



CERTIFICATE NUMBER
14-GE1290672-PDA

DATE
11 Dec 2014

ABS TECHNICAL OFFICE
Genoa Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

PARKER HANNIFIN MANUFACTURING SRL

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Flexible Hose**

Model: **462, 462TC, 462ST; 492, 492TC, 492ST**

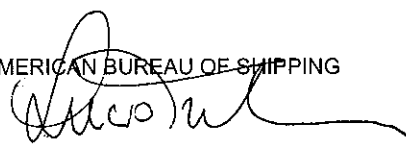
This Product Design Assessment (PDA) Certificate 14-GE1290672-PDA, dated 11/Dec/2014 remains valid until 11/Dec/2019 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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.

AMERICAN BUREAU OF SHIPPING



Lucio Trevisan
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standard. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-4-V/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

PARKER HANNIFIN MANUFACTURING SRL

HOSE PRODUCTS DIVISION EUROPE

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Tier: 3 - Type Approved, unit certification not required

Product: Flexible Hose

Model: 462, 462TC, 462ST; 492, 492TC, 492ST

Intended Service:

Flexible lines for petroleum and water-glycol based fluids, lubricating oils, air and water.

Description:

Oil resistant synthetic rubber hoses reinforced with one or more high tensile steel wire braids covered by synthetic rubber.

For details see Manufacturer's data sheets.

Rating:

See attached Table.

Service Restriction:

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.

1) Hoses are to be completed 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 limitations of the Rules for the intended service (e.g. Steel Vessel Rules 4-6-7/3.5.1)

3) Hose assemblies are to be installed only where flexibility is required 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 installed in applications where flexing in service is expected.

5) For air above 1,7 MPa the hose cover must be pin pricked ad per Manufacturer's recommendations.

6) Not to be used in high pressure fuel oil injection systems, steam systems or oil supply lines to boilers.

7) Flexible hoses are to be permanently marked by the manufacturer with the following details: Hose manufacturer's name or trademark, Date of manufacture (month/year), Designation type reference, Nominal diameter, Pressure rating, Temperature rating.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Manufacturer recommended fittings: see attached Table.

Temperature Range: -40°C up to +100°C with the following exceptions Air: Tmax +70°C, Water: Tmax +85°C.

Cover types:

Standard cover made in Black NBR/PVC compound, TC special cover made in special Black NBR/PVC compound, ST special cover made in UHMWPE film compound.

Notes/Drawing/Documentation:

This Product Design Assessment (PDA) 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.

Drawing No. 101, STR 492 TA, Revision: 0, Pages: 8

Drawing No. 102, STR 462 TA, Revision: 0, Pages: 12

LAPI fire test 462 hose reports no. 562.0IS0110/14 dated 17 April 2014:

Drawing No. 16, LAPI fire test 462-4 hose, Revision: 0, Pages: 10

Drawing No. 17, LAPI fire test 462-16 hose, Revision: 0, Pages: 10

Drawing No. 18, LAPI fire test 462-48 hose, Revision: 0, Pages: 10

Drawing No. 4, Hose spec GHS 462, Revision: C, Pages: 4

Burst test report no. 2841-2842 dated 22 April 2014.



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Drawing No. 45, Burst test DNV survey, Revision: 0, Pages: 4

Burst test report no. 3009 dated 27 November 2014.

Drawing No. 218, Burst pressure report 492-20, Revision: 0, Pages: 3

Drawing No. 63, 462 Impulse reports, Revision: 0, Pages: 3

Drawing No. 65, 492 impulse reports, Revision: 0, Pages: 3

Drawing No. 214, HS-492, Revision: 0, Pages: 5

Drawing No. 52, HS-492TC, Revision: 0, Pages: 4

Drawing No. 54, 462TC catalogue page, Revision: 0, Pages: 1

Drawing No. 55, 492 catalogue page, Revision: 0, Pages: 1

Drawing No. 207, HS-462TC, Revision: 0, Pages: 1

Drawing No. 208, HS-462ST, Revision: 0, Pages: 1

Drawing No. 209, HS-492TC, Revision: 0, Pages: 1

Drawing No. 210, HS-492ST, Revision: 0, Pages: 1

Drawing No. 211, ration for cover compounds, Revision: 0, Pages: 1

Drawing No. 212, 462-492 Declaration of conformity, Revision: 0, Pages: 1

Terms of Validity:

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STANDARDS

ABS Rules:

2014 Steel Vessel Rules 1-1-4/7.7, 1-1 Appendix 3 and 4, 4-6-2/5.7, 4-6-7/3.5.2

2014 Rules for Conditions of Classification, Part 1 – Offshore Units and Structures 1-1-4/9.7, 1-1 Appendix 2 and 3

2014 MODU Rules 1-1-4/9.7, 1-1 Appendix 2 and 3, 4-2-1/11.29

National:

NA

International:

NA

Government:

NA

EUMED:

NA



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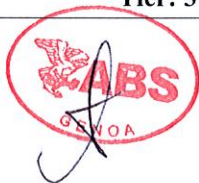
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OTHERS:

NA



ATTACHMENT N. 1 to:

PARKER HANNIFIN MANUFACTURING SRL - Veniano (CO) - ITALY

Model n. 462, 462TC, 462ST; 492, 492TC, 492ST

Certificate 14-GE1290672-PDA issued on 11 Dec 2014, expiring on 10 Dec 2019, Rev. 0

Ratings Table

Model	cover type	size	max working pressure		min burst pressure		fitting
			psi	Mpa	psi	Mpa	
		DN					
462-4	std/TC/ST	6	6160	42,5	24640	170,0	46 or 48
462-5	std/TC/ST	8	5800	40,0	23200	160,0	46 or 48
462-6	std/TC/ST	10	5075	35,0	20300	140,0	46 or 48
462-8	std/TC/ST	12	4495	31,0	17980	124,0	46 or 48
462-10	std/TC/ST	16	4060	28,0	16240	112,0	46 or 48
462-12	std/TC/ST	20	4060	28,0	16240	112,0	46 or 48
462-16	std/TC/ST	25	3045	21,0	12180	84,0	46 or 48
462-20	std/TC/ST	31	2495	17,2	9980	68,8	48
462-24	std/TC/ST	38	2118	14,6	8472	58,4	48
462-32	std/TC/ST	51	1624	11,2	6496	44,8	48
462-40	std/TC/ST	63	1015	7,0	4060	28,0	2 pieces 48
462-48	std/TC/ST	76	1015	7,0	4060	28,0	2 pieces 48
492-4	std/TC/ST	6	4060	28,0	16240	112,0	46
492-5	std/TC/ST	8	3625	25,0	14500	100,0	46
492-6	std/TC/ST	10	3260	22,5	13050	90,0	46
492-8	std/TC/ST	12	2755	19,0	11020	76,0	46
492-10	std/TC/ST	16	2175	15,0	8700	60,0	46
492-12	std/TC/ST	20	2175	15,0	8700	60,0	46
492-16	std/TC/ST	25	1595	11,0	6380	44,0	46
492-20	std/TC/ST	31	1085	7,5	4340	30,0	46

