11 Sec.1 [5.8].

## Periodical assessment

For retention of the Type Approval, DNVGL surveyor shall perform a survey every second year and before expiry date of this certificate to verify that the conditions of the type approval are complied with.

**END OF CERTIFICATE**