



Marine & Offshore

Certificate number: 06961/E0 BV

File number: ACM 135/1317/02

Product code: 2080H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

DURAPIPE UK

Cannock - UNITED KINGDOM

for the type of product

THERMOPLASTIC MATERIAL PIPES AND FITTINGS

DURAPIPE ABS and DURAPIPE AIR-LINE Xtra

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units
- IMO Resolution A.753(18)

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 15 Mar 2023

For Bureau Veritas Marine & Offshore,

At BV LONDON, on 15 Mar 2018,

Spencer Yule



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=bbqp6qvw0y>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

DURAPIPE ABS (general use) and DURAPIPE AIR-LINE Xtra (air use)

- Pipes, fittings and valves

1.1 Description

Type	Durapipe ABS	Durapipe Air-line Xtra
Size (mm)	16 to 225	16 to 110
Minimum wall thickness (mm)	1.4 to 13.9	1.9 to 9.9
Nominal pressure at 20°C	PN 10	PN 12.5
Nominal external pressure* (bar)	1	1
Temperature range (°C)	-40/58	-20/58

* $\leq P_{col}/3$, the collapse pressure (P_{col}) is not to be less than 3 bar

- Pressure temperature parameters to be in accordance with manufacturer's graphs
- Piping assembly by solvent cement jointing

2. DOCUMENTS AND DRAWINGS

- Manufacturer's catalogue dated 10/2015 (Durapipe ABS)
- Manufacturer's catalogue dated 11/2011 (Durapipe Air-Line Xtra)
- Material safety data sheet (CHEIL STAREX SP 0180 G5710 & CHEIL STAREX SP 0180) dated 14/06/2017 Rev. 1

3. TEST REPORTS

- Test report N° PP6228/1/OMR/05 dated 26/04/2005, issued by Building Investigation & Testing Services (Surrey) Ltd. (Load deformation test, short term pressure test, external pressure test)
- Long term hydrostatic test report dated 15/04/2005
- Hydrostatic test report dated 23/09/2017
- Axial strength calculation sheet dated 27/02/2018
- Durapipe ABS pipes were tested for the determination of the minimum heat deflection temperature according to ISO 75 method A and the flame spread characteristics according to ASTM D635-03, under the technical report N° CTR 44580 dated 19/05/2005, issued by Rapra Technology Limited (UK).
- Impact resistance test report dated 26/09/2017
- Ageing test report N° IMP00702/LR dated 09/01/2006
- Statement of fatigue resistance dated 17/08
- Tests not carried out : fire endurance test, electrical conductivity, smoke generation and toxicity.

4. APPLICATION / LIMITATION

4.1 Approved for use in locations and for non-essential applications where no fire endurance test is required according to Pt C, Ch 1, App 3 [2.3.1] of Bureau Veritas Rules or appendix 4 of IMO Resolution A.753 (18) when the abbreviations "O or NA" are specified:

- Domestic water system (cold sea and fresh water)
- Chilled and potable water systems
- Compressed air system (DURAPIPE AIR-LINE Xtra)
- Non-essential systems

4.2 Detailed drawings of piping system for each application on board ships are to be submitted for review of compliance with the Bureau Veritas Rules and the applicable regulations.

4.3 The valves are not to be used as ship side valves.

4.4 The pipes, valves and fittings assembly is to be carried out in accordance with the manufacturer's instructions and the person performing these tasks is to be qualified to the satisfaction of the Society Surveyor.

4.5 Behaviour in case of fire (smoke generation and toxicity) is to be deemed satisfactory by the flag authorities of the vessel on board which the piping system is fitted.

4.6 The pipes, valves and fittings have not been type tested for fire endurance test, electrical conductivity, smoke generation and toxicity test.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be supplied by **DURAPIPE UK** in compliance with the type described in this certificate.

5.2 This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 **DURAPIPE UK** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 Each pipe, valve and fitting is to be tested by the manufacturer at a hydrostatic pressure not less than 1.5 times the nominal pressure. Other recognised national or international standard may be accepted for pipes, valves and fittings not employing hand lay up techniques. Depending upon the intended application the Society may require the pressure testing of each pipe, valve and/or fitting.

For information, **DURAPIPE UK** has declared to Bureau Veritas the following production site:

DURAPIPE UK
Walsall Road
Norton Canes,
Cannock
UNITED KINGDOM

6. MARKING OF PRODUCT

The pipes, fittings and valves are to be permanently marked as follows:

- Manufacturer's name or logo
- Product description
- Size and pressure rating
- Design standard
- Raw material

7. OTHERS

It is **DURAPIPE UK**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the Type Approval certificate N° 06961/D0 BV issued by the Society.

*** END OF CERTIFICATE ***