



NIPPON KAIJI KYOKAI

EUROPEAN UNION RECOGNISED ORGANISATION MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

This is to certify to the Manufacturer named below, that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009 as amended, and has been found in accordance with those requirements.

This certificate is issued to

Manufacturer :	SHO-BOND MATERIAL CO., LTD.
Product description :	Mechanical Joint
Type of Joint :	STRAUB-GRIP 316-TYPE, GX-TYPE and G-TYPE
Type designation(s) :	316-20 to 200E/N, G-20 to 400E/N and GX-20 to 200E
Design evaluation document No.	KB19MF3472
Certificate No. :	EUTA18174M
Valid until :	07 November 2024

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 08/11/2019.

T. Shimada
General Manager
Machinery Department

● Particulars and conditions:

Model	Nominal Dia.	Design Press. (MPa)	Design Temp. (°C)	Casing Material	Kind of Fluid
316-Type	20A	1.6 ^{*1}	80(EPDM) 70(NBR)	SUS316	Inert gases Flammable fluids Sea water Fresh water Sanitary Drains Scuppers Sounding Vents Compressed air
	25A				
	32A				
	40A				
	50A	1.4 ^{*1}			
	65A				
	80A	1.2 ^{*1}			
	100A				
125A	1.0 ^{*1}				
150A					
200A					
G-Type	20A	1.6 ^{*2}	90(EPDM) 80(NBR)	SUS304	Inert gases Flammable fluids Sea water Fresh water Drains Sanitary Scuppers Sounding Vents Compressed air
	25A				
	32A				
	40A				
	50A				
	65A				
	80A	1.4 ^{*2}			
	100A				
	125A				
	150A	1.2 ^{*2}			
	200A				
	250A	1.0			
300A					
350A	0.8				
400A					

*1. In case where the internal fluid is air, the design pressure is 0.7 MPa.

*2. In case where the internal fluid is air, the design pressure is 1.0 MPa.

Model	Nominal Dia.	Design Press. (MPa)	Design Temp. (°C)	Casing Material	Kind of Fluid
GX-Type	20A	1.6 ^{*3}	90(EPD M)	SUS304	Inert gases Flammable fluids Sea water Fresh water Drains Sanitary Scuppers Sounding Vents Compressed air
	25A				
	32A				
	40A				
	50A				
	65A				
	80A				
	100A				
	125A				
	150A	1.3 ^{*3}			
200A					

***3. In case where the internal fluid is air, the design pressure is 1.0 MPa.**

● Application

The mechanical joints can be used for the following piping lines.

[Inert gases]

1. Inert gas lines for water seal effluent and scrubber effluent
2. Inert gas main lines outside machinery spaces of category A, accommodation spaces and pump room and on open deck
3. Inert gas distributions lines outside pump room and on open deck

[Flammable fluids]

4. Cargo oil lines, crude oil washing lines outside pump room and on open deck
5. Fuel oil, lubricating oil, hydraulic oil and thermal oil lines on exposed open deck*1

[Sea water]

6. Bilge, ballast, and cooling sea water lines outside machinery spaces of category A
7. Sea water lines for tank cleaning and non-essential services
8. Fire, water spray, sprinkler and foam lines on exposed open deck*1

[Fresh water]

9. Cooling fresh water and condensate return lines outside machinery spaces of category A
10. Fresh water lines for non-essential services

[Drains, Sanitary]

11. Deck drains (internal) lines above the free board deck
12. Sanitary supply and drains lines

[Vents]

13. Vent and sounding lines for flammable fluids tanks on exposed open deck*1
14. Vent and sounding lines for water tanks and dry spaces

[Compressed air]

15. Compressed air lines for non-essential services and brine lines

*1: Except for the cargo areas of tankers, ships carrying liquefied gases in bulk and ships carrying dangerous chemicals in bulk, or fuel oil lines, fire extinguishing systems and fire mains.

● Limitations

The installation of mechanical joints is to be in accordance with the manufacturer's assembly instructions and the requirements of 12.3.3, Chapter12 and 13.2.4, Chapter13 Part D of the Rules.

● Documents

NK15-20, NK15-21, NK16-04, NK16-05, NK16-06, NK16-09, NK16-10, Test Plan, Test Report

● Type Tests

Tightness test, Vibration (fatigue) test, Burst pressure test, Pull-out test, Vacuum test, Repeated assembly test

● Others:

- The mechanical joints have been verified for compliance with EU Mutual Recognition Technical Requirements for Mechanical Joints version 0.4, dated 2018-07-01.
- In accordance with Article 10.1 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations" as amended, the following organisations, recognised by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognise this certificate:
 - American Bureau of Shipping (ABS);
 - Bureau Veritas (BV);
 - China Classification Society (CCS);
 - Croatian Register of Shipping (CRS);
 - DNV GL;
 - Indian Register of Shipping (IRS);
 - Korean Register (KR);
 - Lloyd's Register Group Ltd. (LR);
 - Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);
 - Polish Register of Shipping (PRS);
 - RINA Services S.p.A. (RINA);
 - Russian Maritime Register of Shipping (RS).
- The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign(non-EU flag) vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS).

- When a product is presented with this European Union Recognised Organisation Mutual Recognition Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the European Union Recognised Organisation in charge of classing the ship or being in charge of the unit/system certification.
- This Certificate is subject to Terms and Conditions for Mutual Recognition of Type Approval.
- Any significant changes in design or construction of the above items may render this certificate invalid.

- The End -