Certificate No: LR2003382TA
Issue Date: 24/11/2017
Expiry Date: 23/11/2022

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	**Future Pipe Industries, Inc.**
Address	15915 Perkins Road, Baton Rouge, LA, 70810, United States
Place of Production	Future Pipe Industries Inc. 15915 Perkins Road, Baton Rouge, LA, 70810, United States
Type	Piping System
Description	Fiberbond Fibreglass Piping System
Trade Name	HV Series
Application	Marine piping systems as listed in tables 12.5.2 and 12.5.3, Part 5, Chapter 12, Section 5 of Lloyd's Registers Rules and Regulations for the Classification of Ships, with regard to pressure, service and location limitations and where no fire endurance test is required (ie: Level "L0")
Specified Standard	Lloyd's Register's Rules for the Classification of Ships-2019 Lloyd's Register Rules and Classification of Offshore Units 2019. IMO Resolution A753 (18) EDO Speciality Plastics specification EG.E10
Ratings	Size range (inches): 2 to 12 Class 200- Maximum pressure (psig): 200

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Gopal Nair

Americas Design Appraisal Manager to
Lloyd's Register Quality Assurance Inc
A member of the Lloyd's Register group

1330 Enclave Parkway, Houston, Texas, 77077,
United States

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Size range (inches): 12 to 24 Class 150- Maximum pressure (psig): 150
Maximum temperature (°C): 66
Fire Rating L0

Additional Tests Burst Tests

Other Conditions Pipes and fittings are to be selected and installed in accordance with the manufacturer's instructions and recommendations, and LR Ship Rules Part 5, Chapter 12, Sections 2.12 and Table 12.5.3 as applicable.
2. Installation design, bonding procedure,choice of materials and adhesives are to comply with manufacturer's instructions and recommendations.
3. For essential services, the bonding procedure is to be in accordance with the manufacturer's recommendations and the bonders are to be approved by Lloyd's Register for each installation.
4. Flame spread, smoke generation and toxicity need to be considered if located in closed spaces as per MSC 313(18).
5. HV Series is not be used where electrical conductivity is required and accordingly HV-C series should be used where electrical conductivity is required.

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 Quality Assurance Inc of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. LR2003382TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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