



Confirmation of Type Approval

This is to certify that, pursuant to the Rules of American Bureau of Shipping (ABS), on 14/DEC/2005 the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) and a valid Product Design Assessment (PDA) for the below listed product, entitling the product to Type Approval. The validity of the Manufacturing Assessment is dependent on satisfactory audits as required by the Rules. The Product Design Assessment is valid only for products intended for use on ABS Classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

For Date of ABS Rules used for evaluation; Please refer to the ABS Rules below.

This Confirmation of Product Type Approval is valid as of the date shown above for the below listed product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for evaluation.

Due to a wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that the Client has full responsibility for continued compliance with the evaluation standard, whether the standard is an ABS Rule or a non-ABS Rule. As specified in the ABS Rules, Unit Certification may be required in addition to Product Type Approval. Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

Geberit Technik AG
Model Name(s): HDPE

Presented to:

Geberit Technik AG
Schachenstrasse 77
Jona
CH-8645
Switzerland

Intended Service:

Sanitary drains, inert gas water seal and scrubber effluent lines

Description:

High density polyethylene pipes and fittings; sizes: 32 mm, 40 mm, 50 mm, 56 mm, 63 mm, 75 mm, 90 mm, 110 mm, 125 mm 160 mm.

Ratings:

PN 1.5, Maximum service temperature 73°C, Maximum external pressure: 32mm to 40mm - 1.66 bar; 50 mm to 63 mm - 1 bar; 75 mm - 0.46 bar; 90 mm to 125 mm - 0.4 bar; 160 mm - 0.7 bar.

Service Restrictions:

1. Usage limited to applications where "no fire endurance test required" by Table 4-6-3/1 of the ABS Steel Vessel Rules and is to be fitted only on open decks and within tanks, cofferdams, void spaces, pipe tunnels and ducts, as no fire endurance test or flame spread test have been carried out in accordance with 4-6-3/5.11 and 4-6-3/5.13 of the ABS Steel Vessel Rules. 2. Not to be used in fire main. 3. Not to be installed in areas classified as "hazardous" by 4-8-4/27 of the ABS Steel Vessel Rules or 4/1.7 of the ABS MODU Rules.

Comments:

1. Joining techniques are to be in accordance with the manufacturer's installation guidelines. 2. Pipes and fittings are to be permanently marked with identification including pressure rating, standard of manufacture and material with which it is made. 3. For each application, details of axial strength are to be submitted for review.

Notes / Documentation:

Term of Validity:

This product/model is covered under Product Design Assessment (PDA) Certificate # 00-LD196444/1-PDA, dated 13/May/2005. This PDA Certificate expires May of

2010. 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).

ABS Rules:

2005 Steel Vessel Rules 1-1-4/7.7, 4-6-3/5.1, 4-6-3/5.3, 4-6-3/5.7, 4-6-3/5.9, 4-6-3/7.3, 4-6-3/11.3.1

National Standards:

International Standards:

Government Authority:

EUMED:

Others:



Manager, ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.