

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Anchoring Equipment**

with type designation(s)
Anchor Swivel Shackles according to Chinese Standard

Issued to

Zibo Anchor Chain Co. Ltd., Laiwu Steel Group
ZIBO SHANDONG, 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 K3-Quality as per current DNV GL 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 **2020-06-21**.

Issued at **Høvik** on **2016-06-22**

DNV GL local station: **Qingdao**

Approval Engineer: **Chi Wan Bang**

for **DNV GL**

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.

Product description

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

Swivel Shackle A-Type (AM2 and AM3)

Is applicable to be connected with anchor directly or with an anchor shackle.

Swivel Shackle B-Type (AM2 and AM3)

An approved anchor shackle is to be used between anchor and swivel.

Application/Limitation

1. The relevant size of swivels is defined by the number suiting the diameter of the actual anchor chain.
2. Each swivel shackle is to be delivered with its own product certificate issued by DNV GL.
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
 - f) Statement to the effect that dimensional measurements, visual inspection and non-destructive examination, as far as relevant, are satisfactory
 - g) Identification mark and position
3. Material quality is to comply with our Rules Pt.3 Ch.11 Sec.1 Table 5, and is to be delivered with certificate as specified in Pt.3 Ch.11 Sec.1 5.2.
4. The swivel shackles are to be tested to the proof load described for the grade and size of chain for which they are intended, ref. Rules Pt.3 Ch.11 Sec.1 5.4.
5. For testing to breaking load or alternative to test ref. is made to Rules Pt.3 Ch.11 Sec.1 5.5.
6. 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

The following drawings are stamped 2007-08-27:

Tests carried out

Testing is to be according to the Rules Pt.3 Ch.11 Sec.1 as described above. Initial break testing is considered as Type Test. All testing is to be to the Surveyor's entire satisfaction and to be recorded locally until a potential renewal.



Job Id:
Certificate No: **TAS00000H4**

Marking of product

Swivels are to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

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

END OF CERTIFICATE