Certificate No: LR2003808TA-02
Issue Date: 10/09/2020
Expiry Date: 19/02/2025

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**Aalberts integrated piping systems B.V.**
Address	Oude Amersfoortseweg 99, Hilversum, 1212 AA, Netherlands
Type	Mechanical Pipe Joints
Description	System of polypropylene coated (outside) or galvanized (outside) carbon steel pipes (E195) and compression (press type) couplings (E195 - 1.0034) sealed by butyl rubber (EPDM) or Viton O-ring. Compression and reshape to be achieved with special crimping tools.
Trade Name	VSH XPRESS CARBON STEEL, Press Type
Application	Use in non-essential piping systems on ships, classed or intended for classification with Lloyd's Register.
Specified Standard	LR Rules and Regulations for the Classification of Ships, July 2019. IACS Unified Requirements P2.11, 2001 (Rev.4, March 2016) (vacuum, burst, tightness, fire endurance, vibration, pull-out tests) EN 10305, EN 10246-1.
Ratings	Pipe and Fitting Sizes: 12x1.2 mm, 15x1.2 mm, 18x1.2 mm 22x1.5 mm, 28x1.5 mm 35x1.5 mm, 42x1.5 mm, 54x1.5 mm

Breel Matthijs

Matthijs Breel

Lead Specialist Propulsion Systems and
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76.1x2.0 mm 88.9x2.0 mm 108x2.0 mm

Max Pressures:
16 bar (12-54 mm)
12.5 bar (76.1 mm)
10 bar (88.9-108 mm)
10 bar (for compressed air, all sizes)
7 bar (forsteam, all sizes)

Temperature Range:
-20°C to 200°C (Green Viton O-ring)
-20°C to 150°C (Grey Viton O-ring)
-35°C to 135°C (Black EPDM O-ring)

Max Temperature:
150°C (for steam, Viton Grey O-ring)

Other Conditions

Use for fuel piping systems (gaseous or liquid) in domestic applications (heating, fireplace, galley, etc.) is not allowed.

Application in non-essential piping systems conveying flammable liquids is not allowed.

VSH XPRESS system is not allowed to pass through tanks or to be connected to ship's side as an overboard discharge for all services.

Bend radius of carbon steel pipes to be not less than 3D (D = outer diameter of pipe)

The manufacturer's list of the chemical resistance of the piping components is to be observed.

The selection of fittings, pipes and O-rings for the corresponding application and the right mounting with the stipulated pressing tools is to be in

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accordance with the manufacturer's instructions.

This is to certify that Certificate No. 14/30007(E1) for the above mentioned product is extended and renumbered as shown.

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 Design Appraisal Document No. PRJ11100238058/MB and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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