



## *Confirmation of Product Type Approval*

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 17-NOV-2021. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid 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.

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 this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

**Product Name:** Hose Assemblies

**Model Name(s):** 1SN / 2SN / 4SP / R13 / R15 Fire-Resistent Type Flexible Hose

**Presented to:**

TECHFLUID YANTAI LIMITED  
PINGLIDIAN TOWN  
261414  
China

<b>Intended Service:</b>	Suction & delivery of Hydraulic Oil, Water/Glycol Hydraulic Fluids, Fuel Oil, Lubricating Oil, Seawater, Fresh Water and Compressed Air.
<b>Description:</b>	Flexible hoses of non-metallic material with permanently fitted couplings. For details, see attachment.
<b>Tier:</b>	5
<b>Ratings:</b>	Size range: DN 1/4" to 2", design pressure: 40 to 445 bar. For details, see attachment.
<b>Service Restrictions:</b>	Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
<b>Comments:</b>	1) Hoses are to be complete with Factory Assembled End Fittings or Factory Supplied End Fittings installed in accordance with Manufacturer's Specifications. 2) End Connections are to comply with applicable requirements and limitation of 4-6-2/5.5.4, 4-6-2/5.5.5, 4-6-7/3.5.1 and 4-6-7/5.3.2 of the Steel Vessels Rules . 3) Hose Assemblies are to be installed only where flexibility is required, in clearly visible and readily accessible locations, and are not to be subject to torsional deflection under normal conditions. Hose Length is to be limited to that required by flexibility only. 4) Not to be used for installations where repeated and/or frequent

flexing is expected. 5) Marking for Flexible hoses are to be permanently marked by the manufacturer with the following details as per 4-6-2/5.7.6 of the Steel Vessel Rules: • Hose manufacturer's name or trademark. • Date of manufacture (month/year). • Designation type reference. • Nominal diameter. • Pressure rating • Temperature rating. 6) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

**Notes / Documentation:**

Drawing No. 1SN Type, Flexible Hose 1SN, Revision: 0; Drawing No. 2SN Type, Flexible Hose 2SN, Revision: 0; Drawing No. 4SP Type, Flexible Hose 4SP, Revision: 0; Drawing No. R13 Type, Flexible Hose R13, Revision: 0; Drawing No. R15 Type, Flexible Hose R15, Revision: 0; Drawing No. NA-1, Test Report for Flexible Hose 1SN-6 (Report No. 1SN-6.3 dated 20 September 2016); Drawing No. NA-10, Test Report for Flexible Hose R15-38 (Report No. R15-38 dated 20 September 2016); Drawing No. NA-2, Test Report for Flexible Hose 1SN-51 (Report No. 1SN-51 dated 20 September 2016); Drawing No. NA-3, Test Report for Flexible Hose 2SN-6 (Report No. 2SN-6.3 dated 20 September 2016); Drawing No. NA-4, Test Report for Flexible Hose 2SN-51 (Report No. 2SN-51 dated 20 September 2016); Drawing No. NA-5, Test Report for Flexible Hose 4SP-10 (Report No. 4SP-10 dated 20 September 2016); Drawing No. NA-6, Test Report for Flexible Hose 4SP-51 (Report No. 4SP-51 dated 20 September 2016); Drawing No. NA-7, Test Report for Flexible Hose R13-19 (Report No. R13-19 dated 20 September 2016); Drawing No. NA-8, Test Report for Flexible Hose R13-51 (Report No. R13-51 dated 20 September 2016); Drawing No. NA-9, Test Report for Flexible Hose R15-19 (Report No. R15-19 dated 20 September 2016);

**Term of Validity:**

This Product Design Assessment (PDA) Certificate 16-SQ1576777-PDA, dated 18/Nov/2016 remains valid until 17/Nov/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

**ABS Rules:**

2016 Rules for Condition of Classification 1-1-4/7.7, 1-1-A3 and 1-1-A4, which covers the following: Steel Vessels 2016: 4-6-2/5.7. Offshore Support Vessels 2016: 4-6-2/5.7 and 5-2-2/5.7. Steel Vessels Under 90M 2016: 4-4-1/9.19. High-Speed Craft 2016: 1-1-4/11.9, 1-1-Appendix 2 and 3, 4-4-1/9.19. ABS Rules for Building and Classing Mobile Offshore Drilling Units 2016: 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-1/11.29.

**National Standards:**


**International Standards:** ISO 15540:2016 & ISO 15541:2016

**Government Authority:**

**EUMED:**

**Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	16-SQ1576777-PDA	29-NOV-2016	17-NOV-2021



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.