



Confirmation of Product Type Approval

Company Name: DEUK WOO INDUSTRY CO

Address: 12-9JANGANSANDAN 1-ROJANG-AN-EUP, GIJANG-GUN Korea, Republic of

Product: Fastening System

Model(s): DW T-CLIP-25/29, DW T-CLIP-30/35, DW T-CLIP-35/40, DW T-CLIP-44/48.

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-1997629-1-PDA	16-JUN-2020	11-JUN-2025
Manufacturing Assessment (MA)	20-4322559	17-JUN-2020	16-JUN-2025
Product Quality Assurance (PQA)	NA	NA	NA

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Intended Service

For grating fastener used on Marine Vessels, Offshore Units & Structures.

Description

DW T-CLIP is a grating fastener used on Marine Vessels, Offshore Units & Structures and has an easeir tightening method and strong fastening ability.

Ratings

1. For DW T-CLIP 25/29

- Pull-Out Load Tested @ Temp. 22.8 °C, Humidity 40.1 % R.H : 10.4 KN
- Recommended Pull-Out Load : 3.47 KN(Safety Factor=3 as per Manufacturer's Standard)
- Shear Load Tested for Specimen No. A @ Temp. 22.8 °C, Humidity 40.1 % R.H : 1.85 KN
- Shear Load Tested for Specimen No. B @ Temp. 22.8 °C, Humidity 40.1 % R.H : 1.65 KN
- Recommended Shear Load for Specimen No. A : 0.93 KN(Safety Factor=2 as per Manufacturer's Standard)
- Recommended Shear Load for Specimen No. B : 0.83 KN(Safety Factor=2 as per Manufacturer's Standard)

2. For DW T-CLIP 30/35

- Pull-Out Load Tested @ Temp. 22.8 °C, Humidity 40.1 % R.H : 7.25 KN
- Recommended Pull-Out Load : 2.42 KN(Safety Factor=3 as per Manufacturer's Standard)

- Shear Load Tested for Specimen No. A @ Temp. 22.8 °C, Humidity 40.1 % R.H : 2.7 KN
- Shear Load Tested for Specimen No. B @ Temp. 22.8 °C, Humidity 40.1 % R.H : 2.4 KN
- Recommended Shear Load for Specimen No. A : 1.35 KN(Safety Factor=2 as per Manufacturer's Standard)
- Recommended Shear Load for Specimen No. B : 1.20 KN(Safety Factor=2 as per Manufacturer's Standard)

3. For DW T-CLIP 35/40

- Pull-Out Load Tested @ Temp. 22.8 °C, Humidity 40.1 % R.H : 11.25 KN
- Recommended Pull-Out Load : 3.75 KN(Safety Factor=3 as per Manufacturer's Standard)
- Shear Load Tested for Specimen No. A @ Temp. 22.8 °C, Humidity 40.1 % R.H : 1.6 KN
- Shear Load Tested for Specimen No. B @ Temp. 22.8 °C, Humidity 40.1 % R.H : 2.75 KN
- Recommended Shear Load for Specimen No. A : 0.80 KN(Safety Factor=2 as per Manufacturer's Standard)
- Recommended Shear Load for Specimen No. B : 1.38 KN(Safety Factor=2 as per Manufacturer's Standard)

4. For DW T-CLIP 44/48

- Pull-Out Load Tested @ Temp. 22.8 °C, Humidity 40.1 % R.H : 9.75 KN
- Recommended Pull-Out Load : 3.25 KN(Safety Factor=3 as per Manufacturer's Standard)
- Shear Load Tested for Specimen No. A @ Temp. 22.8 °C, Humidity 40.1 % R.H : 1.35 KN
- Shear Load Tested for Specimen No. B @ Temp. 22.8 °C, Humidity 40.1 % R.H : 1.35 KN
- Recommended Shear Load for Specimen No. A : 0.68 KN(Safety Factor=2 as per Manufacturer's Standard)
- Recommended Shear Load for Specimen No. B : 0.68 KN(Safety Factor=2 as per Manufacturer's Standard)

5. For Specimen No. A & B refer to Manufacturer's Standards titled "DW T-Clip Technical data"

Service Restrictions

- Unit Certification is not required for this product.
- If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
- User of these fasteners is to observe the Manufacturer's Standards titled "DW T-Clip Technical data" for application limitations, conditions and recommended load values.

Comments

- The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

- Our Approval is based on that the above materials have been tested by KEOJIN CO. LTD.(Korea), Report No.: 4283093 dated 22 May 2020 and dated 11 June 2020.

- ABS approvals are general based on the product test reports furnished by recognized institutions and laboratories which may reflect specific local conditions. If any application is in a jurisdiction where the fasteners are subject to the approval process or specific guidelines are to be followed, the approved technical data or design guidelines take precedence over technical data presented herein.

Notes, Drawings and Documentation

Drawing No. 60557/B/0001/UK/En, ISO 9001:2015 Certificate, Revision: -, Pages: 1

Drawing No. 2020061-A, DW T-Clip, Revision: 0, Pages: 1

Drawing No. 2020061-B, DW T-Clip Technical data, Revision: 0, Pages: 1

Drawing No. 4283093, Test Report by by KEOJIN CO. LTD.(Korea) dated 22 May 2020 and dated 11 June 2020, Revision: -, Pages:

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 11/Jun/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

- 2020 Marine Vessel Rules 1-1-4/7.7, 1-1-A3 & 1-1-A4, 4-1-1/7.15.

- 2020 Offshore Units and Structures Rules 1-1-4/9.7, 1-1-A2 & 1-1-A3, 5-1-1/3.7.

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

Manufacturer's Standards titled "DW T-Clip Technical data"



A handwritten signature in blue ink, appearing to read "Joseph W. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 10-Aug-2020 7:28

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.