DNV·GL

Certificate No:
TAP00001E6

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe Couplings with Bolts Not Covered by a National Standard

with type designation(s)
Style 99

Issued to
Victaulic Company
Easton, PA, USA

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018
DNV GL class programme DNVGL-CP-0185 – Type approval – Mechanical joints

Application :

Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV GL.

Temperature range:	**0°C to +110°C**
Max. working press.:	**Size 1 1/2" to 8": 15.5 bar, Size 10" and 12": 13.8 bar**
Sizes:	**1 1/2", 2", 2 1/2", 3", 3 1/2", 4", 5", 6", 8", 10", 12"**

Issued at **Høvik** on **2018-10-16**

This Certificate is valid until **2023-10-15**.

for **DNV GL**

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Iselinn Vindstad**

Marianne Spæren Marveng
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

Victaulic Style 99 flexible coupling.

Design:

Machine grooved type fittings are joined by the coupling, which is comprised of a two piece cast housings. The sealing is provided by a rubber gasket, internal to the coupling.

Materials:

Coupling housings: Ductile iron to ASTM A-536 Grade 65-45-12
Bolts and nuts: Carbon steel ASTM A-183
Gasket: EPDM

Manufacturing location:

Victaulic Company
4901 Kesslersville Road,
Easton, PA 18040 USA

Application/Limitation

The Victaulic couplings may be used for the following systems on board:

Systems			Systems		
Flammable fluids (Flash point ≤ 60 °C)			Fresh water		
1	Cargo oil lines	+ 4)	21	Cooling water system	+ 1)
2	Crude oil washing lines	+ 4)	22	Condensate return	+ 1)
3	Vent lines	+ 3)	23	Non-essential system	+
Inert gas			Sanitary/Drains/Scuppers		
4	Water seal effluent lines	+	24	Deck drains (internal)	+ 5)
5	Scrubber effluent lines	+	25	Sanitary drains	+
6	Main lines	+ 2) 4)	26	Scuppers and discharge (overboard)	-
7	Distribution lines	+ 4)			
Flammable fluids (Flash point > 60°C)			Sounding/ vent		
8	Cargo oil lines	+ 4)	27	Water tanks/Dry spaces	+
9	Fuel oil lines	+ 2) 3)	28	Oil tanks (flash point > 60°C)	+ 2) 3)
10	Lubrication oil lines	+ 2) 3)			
11	Hydraulic oil	+ 2) 3)			
12	Thermal oil	+ 2) 3)			
Sea Water			Miscellaneous		
13	Bilge lines	+ 1)	29	Starting/control air	-
14	Sprinkel system	+ 3)	30	Service air (non-essential)	+
15	Foam systems	+ 3)	31	Brine	+
16	Fire main	+ 3)	32	$C0_2$ system	-
17	Ballast system	+ 1)	33	Steam	+
18	Cooling water system	+ 1)			
19	Tank cleaning services	+			
20	Non-essential system	+			

The couplings are permitted for use in systems marked '+', not permitted for systems marked '-'.

Limitations/remarks:

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 provided the joints are located 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 - only approved fire resistant types.
5) Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.

The couplings (except size 1 ½") are of fire resistant types, and may be used in systems where fire safe application is required. When used as fire resistant type the maximum working pressure shall be reduced to 10.3 bar (150 psi).

When used in systems where vacuum may occur, precautions shall be taken to prevent the internal gasket from being drawn into the gap of the two pipe ends.

Materials chosen for the specific system shall be suitable for the intended medium and environmental conditions.

EPDM may not be used for hydrocarbon services.

The couplings are approved to be used in piping systems of class II and III.

The couplings are not to be used in piping systems subject to impulse loadings, e.g. hydraulic systems.

Type Approval documentation

Tests carried out
Tightness test, pull-out test, fire test, vacuum test, repeated assembly test, burst test, and vibration test

Certification
Material certification shall be as per DNVGL-RU-SHIP Pt. 4 Ch. 6 Sec. 2 Table 3.

Marking of product
For traceability to this type approval, the couplings are at least to be marked with:
— manufacturer's name or trade mark
— type designation
— size

Periodical assessment
For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.