



CERTIFICATE NUMBER
03-HG361818-PDA

DATE
06 March 2003

ABS TECHNICAL OFFICE
Hamburg

CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of

aquatherm GmbH

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate; and it will remain valid for five years from the date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Plastic Pipes and Plastic Fittings/ Joints
MODEL: Fusiotherm types 'stabi composite', 'faser composite', 'SDR11/S5', 'SDR7.4/S3.2', 'SDR6/S2.5'
ABS RULE: 2003 SVR, 1-1-4/3.7, 4-6-3/5.1/5.7/5.9/5.15/5.17
OTHER STANDARD: DVGW-Arbeitsblätter W542/W534

AMERICAN BUREAU OF SHIPPING


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Product: Plastic Pipes, Fittings and Valves

Model: fusiotherm types 'stabi composite', 'faser composite', 'SDR11/S5', 'SDR7.4/S3.2', 'SDR6/S2.5'

Intended Service:

Potable water, sanitary water and water-heating piping systems.
Only for installation within tanks, cofferdams, void spaces, pipe tunnels and ducts.

Description:

Thermoplastic pipes/ fittings material: Polypropylene Type 3.
Type 'stabi composite': multi layer composite PP pipes with intermediate aluminum foils.
Type 'faser composite': composite PP-R80 pipes with inner fibre layer.
Types 'SDR11/S5', 'SDR7.4/S3.2', 'SDR6/S2.5': one layer polypropylene (PP) pipes.

Ratings:

'stabi composite' PN 20: 17x2.7 to 112.0x16.2; 15.9 bar at 10°C to 2.5 bar at 80°C.
'faser composite' PN 16: 20x2.8 to 125x17.1; 15 bar at 10°C to 2.4 bar at 80°C.
'SDR11/S5' PN 10: 20x1.9 to 125x11.4; 9.5 bar at 10°C to 1.5 bar at 80°C.
'SDR7.4/S3.2' PN 16: 16x2.2 to 125x15.1; 15 bar at 10°C to 2.4 bar at 80°C.
'SDR6/S2.5' PN 20: 16x2.7 to 110x18.4; 18.7 bar at 10°C to 3 bar at 80°C.

Service Restrictions:

The pipes are neither to be installed in spaces where a fire endurance test is required according to the Fire Endurance Matrix, 4-6-3/Table 1, nor where a flame spread test is required according to 4-6-3/5.13 of the ABS Rules. Further, these pipes are not to be installed in hazardous areas.

Comments:

The installation of the piping systems is to be carried out by qualified personnel in accordance with the manufacturer's specifications and instructions. Each particular application/installation is to be specifically ABS approved.

Term of Validity:

This product/model is covered under Product Design Assessment (PDA) Certificate # 03-HG361818-PDA, dated 06/Mar/2003. This PDA Certificate expires March of 2008. It will remain valid for the 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first).

STANDARDS

ABS Rules:

2003 Steel Vessel Rules, 1-1-4/3.7; 4-6-3/5.1/5.7/5.9/5.15/5.17/9

National:

DVGW-Arbeitsblätter W542/W534