

TYPE APPROVAL CERTIFICATE

Certificate No: **TAP00001DV** Revision No:

This is to certify:

That the Pipe Couplings

with type designation(s)

Victaulic fittings no: 10, 11, 12, 13, 20, 25, 30, 45, 50, 51, 60 and FireLock 001, 002, 003, 006

Issued to

Victaulic Company Easton, PA, USA

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV class programme DNV-CP-0185 – Type approval – Mechanical joints
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021

Application:

Products approved by this certificate are accepted for installation on vessels classed by DNV.

Temperature range: EPDM:0°C to +110°C / Nitrile: 0°C to +82°C

Max. working press.: see certificate see certificate

Issued at Hamburg on 2022-01-07

for **DNV**

This Certificate is valid until 2023-06-29.

DNV local station: New York

Approval Engineer: Ana Cristina Do Carmo Insfran

Olaf Drews Head of Section

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



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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.



Job Id: **262.1-009291-26** Certificate No: **TAP00001DV**

Revision No: 1

Product description

Victaulic fittings no: 10, 11, 12, 13, 20, 25, 30, 45, 50, 51, 60 and FireLock 001, 002, 003, 006

<u>Design</u>: The grooved fitting is joined to the grooved pipe by couplings. The sealing is provided by a rubber gasket, internal to the coupling.

Fitting material: Ductile iron to ASTM A-536 65-45-12

Material certification shall be as per DNV-Ship - Pt. 4 Ch. 6 Sec. 2 Table 3

Sizes:

Style No.	Туре	Size (inch)	
10	90° Elbow		
11	45° elbow	³ ⁄ ₄ , 1, 1 ½, 1 ½, 2, 2 ½, 3, 3 ½, 4, 5, 6, 8, 10, 12	
12	22,5° elbow		
13	11,25° elbow		
20	Tee		
25	Reducing Tee	1 x 1 x ¾, 1 ¼ x 1 ¼ x 1, 1 ½ x 1 ½ x ¾, 1 ½ x 1 ½ x 1, 1 ½ x 1 ½ x 1 ¼, 2 x 2 x ¾, 2 x 2 x 1, 2 x 2 x 1 ¼, 2 x 2 x 1 ½, 2 ½ x 2 ½ x ¾, 2 ½ x 2 ½ x 1, 2 ½ x 2 ½ x 1 ½, 2 ½ x 2 ½ x 1 ½, 3 x 3 x 3 x 1 ½, 3 x 3 x 3 x 1 ½, 3 x 3 x 2, 3 x 3 x 2 ½, 4 x 4 x ¾, 4 x 4 x 1, 4 x 4 x 1 ¼, 4 x 4 x 1 ½, 4 x 4 x 2, 4 x 4 x 2 ½, 4 x 4 x 3, 5 x 5 x 1, 5 x 5 x 1 ½, 5 x 5 x 2, 5 x 5 x 2 ½, 5 x 5 x 3, 5 x 5 x 4, 6 x 6 x 1, 6 x 6 x 1 ½, 6 x 6 x 2, 6 x 6 x 2 ½, 6 x 6 x 3, 6 x 6 x 4, 6 x 6 x 5, 6 ½ x 6 ½ x 3, 6 ½ x 6 ½ x 4, 8 x 8 x 1 ½, 8 x 8 x 2, 8 x 8 x 2 ½, 8 x 8 x 3, 8 x 8 x 4, 8 x 8 x 5, 8 x 8 x 6, 8 x 8 x 165.1, 10 x 10 x 1 ½, 10 x 10 x 2, 10 x 10 x 2 ½, 10 x 10 x 3, 10 x 10 x 4, 10 x 10 x 5, 10 x 10 x 6, 10 x 10 x 8, 12 x 12 x 1, 12 x 12 x 2, 12 x 12 x 2 ½, 12 x 12 x 3, 12 x 12 x 4, 12 x 12 x 5, 12 x 12 x 6, 12 x 12 x 8, 12 x 12 x 10	
30	45° Lateral	3, 4	
45	Raised face Flat face	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 6, 8, 10, 12 2, 2 1/2, 3, 4, 6, 8, 10, 12	
50	Eccentric Reducer	1 ½ x ¾, 1 ½ x 1, 1 ½ x ¾, 1 ½ x 1, 1 ½ x 1 ¼, 2 x ¾, 2 x 1, 2 x 1 ¼, 2 x 1 ½, 2 ½ x ¾, 2 ½ x 1, 2 ½ x 1 ¼, 2 ½ x 1 ½, 2 ½ x 2, 3 x ¾, 3 x 1, 3 x 1 ¼, 3 x 1 ½, 3 x 2, 3 x 2 ½, 3 ½ x 3, 4 x 1, 4 x 1 ¼, 4 x 1 ½, 4 x 2, 4 x 2 ½, 4 x 3, 4 x 3 ½, 5 x 2, 5 x 2	
51	Concentric Reducer	1/2, 5 x 3, 5 x 4, 6 x 1, 6 x 1 1/2, 6 x 2, 6 x 2 1/2, 6 x 3, 6 x 4, 6 x 5, 8 x 2 1/2, 8 x 3, 8 x 4, 8 x 5, 8 x 6, 10 x 4, 10 x 5, 10 x 6, 10 x 8, 12 x 4, 12 x 6, 12 x 8, 12 x 10	
60	Сар	³ / ₄ , 1, 1 ¹ / ₄ , 1 ¹ / ₂ , 2, 2 ¹ / ₂ , 3, 3 ¹ / ₂ , 4, 5, 6, 8, 10, 12	

Style No.	Туре	Size (inch)
001 FireLock	90° Elbow	2, 2 ½, 3, 4, 5, 6, 8
002 FireLock	Straight Tee	
003 FireLock	45° Elbow	
006 FireLock	Сар	1 ¼, 1 ½, 2, 2 ½, 3, 3 ½, 4, 5, 6, 8

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Application/Limitation

The fittings are approved to be used in piping systems of class II and III with the following DNV type approved couplings:

Coupling type	Coupling type approval certificate	Maximal working pressure [bar]
Style 75 and 750	TAP00001E7	16
Style 07	TAP00001EE	16
Style 77	TAP0000029	25

The application/limitations stated in the above-mentioned certificates are applicable.

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

Type Approval documentation

Type Approval Application dated on 2019-03-01
Test Report dated on 2019-03-01
Manufacturer's product catalogue no. 07.01 "Victaulic® Grooved End Fittings", rev. AF
Manufacturer's product catalogue no. 10.03 "Victaulic® FireLock™ Fittings", rev. N
CCS Burst pressure testing reports dated July 31, 2017 (witnessed by DNV GL)
Renewal burst pressure test reports witnessed by DNV GL

Tests carried out

Burst pressure test

Manufacturer locations

Victaulic Company 4901 Kesslersville Road, Easton, PA 18040 USA

Victaulic Polska Sp. z o.o. ul. Niepodległości 8 66-530 Drezdenko, Poland

Dalian Bingshan Metal Technology Co., Ltd.No.9 Northeastern 7th Street Economic and Technology Development Zone,

Dalian, Liaoning, 116600, China

Marking of product

For traceability to this type approval, the couplings are at least to be marked with:

- manufacturer's name or trademark
- type designation
- size

Periodical assessment

For retention of the Type Approval, a DNV 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 DNV-CP-0338.

Ende of Certificate

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