DNV·GL

Certificate No:
TAP00001UM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe Couplings

with type designation(s)
Style 77 and Style W77

Issued to
TPR Fiberdur GmbH & Co. KG
Aldenhoven, Germany

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems

Application :

Modified glass fiber reinforced pipes and fittings manufactured by TPR Fiberdur GmbH & Co. KG according to TAK000008A, Rev.2 and TAK00000RD, Rev. 1.
Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature range:	**Refer to certificate.**
Max. working press.:	**up to 16 bar. Refer to certificate.**
Sizes:	**11/4" up to 16"**

Issued at **Hamburg** on **2019-05-31**
This Certificate is valid until **2020-05-30**.
DNV GL local station: **Essen**

Approval Engineer: **Hagen Markus**

for **DNV GL**

Olaf Drews
Head of Section

Product description

Slip-on joint grip type pipe coupling (grooved) with NBR, EPDM or Silicone gaskets for the use on modified GRP pipes of manufacturer TPR Fiberdur, Germany, type approved by DNV GL.

Applicable GRP piping systems

TAK000008A, Rev.2 – Fiberdur EP – GRE System, Fiberdur CS EP – GRE – system
TAK00000RD, Rev. 1 – Fiberdur VE – GRVE system, Fiberdur CS VE – GRVE system

Design of pipe connection

Grooved pipe and fittings (standard pipes and fittings provided with special adapter rings) are joined by couplings made of two piece cast housings with bolts and nuts.The sealing is provided by a rubber gasket.

Approved size, pressure and temperature range

Size of coupling	DN (Pipe / Fitting)	PN	Temperature range
11/4” to 6”	DN25 to DN125	232psi / 16bar	0°C up to 40°C
8” and 16”	DN150 and DN350	145pasi / 10bar	
10”, 12”, 14”	DN200, DN250, DN300	138psi / 9.5bar	

Materials

Component	Materials	Specification
Housing	Ductile iron	ASTM A536, Grade65-45-12 ASTM A395, Grade 65-45-15
Coupling Gaskets	Victaulic Grade “E” FlushSeal EPDM	Green stripe color code
Bolts/Nuts	Carbon steel (standard)	ASTM A449
		ASTM A563 Grade B, ASTM A563M Class9
		ASTM A-183 heat-treated to 110 000 psi minimum tensile strength
	Stainless steel	ASTM A193, Grade B8M, Class 2 (AISI316)

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:

Scope	Example
Manufacturer’s mark	VICTAULIC
Coupling type	77
Size inch/OD pipe	10/273

Application/Limitation

The Victaulic Style 77 and Style W77 pipe couplings are type approved for the use on modified Fiberdur GRVE / GRE Fibermarine pipes and fittings.

Approved installation location and piping systems where "0" is specified in Table 1 Fire endurance requirements matrix of DNVGL Rules Pt.4, Ch.6 Section 2 – 1.7 Plastic pipes.

In addition the following limitations are to be observed.

Limitations

Slip-on joints are in general not approved for the following applications:

- 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).
- in piping systems with impulse pressure load other than water hammer, e.g. pressure lines of hydraulic piping systems

Installation inside tanks is permitted only if the pipes and tanks contain a medium of the same nature.

Type Approval documentation

Tests carried out

Repeated Assembly Test, Tightness Test, Burst Test, Flexible Bending Test.

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 Type Approval are complied with. Refer to DNVGL-CP-0338, Sec.4.

END OF CERTIFICATE