



Marine &amp; Offshore

Certificate number: 23742/B0 BV

File number: ACM 135/2689/01

Product code: 2161H

This certificate is not valid when presented without the full attached schedule  
composed of 7 sections

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## TYPE APPROVAL CERTIFICATE

This certificate is issued to

**HSME Corporation**  
BUSAN - KOREA (REPUBLIC OF)

for the type of product

**PIPE FITTINGS**  
Bite Type Tube Fitting

### Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

**This certificate will expire on: 07 Oct 2025**

**For Bureau Veritas Marine & Offshore,**

At BV PUSAN, on 07 Oct 2020,

Chang-Uk HONG



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## **THE SCHEDULE OF APPROVAL**

### **1. PRODUCT DESCRIPTION**

#### **Bite type tube fitting (Twin Ferrule Compression Coupling)**

##### 1.1 Models

Bite Type Tube Fitting : BU, BUB, BUW, BL, BLB, BLM, BLF, BLA, BLS, BT, BTBM, BTRM, BTBF, BTRF, BTBA, BTRA, BCMR, BCM, BCML, BCF, BCG, BCW, BAMR, BAM, BR, BP

##### 1.2 Rating:

Temperature range	- 20°C to + 300°C
Max. working pressure	250 bar (Bite Type Tube Fitting)
Sizes	6 mm to 50 mm / 1/8" to 1-3/4" (Bite Type Tube Fitting)

##### - Bite type tube fitting made of stainless steel:

Tube O.D (Inches)	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-3/4"										
Max Working pressure (bar)	250	250	250	250	250	250	250	250										
Tube O.D (mm)	6	8	10	12	15	16	18	20	22	25	28	30	32	35	38	40	42	50
Max Working pressure (bar)	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250

##### - Bite type tube fitting made of carbon steel

Tube O.D (Inches)	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-3/4"										
Max Working pressure (bar)	250	250	250	250	250	250	250	250										
Tube O.D (mm)	6	8	10	12	15	16	18	20	22	25	28	30	32	35	38	40	42	50
Max Working pressure (bar)	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250

##### - Bite type tube fitting made of brass

Tube O.D (mm)	6	8	10	12	15	16	18	20	22	25	28	30	32	35	38	40	42	50
Max Working pressure (bar)	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250

##### 1.3 Material and components:

	Steel	Stainless	Brass
Forged Bodies	S20C-S45C	SUS 316/L.304/L	C3604
Barstock Bodies	S20C-S45C	SUS 316/L.304/L	C3604
Cold Formed Nuts	S10C-S20C	-	-
Barstock Nuts	S20C-S45C	SUS 316/L.304/L	C3604
Sleeves ( Bite Type)	S10C-S20C	SUS 316/L.304/L	C3604
Ferrules (HS LOK)	-	SUS 316/L.304/L	-

### **2. DOCUMENTS AND DRAWINGS**

- Manufacturer's Catalogue N°.JIS-2 dated on 01/2014

### **3. TEST REPORTS**

Tests carried out, witnessed by Classification Societies :

- Test reports of Repeated assembly test, Tightness test, Vibration and pressure pulsation tests, Burst test, Pull-out test dated on 19/06/2011

### **4. APPLICATION / LIMITATION**

4.1 May be used on board units for marine, offshore piping systems :

- Cargo oil lines (flash point  $\leq 60^{\circ}\text{C}$ ) - cargo oil, crude oil washing, vent lines
- Inert gas - water seal, scrubber effluent, main, distributions lines
- Flammable fluids (flash point  $> 60^{\circ}\text{C}$ ) - cargo oil, fuel oil, lubricating oil, hydraulic oil, thermal oil lines
- Sea water - bilge/ballast/cooling water, fire main/water spray/foam/sprinkler systems, tank cleaning, non-essential lines
- Fresh water - cooling water, condensate return, non-essential lines
- Deck drains (internal), sanitary drains
- Sounding and venting - water tanks, dry spaces, oil tanks (flash point  $> 60^{\circ}\text{C}$ )
- Miscellaneous - service air (non-essential), brine, non essential systems

4.2 In all cases, the associated pipes are to be suitably supported and anchored. The joints are to be at any time accessible, excepting inside tanks where permitted by the Bureau Veritas rules.

4.3 The wall thickness and material of the tubes are to be in accordance with the applicable Society Rules.

4.4 The bulkhead fittings are not approved through watertight or fire bulkheads.

4.5 Assembly instructions given by the manufacturer are to be complied with.

#### **5. PRODUCTION SURVEY REQUIREMENTS**

5.1 The products are to be supplied by **HSME Corporation** in compliance with the type described in this certificate and in compliance with the requirements stated on the front page of this certificate.

5.2 This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 **HSME Corporation** has to make the necessary arrangements to have its works recognized by BUREAU VERITAS in compliance with the requirements of NR 320 for HBV products.

5.4 For information, **HSME Corporation** has declared to Bureau Veritas the following production site :

**HSME Corporation**  
**8, Hwajeonsandan 5-ro**  
**Gangseo-gu**  
**BUSAN**  
**KOREA (REPUBLIC OF)**

#### **6. MARKING OF PRODUCT**

Each fitting shall be at least marked with:

- Manufacturer's name or logo
- Material
- Size

#### **7. OTHERS**

It is **HSME Corporation's** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*This certificate supersedes the Type Approval Certificate No. 23742/A1 BV issued by the Society.*

\*\*\* END OF CERTIFICATE \*\*\*