



CERTIFICATE NUMBER

DATE

04-GE428472-PDA

15 October 2004

ABS TECHNICAL OFFICE

Genoa Engineering Services

CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of
Georg Fischer SpA - Società del Gruppo G. Fischer

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. 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, Fittings and Valves

MODEL: +GF+ AQUASYSTEM

ABS RULE: 2004 Steel Vessel Rules 1-1-4/3.7, 4-6-3/5

OTHER STANDARD:

AMERICAN BUREAU OF SHIPPING


Lucio Trevisan

Engineering Type Approval Co-ordinator

Georg Fischer SpA - Società del Gruppo G. Fischer

Via Sondrio, 1
Cernusco sul Naviglio,
MI 20063
Italy
Telephone: +39 02 92 186 1
Fax: +39 02 92 186 247

Product: Plastic Pipes, Fittings and Valves

Model: +GF+ AQUASYSTEM

Intended Service:

Hot and cold water - sanitary system - heating and conditioning

Description:

PP-R (Polypropylene Random) pipes and fittings - Sizes 20-25-32-40-50-63-75-90-110 mm OD

Ratings:

PN10 and PN20 at ambient temperature (20°C) - For higher temperatures, maximum working pressure to be reduced as per the Manufacturer's catalogue. Continuous temperature not to exceed 60°C. Instantaneous temperature not to exceed 95°C.

Service Restrictions:

1) Unit Certification is not required for this product. 2) Usage limited to applications where "no fire endurance test" is required by 4-6-3/Table 1 of the ABS Steel Vessels Rules. 3) Unless installed on open decks or within tanks, cofferdams, void spaces, pipe tunnels and ducts, acceptability of flame spread testing carried out in accordance with ASTM D635 is subject to approval by the vessel's Flag Administration.

Comments:

1) All pipes and fittings are to be permanently marked with identification of pressure rating, referenced standard and material. 2) For every installation, details of operating medium, maximum and operating pressure and temperature, pipe sizes and pipe supports and fixing arrangements are to be submitted for review. 3) Installation and joining procedures are to be carried out as per 4-6-3/7 and the Manufacturer's instructions, to the satisfaction of the attending Surveyor.

Term of Validity:

This product/model is covered under Product Design Assessment (PDA) Certificate # 04-GE428472-PDA, dated 15/Oct/2004. This PDA Certificate expires Oct of 2009. 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:

2004 Steel Vessel Rules 1-1-4/3.7, 4-6-3/5

