

## Type Approval Certificate Extension

*This is to certify* that Certificate No. 00/20070 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	Aquatherm GmbH Kunststoff- Extrusions- und Spritzgießtechnik Biggen 5 D-57439 Attendorn Germany
<b>DESCRIPTION</b>	Polypropylene pipes and fittings and multi layer composite poly-proylene pipes with intermediate aluminium layer.
<b>TYPE</b>	Fusiotherm pipes and fittings Fusiotherm Stabi composite pipes Fusiotherm Faser composite pipes
<b>APPLICATION</b>	In ship and offshore installations for potable water-, sanitary water- and hot water heating- systems, when fitted on open decks and within tanks, cofferdams, void spaces, pipe tunnels and ducts.
<b>RESTRICTIONS</b>	Pipes within accommodation, service and control spaces are either not to be capable of producing excessive quantities of smoke and toxic products or are adequately insulated against fire. The use of plastic pipes may be restricted by statutory requirements of the National Authority of the country in which the ship is to be registered.

<b>Certificate No.</b>	00/20070 (E1)
<b>Issue Date</b>	30 April 2004
<b>Expiry Date</b>	30 November 2005
<b>Sheet</b>	1 of 2

Lloyd's Register EMEA  
71 Fenchurch Street, London EC3M 4BS



Ramona Zettelmaier  
Hamburg Plan Approval Centre  
Lloyd's Register EMEA

## RATINGS

### Fusiotherm

PN 10 (SDR 11) : DN 15 to DN 125

PN 16 (SDR 7,4) : DN 10 to DN 80

PN 20 (SDR 6) : DN 10 to DN 65

### Fusiotherm Stabi

PN 20 : DN 12 to DN 80

### Fusiotherm Faser

PN20 (SDR 7,4) : DN12 to DN115

## STANDARDS

Lloyd's Register's Rules and Regulations for the Classification of Ships, Edit. 2003.

## OTHER CONDITIONS

For selection and installations of the pipes and fittings the producer's instructions and recommendations are to be adhered to. Furthermore the requirements of the IMO Resolution to be followed where applicable.

*"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 attached Design Appraisal Document No. HMD 12648-04 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 00/20070 to which this extension should be attached.

Certificate No.	00/20070 (E1)
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**DESIGN APPRAISAL DOCUMENT**

Date 30 April 2004	Quote this reference on all future communications HMD 0410123/12648-04/RZ/BHS
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**THE LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.**

**Issued to: Aquatherm GmbH**  
**for: Fusiotherm pipes and fittings, Fusiotherm Stabi**  
**composite pipes and Fusiotherm Faser composite pipes**  
**TYPE APPROVAL CERTIFICATE No. 00/20070 (E1)**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

Where piping systems are arranged to pass through watertight bulkheads or decks, provision is to be made for maintaining integrity of the bulkhead or deck by means of metallic bulkhead or deck pieces.

**APPROVAL DOCUMENTATION**

Form LR6606	Lloyd's Register Approval Services- Request for Quotation	28.04.2004
-	Data sheet of Faser composite pipe SDR 7,4 (1 sheet)	
1.06	Data sheet System identification pressure design	

**TEST REPORTS**

37622/99	SKZ Test Report	18.08.2000
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**Supplementary Type Approval Terms and Conditions**

*Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.*

*Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.*

*Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*

*Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.*

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