



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE

Certificate No. TA24370M

This is to certify that the undernoted product(s) has/have been approved in accordance with the relevant requirements of 12.3.3, Part D of the “Rules for the Survey and Construction of Steel Ships”(hereinafter referred to as “the Rules”) and Chapter 9, Part 6 of the “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use”.

This certificate is issued to

| | |
|-------------------------|------------------------------------------------------------------|
| Manufacturer : | Hansun Engineering Co., Ltd. |
| Place of manufacturer : | 27 Noksansandan 361-ro, Gangseo-gu, Busan, KOREA |
| Product description : | Mechanical Joints (Compression Couplings (Bite Type)) |
| Type designation(s) : | S-LOK BITE-DIN 2353 BITE-JIS B2351 |
| Approval No. : | 14FV103B |
| Valid until : | 23 July 2029 |

The details are described in the attached sheets.

Issued at Tokyo on 17 July 2024.

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S. Oishi
General Manager
Machinery Department

• Max. Working Pressure and Sizes

< S-LOK >

| Size | Max. Working Pressure (psi) | | |
|--------|-----------------------------|--------------|-------|
| | Stainless Steel | Carbon Steel | Brass |
| 1/8" | 10,900 | 10,900 | 3,600 |
| 3/16" | 10,200 | 10,200 | 3,400 |
| 1/4" | 10,200 | 10,200 | 3,500 |
| 5/16" | 8,000 | 8,000 | 2,700 |
| 3/8" | 6,500 | 6,500 | 2,200 |
| 1/2" | 6,700 | 6,700 | 2,200 |
| 5/8" | 6,000 | 6,000 | 1,900 |
| 3/4" | 5,800 | 5,800 | 1,800 |
| 7/8" | 4,800 | 4,800 | 1,500 |
| 1" | 4,700 | 4,700 | 1,500 |
| 1 1/4" | 4,900 | 4,900 | 1,500 |
| 1 1/2" | 4,900 | 4,900 | 1,500 |

< BITE – JIS B2351 >

| Size (mm) | Max. Working Pressure (bar) | | |
|-----------|-----------------------------|--------------|-------|
| | Stainless Steel | Carbon Steel | Brass |
| 6 ~ 15 | 500 | 500 | 350 |
| 16 ~ 22 | 400 | 400 | 280 |
| 25 ~ 28 | 350 | 350 | 245 |
| 30 ~ 38 | 250 | 250 | 175 |
| 40 ~ 42 | 210 | 210 | 147 |

< BITE – DIN 2353 >

| Series | Stainless Steel | | Carbon Steel | | Brass | |
|--------|-----------------|---------------------|--------------|---------------------|-----------|---------------------|
| | Size (mm) | Max. Pressure (bar) | Size (mm) | Max. Pressure (bar) | Size (mm) | Max. Pressure (bar) |
| LL | 6 ~ 8 | 100 | 6 ~ 8 | 100 | 6 ~ 8 | 70 |
| L | 6 ~ 15 | 250 | 6 ~ 18 | 315 | 6 ~ 18 | 220.5 |
| | 18 ~ 22 | 160 | — | — | — | — |
| | 28 ~ 42 | 160 | 22 ~ 42 | 160 | 22 ~ 42 | 112 |
| S | 6 ~ 14 | 360 | 6 ~ 14 | 630 | 6 ~ 14 | 441 |
| | 16 ~ 25 | 400 | 16 ~ 30 | 400 | 16 ~ 30 | 280 |
| | 30 ~ 38 | 315 | 38 | 315 | 38 | 220.5 |

- **Max. Temperature**

| | |
|-----------------|--------|
| Stainless Steel | 649 °C |
| Carbon Steel | 426 °C |
| Brass | 205 °C |

- **Applicable Shipboard Systems**

Fuel oil, Lubricating oil, Hydraulic oil, Fresh water, Sea water, Gas, Air, Steam

- **Type Approval Test**

Tightness test, Vibration test, Pressure pulsation test, Burst pressure test, Pull-out test, Vacuum test, Repeated assembly test

- **Limitation**

- The installation of mechanical joints is to be in accordance with the manufacturer's assembly instructions and 12.3.3, Part D of the Rules.
- Where special tools and gauges are required for installation of the joints, these are to be supplied by the manufacturer.

- **Reference Documents**

- “Leak – Proof Flow & Control Solution Partner (S-LOK Tube Fittings)”
- “Leak – Proof Flow & Control Solution Partner (BITE – JIS B2351 Tube Fittings)”
- “Leak – Proof Flow & Control Solution Partner (BITE – DIN 2353 Tube Fittings)”

- **Production Test**

The joints used for piping belonging to Group I & II defined by 12.1.3, Part D of the Rules are to be subjected to hydraulic test in the presence of the Society's surveyor in accordance with 12.6.1, Part D of the Rules.

- **Notice**

Any significant changes in design or construction of the above items may render this certificate invalid.

- The End -