

TYPE APPROVAL CERTIFICATE

Certificate no.:
TAP00001HV
Revision No:
1

This is to certify:

that the **Pipe Couplings**

with type designation(s)
Style 107N

issued to

Victaulic Company
Easton, PA, USA

is found to comply with

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

Application:

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

Temperature range: 0°C up to +120°C
Max. working press.: 16 bar
Sizes: DN50

Issued at **Hamburg** on **2025-02-10**

This Certificate is valid until **2030-02-09**.

DNV local unit: **New York**

Approval Engineer: **Jörg Hille**

for **DNV**



Digitally Signed By:
Sven Klinger
Location: DNV Hamburg,
Germany

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.

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 USD 300 000.

Product description

The Victaulic® Style 107N QuickVic™ Rigid Coupling consist of two cast housings, internal gasket, and two bolts and nuts.

Joins carbon steel and/or stainless-steel pipe which ends prepared with the Victaulic® OGS groove profile.

Fire endurance resistance not tested.

Components and materials

Component	Material
Housings	Grade 65-45-12 Ductile iron per ASTM A536 Grade 65-45-15 Ductile iron per ASTM A395 (upon request)
Gasket	Grade EHP EPDM - fire resistant types Grade T Nitrile - non-fire-resistant types
Bolts	Carbon steel oval neck track bolt per ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) and Class 8.8 (M20 and greater). Zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric).
Nuts	Carbon steel hex nuts per ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric - hex nuts). Zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric).

Temperature range

The applicable temperature range of the operating media for the coupling depends on the selected materials of its components:

Gaskets

Grade EHP EPDM – Red and Green or Yellow and Green Stripes	-34° C to +110° C / -30 F to +230 F
Grade T Nitrile – Orange Stripe	-29° C to +82° C / -20 F to +180 F

Housing

Grade 65-45-12 Ductile iron per ASTM A536	0° C to 350° C
Grade 65-45-15 Ductile iron per ASTM A395	0° C to 350° C
ASTM A449	-29° C to 375° C
ASTM A563	0° C to 350° C

Temperature range example:

Coupling with housing material Grade 65-45-12 with a gasket of EPDM 0°C up to +110° C service temperature.

Pipes

For pipe selection, the general recommendations in the Victaulic® Field Installation Handbook I-100, rev. H, section "Pipe Preparation and Grooving Specifications" is to be observed.

In addition, the minimum wall thicknesses specified in the DNV RU-SHIP Rules Pt.4 Ch.6 Piping system, Sec. 9, Tables 2 and 3 are to be observed.

Note: Pipe wall must continue to meet the minimum wall thickness requirements after cut grooving.

Manufacturing locations

- Victaulic Company, 4901 Kesslersville Road, Easton, PA 18040 USA
- Victaulic Polska Sp. z o.o. ul. Niepodległości 8, 66-530 Drezdenko, Poland

Responsibility

Victaulic Company, located in Easton, PA, USA, is responsible for the design and the production procedures with relation to ensuring continued consistent production of the type approved products.

Reference DNV CP-0338 Type approval scheme, Section 4.

Application

The Victaulic® Style 107N couplings are type approved for installation in pipe systems of Class II, and III, and are not classified as fire resistant.

Ref.: DNV-RU-SHIP Pt.4 Ch.6 Piping systems, Sec. 9 - 5.2 Slip-on joints - Machine Grooved Type, Tables 8, 9, 10.

Piping systems		Application/Limitation
Flammable fluids (flash point ≤ 60 °C)		
1	Cargo oil lines	Not approved in pump rooms and open deck.
2	Crude oil washing lines	
3	Vent lines	Approved for installation 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.
Inert gas		
4	Water seal effluent lines	Not approved
5	Scrubber effluent line	
6	Main lines	Not approved in pump rooms and open deck.
		Not approved 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.
7	Distribution lines	Not approved in pump rooms and open deck.
Flammable fluids (flash point > 60 °C)		
8	Cargo oil lines	Not approved in pump rooms and open deck.
9	Fuel oil lines	Not approved.
10	Lubricating oil lines	Approved for installation 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.
11	Hydraulic oil	
12	Thermal oil	
Seawater		
13	Bilge lines	Not approved inside machinery spaces of category A.
14	Water filled fire extinguishing systems, e.g. fire main, sprinkler systems	Approved for installation on exposed open decks, as defined in SOLAS II-2/Reg. 9.2.3.3.2.2(10).
15	Non water filled fire extinguishing systems, e.g., drencher systems	
16	Fire main (not permanently filled)	
17	Ballast systems	Not approved inside machinery spaces of category A
18	Cooling water systems	No limitation
19	Tank cleaning services	
20	Non-essential systems	
Fresh water		
21	Cooling water systems	Not approved inside machinery spaces of category A
22	Condensate return systems	
23	Non-essential piping systems	No limitation
Sanitary/drains/scuppers		
24	Deck drains (internal)	Approved above bulkhead deck of passenger ships and freeboard deck of cargo ships.
25	Sanitary drains	No limitation
26	Scuppers and discharge (overboard)	Not approved
Sounding/vent		
27	Water tanks/dry spaces	No limitation
28	Oil tanks (flash point > 60 °C)	Not approved 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.
Miscellaneous		
29	Starting/control air	Not approved
30	Service air piping systems (non-essential)	No limitation
31	Brine	
32	CO2 systems	Not approved
33		
34	Steam	Approved for installation for pipes on deck with a design pressure of 10 bar or less.

Limitation

In addition to the table on page 3 the following installation limitations apply on slip-on joints:

Slip-on joints

- are not approved for installation in pipelines arranged in cargo holds and other spaces which are not easily accessible.
- are not approved for installation inside of tanks. May be permitted in tanks only for the same media that is in the tanks.
- are not approved in pipeline sections directly connected to sea openings or tanks containing flammable liquids which in the event of damage could cause flooding or fire.

Guidance notes

"easily accessible" as defined in MSC/Circ. 734

That means during normal operating conditions:

- .1 located in a space normally entered without the use of tools;
- .2 clear of or protected from obstructions, moving equipment and hot surfaces that prevent operation or servicing
- .3 within arm's reach, or, within reach of a normally employed remote control device".

Type Approval documentation

TAP00001HV rev. 1

Work scope : Renewal, update fire resistance capability acc. to DNV Rules Ship Pt.4 Ch.6 Piping systems, Ed. 2024

Test reports

- Renewal burst pressure tests for Assembly #10 (2" Test Spool) witnessed by DNV, dated 2024-11-11
- Renewal burst pressure tests for Assembly #11 (8" Test Spool) witnessed by DNV, dated 2024-11-11

Documents

- Installation Guide I-100, Rev. H, dated 03/2023
- Victaulic General Catalogue, G-103, Rev. E 2020
- DNV Assessment report production site Victaulic Easton, USA, dated 10.07.2023
- Seal Selection Guide Elastomeric Seal Construction Victaulic data sheet 05.01, Rev. AG updated 10/2022
- Victaulic specification "Victaulic QuickVic Rigid Coupling Style 107N", 06.23, Rev. K updated 10/2022

Tests carried out

Tightness test, repeated assembly test, burst pressure test, pull-out test, vibration (endurance) test, pressure pulsation test, vacuum test.

Refer to the Class Programme DNV CP-0185.

Marking of product

Each pipe coupling shall bear legible and durable marking on the body and on the gasket.

Scope of marking shall be at least as follows:

Coupling Housing

Marking scope	Example
Manufacturer's name or Trademark	"Victaulic" or "V"
Model number	107N
Size inch / mm	2"/60,3mm
Traceability	Foundry symbol, Date Code

Gasket

Marking scope	Example
Manufacturer's name or Trade Mark	"V"
Model/Size/Material	107N 2"/60,3mm, color code mark
Additional symbols	Gasket Manufacturer's Symbols
	Date Plug
	Cavity number

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV-CP-0338, Section 4.

In addition, burst pressure testing on selected sizes to be carried out in the course of renewal of the certificate.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

--- END OF CERTIFICATE ---