DNV·GL

Certificate No:
TAP00000T9

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe Couplings

with type designation(s)
PEJ, SSJB

Issued to
Jiangsu Yangzijiang Pipe Co., Ltd.
Taizhou City Jiangsu, China

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV GL class programme DNVGL-CP-0185 – Type approval – Mechanical joints

Application :

The slip-on joint slip type coupling of types SSJB and PEJ are type approved for pipe class II and III piping systems.
Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Type:	Temperature range:	Max. working press.:	Sizes:
PEJ	up to 200°C	PN6 up to PN16	DN50 up to DN800
SSJB	up to 200°C	PN6 up to PN16	DN65 up to DN800

This Certificate is valid until **2022-05-22**.

Issued at **Hamburg** on **2017-05-23**
DNV GL local station: **Nantong CMC** for **DNV GL**

Approval Engineer: **Hagen Markus**

Olaf Drews
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.

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Product description

Type	Manufacturers specification	DNVGL Rule reference	Size range[1]	Nominal pressure	Temperature range
PEJ[2]	Slip Packing Joint with flange connection	Pt.4, Ch.6, Sec.9 – Table 11 – Slip on joint - Slip type	DN50 up to DN800	PN16	NBR - 10°C up to + 100°C FPM - 10°C up to + 200°C
SSJB[3]	Slip telescopic joint		DN65 up to DN800		

Notes
[1] Approved fire resistant size range up to DN400
[2] Design standard CB694 - 77
[3] Design standard GB/T 12465 - 2007

Pressure reduction factors

For service temperatures, above 50 °C (stainless steel) or above 120°C (carbon steel) the nominal pressure is to be reduced by the following pressure reduction factors:

50°C	0.96
100°C	0.89
200°C	0.80

Materials
Pipe Coupling

Type	SSJB	PEJ
Casing	n.a.	Carbon steel Q235-A, 20# (C22)
Sleeve	Q235A, B SUS304, SUS316L,20#	n.a.
Flanges	n.a.	Q235A, B SUS304, SUS316L
SLTP Pipe	n.a.	
Gland	Q235A, B SUS304, SUS316L	n.a.
Bolts, Nuts	Q235A, B SUS304, SUS316L	
Limit bolt, spring washer	Q235A, B SUS304, SUS316L	n.a.
Bush	n.a.	Q235A, B SUS304, SUS316L
Sealing ring materials	NBR, FPM (Viton) acc.to data sheet SSJBDN65-DN800	NBR, FPM (Viton) acc. to data sheet PEJDN50-DN800-03

Overview
Sizes, Nominal pressure PN

Type		
SSJB		**PEJ**
DN	**Pipe OD**	**DN**
65	76	50
80	89	65
100	108 - 114	80
125	133 – 140	100
150	159 – 168	125
200	216 - 219	150
250	267 - 273	200
300	318 - 325	250
350	355 - 377	300
400	406 - 426	350
450	457 - 480	400
500	508 - 530	450
550	560	500
600	610 - 630	600
650	660	700
700	720	800
800	820	--

Application/Limitation

The slip-on joint slip type coupling of types SSJB and PEJ are type approved for piping systems of pipe class II and III as listed in table below. In addition, the limitations as specified on page 4 of this certificate and in the "Notes" column of the table below are to be observed.

Table – Approved applications

Piping systems	Notes
Flammable fluids (flash point ≤ 60 °C)	
Cargo oil lines	4)
Crude oil washing lines	4)
Vent lines	3)
Inert gas	
Water seal effluent lines	5)
Scrubber effluent lines	5)
Main lines	2), 4)
Distribution lines	4)
Flammable fluids (flash point > 60 °C)	
Cargo oil lines	4)
Fuel oil lines	2), 3)
Lubricating oil lines	2), 3)
Hydraulic oil lines	2), 3)
Thermal oil lines	2), 3)
Sea water	
Bilge lines	1)
Water filled fire extinguishing systems (e.g. sprinkler)	3)
Non-water filled fire extinguishing systems (e.g. foam, drencher systems)	3)
Fire main (not permanently filled)	3)
Ballast systems	1)
Cooling water systems	1)
Tank cleaning services	5)
Non-essential systems	5)

Table – Approved applications (Continuation)

Piping systems	Notes
Fresh water	
Cooling water systems	1)
Condensate return systems	1)
Non-essential piping systems	5)
Sanitary/drains/scuppers	
Deck drains (internal)	6)
Sanitary drains	5)
Sounding/vent	
Water tanks/dry spaces	5)
Oil tanks (flash point > 60 °C)	2), 3)
Miscellaneous	
Service air piping systems (non-essential)	5)

Notes – Fire resistance

For applications where "fire resistance types" are required the size range is limited up to DN400.

1) Inside machinery spaces of category, A - only approved fire resistant types
2) Not inside machinery spaces of category A or accommodation spaces. May be accepted in other machinery spaces if the joints are in easily visible and accessible positions.
3) Approved fire resistant types except in cases where such mechanical joints are installed on exposed open decks, as defined in SOLAS II-2/Reg. 9.2.3.3.2.2(10) and not used for fuel oil lines.
4) Only in pump rooms and open decks - approved fire resistant types
5) Non-fire resistance types approved

Notes - General

6) Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.

Limitations

Pipe couplings are not approved for:

- bilge lines inside ballast and fuel tanks.
- seawater and ballast lines including air and overflow pipes inside cargo holds and fuel tanks.
- fuel and oil lines including overflow pipes inside cargo holds and ballast tanks.
- scuppers and discharge (overboard), starting/control air and CO2 systems.
- piping sections directly connected to sea openings or tanks containing flammable liquids which in the event of damage could cause fire or flooding.
- systems containing oxygen (more than 25% by volume).

Slip-on joints inside tanks may be permitted only if the pipes and tanks contain a medium of the same nature.

Sea water application

The traditional stainless steels, including type 316 or 316L, should not be considered suitable for use in seawater systems.

However, certain stainless steels with higher contents of chromium, molybdenum and nitrogen have improved resistance to localised corrosion. These include high molybdenum austenitic steels and ferritic-austenitic (duplex) steels. Even these steels cannot be considered immune to attack under all situations; avoidance of stagnant sea water conditions and removal of welding oxides are some of the important factors to the successful use.

For application in sea water systems stainless steel grades with a minimum pitting resistance equivalent number (PREN) of 30 shall be used.

Material certificate shall include appropriate confirmation tests per ASTM A262, Practice E, Copper - Copper Sulphate - Sulphuric Acid Test or to another recognised standard.

Refer to DNVGL Rules Part 2 Section 3 – Corrosion testing.

Type Approval documentation

Tests carried out
Tightness test, Burst test, Fire resistance test

Marking of product
Each pipe coupling shall bear legible and durable marking on the body or on a plate fixed securely to the body. Scope of marking shall be at least as follows:

Marking scope	**Example**
Manufacturer's name	Jiangyan Yangzijiang Pipe Fitting Equipment Co., Ltd.
Type code	PEJ
Size in DN / inch	100 / 4
MAWP	1.6 MPA
Fixing length	180
Gasket material	NBR
Casing material	#20
Serial number	YE1704001
Date	Year: 2017, Month: 4

Periodical assessment

For retention of the type approval certificate periodical assessments shall be carried out at production places.
The objective of the periodical assessment is to verify that the design and production conditions for the type approval have not been altered.

Main scope of the assessment:
- verification of the production and quality control system
- review of quality control documentation of recent deliveries
- review of drawings in production to verify any design changes which may have an impact on data specified in the type approval certificate, performance and range of application
- verification of the product marking

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

End of certificate