

Type Approval Certificate

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

Manufacturer	G. Theodor Freese GmbH & Co. KG
Address	Carl-Benz-Str. 29, Bremen, 27237, Germany
Type	Composite Repair System
Description	Application procedure includes cleaning, inspection and repair or prophylactic installation for inner pipe section, followed by soaking the textile hose with two component epoxy resin, everting and moving the hose with compressed air into the pipe section and subsequent curing of resin.
Trade Name	FREEliner
Application	Additional inner pipe layer intended mainly for repair of difficult accessible piping sections or also new pipework in grey and black water systems, decks drainage, oily bilge systems, fresh or sea cooling & ballast water systems, external water fire-fighting monitor pipe lines and 'in-tank vent pipes' on board of ships classed or intended for classification with Lloyd's Register. <u>RESTRICTION:</u> Not to be used for safety critical decks drainage where pipes could be affected by fire.
Specified Standard	Lloyd's Register's Rules and Regulations for the Classification of Ships, July 2020.

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Ratings	For pipe sizes DN 100 to DN 600 (4 inch up to 24 inch) with elbows up to 90° and transitions
Other Conditions	The pipe section preparation and application of new pipe liner should be done by or under the supervision of the manufacturer's or producer's authorised personal.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. ENS 41286-20, Issue 0 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Appendix

PLACE OF PRODUCTION	I.S.T. Innovation Sewer Technologies GmbH Rombacher Hütte 19 44795 Bochum Germany	Hanse Rohr GmbH Lise-Meitner-Allee 41 25436 Tornesch
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