

Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 10 902 - 97 HH

Company TPR Fiberdur GmbH & Co. KG
Industriepark Emil Mayrisch
52457 Aldenhoven, GERMANY

Product Description REINFORCED PLASTIC PIPES AND FITTINGS (FRP/GRP)

Type FIBERDUR EP, NAVICON EP

Environmental Category None

Technical Data / TECHNICAL DATA

Range of Application

Nominal Diameter:	DN25 to DN800	DN25 to DN800	DN25 to DN800
M.A.W.T.:	100 [°C]	100 [°C]	100 [°C]
M.A.W.P. [up to 80°C]:	EP10 [bar]	EP16 [bar]	EP16 [bar]**
	Navicon	Navicon	Navicon
M.A.W.P. [up to 80°C]:	EP10 [bar]	EP16 [bar]	EP16 [bar]**
Electrical resistance:	< 1MΩ		

The Navicon EP is the conductive EP pipe series.

** Fiberdur type EP 16 bar or Navicon 16 bar series are collapse resistant series (from full vacuum up to full vacuum + x meter water head). Wall thickness based on collapse formula with a 3:1 safety and $0 \leq x \leq 30$ meter water head.

PRODUCTION PLACE, RANGE OF APPLICATION and INSTALLATION see page 2.

Test Standard IMO Resolution A.753 (18) : 1993 except smoke generation and toxicity test

Documents

- Test Reports of product tests according to IMO Res. A. 753(18)
- Data Sheets
- Instructions for handling and installation

Remarks For the use on passenger vessels national regulations may have to be observed.

Valid until 2017-05-08

Page 1 of 2

Type Approval Symbol



File No. II.C.03

Hamburg, 2012-07-30

Germanischer Lloyd

i.v. Hanspeter Raschle
Hanspeter Raschle

i. A. P. Gierhan
Peter Gierhan

Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 10 902 - 97 HH

PRODUCTION PLACE

TPR Fiberdur GmbH & Co. KG
52457 Aldenhoven
GERMANY

RANGE OF APPLICATION

In pipe class III piping systems arranged on open decks, cofferdams, void spaces, pipe tunnels, ducts and further locations where fire endurance test according to Appendix 2, Level 3 and flame spread test acc. to Appendix 3 of the IMO Resolution A.753 (18) is required.

INSTALLATION

For installation of plastic piping systems the following Rules and Regulations are to be observed:

- Germanischer Lloyd Rules for Seagoing Ships, Chapter 2, Machinery Installations, Section 11 B (Plastic piping systems) and Sec. 11 D (Pipe couplings).
- IMO Resolution A.753(18)

Furthermore the installation requirements of the piping system manufacturer are to be observed.

Joining Methods

Flange joint and laminated joint.

Type approved pipe couplings may be used only for compensation of thermal expansion and at location where a fire endurance test according to IMO Res. 753(18) is not required. The use of pipe couplings as main means of connection is not approved. The maximum allowable nominal pressure for pipe couplings is PN 10.

Valid until 2017-05-08

Page 2 of 2

File No. II.C.03

Hamburg, 2012-07-30

Type Approval Symbol



Germanischer Lloyd

Hanspeter Raschle

Hanspeter Raschle

Peter Gierhan

Peter Gierhan