



CERTIFICATE NUMBER
15-GE1349075-PDA

DATE
04 May 2015

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

INTERTRACO (ITALIA) S.P.A.

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: **FlexIT 1T, FlexIT 2T, FlexIT SK117, FlexIT SK216, FlexIT 3T, FlexIT R5, FlexIT H4, FlexIT SHP, FlexIT 5000, FLEXIT 6000**

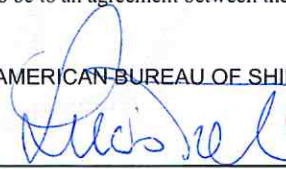
This Product Design Assessment (PDA) Certificate 15-GE1349075-PDA, dated 04/May/2015 remains valid until 03/May/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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 manufacturers standards. 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 1-1-A/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

INTERTRACO (ITALIA) S.P.A.

VIA E. AMALDI, 1/A-B

SUZZARA, MANTOVA

Italy 46029

Telephone: +39 0376 539742

Fax:

Email: fabio.covri@intertraco.it

Web: www.intertraco.it

Tier: 3 - Type Approved, unit certification not required

Product: Flexible Hose**Model:** FlexIT 1T, FlexIT 2T, FlexIT SK117, FlexIT SK216, FlexIT 3T, FlexIT R5, FlexIT H4, FlexIT SHP, FlexIT 5000, FlexIT 6000**Intended Service:**

Hydraulic Systems (mineral and vegetable oils, polyglycol base oils, water/oil emulsions and water)

Description:

Oil resistant synthetic rubber hoses reinforced with one, two, three or four high tensile steel wire braids or spirals, covered with a synthetic rubber. For details see Manufacturer's data sheets.

Rating:

See attachment

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.

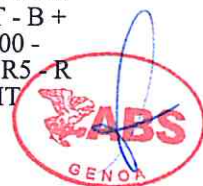
- 1) Hoses are to be completed with factory assembled end fittings or factory supplied end fittings installed in accordance with manufacturer's specifications.
- 2) End connections are to comply with applicable requirements and limitations of the Rules for the intended service (e.g. Steel Vessel Rules 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 large amount of repeated flexing is expected in combination with pressure pulses.
- 5) 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

Notes/Drawing/Documentation:

Drawing No FlexIT 1T, EN 853 TYPE 1SN exceeds SAE J517 100R1AT, Revision No. 0, Pages: 1
Drawing No FlexIT 2T, EN 853 TYPE 2SN exceeds SAE J517 100R2AT, Revision No. 0, Pages: 1
Drawing No FlexIT SK117, EN 857 TYPE 1SC exceeds SAE J517 100R17, Revision No. 0, Pages: 1
Drawing No FlexIT SK216, exceeds EN 857 TYPE 2SC -R16, Revision No. 0, Pages: 1
Drawing No FlexIT 3T, forestry hose - proprietary, Revision No. 0, Pages: 1
Drawing No FlexIT R5, SAE J517 100R5, Revision No. 0, Pages: 1
Drawing No FlexIT H4, EN 856 TYPE 4SH, Revision No. 0, Pages: 1
Drawing No FlexIT SHP, EN 856 TYPE 4SP exceeds SAE J517 100R12, Revision No. 0, Pages: 1
Drawing No FlexIT 5000, EN 856 TYPE R13 SAE J517 100R13, Revision No. 0, Pages: 1
Drawing No FlexIT 6000, SAE J517 100R15 exceeds SAE J517 100R13, Revision No. 0, Pages: 1
Drawing No burst test witnessed and signed for FlexIT 1T, FlexIT 2T, FlexIT_SK117, FlexIT_SK216, FlexIT_3T, FlexIT_R5, FlexIT_H4, FlexIT_SHP, FlexIT_5000, FlexIT_6000.
Drawing No Burst test reviewed for FlexIT 1T - B + SN03T, FlexIT 1T - J series, FlexIT 1T - K series, FlexIT 2T - B + S0420, FlexIT 2T - B + SN03T, FlexIT 2T - J series, FlexIT 2T - K series, FlexIT 3T - B + S312T, FlexIT 3T - B + S0420, FlexIT 3T - J series, FlexIT 5000 - H series, FlexIT 5000 - I + S00XI, FlexIT 5000 - X series, FlexIT 6000 - XLZ, FlexIT H4 - B + S0420, FlexIT H4 - I + S004I S006I, FlexIT H4 - J series, FlexIT H4 - X series, FlexIT R5 - R series, FlexIT Shp - B + S312t, FlexIT Shp - B + S0420, FlexIT Shp - J Series, FlexIT Sk117 - B + Scx0t, FlexIT



INTERTRACO (ITALIA) S.P.A.

VIA E. AMALDI, 1/A-B

SUZZARA, MANTOVA

Italy 46029

Telephone: +39 0376 539742

Fax:

Email: fabio.covri@intertraco.it

Web: www.intertraco.it

Tier: 3 - Type Approved, unit certification not required

Sk117 - K Series, FlexIT Sk216 - B + Sn03t, FlexIT Sk117 - K Series, FlexIT Sk216 - B + Sn03t, FlexIT Sk216 - J Series, FlexIT Sk216 - K Series.

Drawing No Fire Hose Test Report for FlexIT 1T, FlexIT 2T, FlexIT SK117, FlexIT SK216, FlexIT 3T, FlexIT R5, FlexIT H4, FlexIT SHP, FlexIT 5000, FlexIT 6000

Drawing No Impulse Test Report Reviewed for FlexIT 1T - B + SN03T, FlexIT 1T - J S Series, FlexIT 1T - K Series, FlexIT 2T - B + S0420, FlexIT 2T - B + SN03T, FlexIT 2T - J Series, FlexIT 2T - K Series, FlexIT 3T - B + S312T, FlexIT 3T - B + S0420, FlexIT 3T - J Series, FlexIT 5000 - H Series, FlexIT 5000 - I + S00XI, FlexIT 5000 - X Series, FlexIT 6000 - I Z + S004I S006I SZ06I, FlexIT 6000 - X Series, FlexIT 6000 - XLZ, FlexIT H4 - B + S0420, FlexIT H4 - I + S004I S006I, FlexIT H4 - J Series, FlexIT H4 - X Series, FlexIT R5 - R Series, FlexIT SHP - B + S312T, FlexIT SHP - B + S0420, FlexIT SHP - J Series, FlexIT SK117 - B + SCX0T, FlexIT SK117 - K Series, FlexIT SK216 - B + SN03T, FlexIT SK216 - J Series, FlexIT SK216 - K Series.

Drawing No Burst Test Report for FlexIT 1T, FlexIT 2T, FlexIT SK117, FlexIT SK216, FlexIT 3T, FlexIT R5, FlexIT H4, FlexIT SHP, FlexIT 5000, FlexIT 6000

Drawing No Burst Test Report Witnessed for FlexIT 1T, FlexIT 2T, FlexIT SK117, FlexIT SK216, FlexIT 3T, FlexIT R5, FlexIT H4, FlexIT SHP, FlexIT 5000, FlexIT 6000.

Terms of Validity:

This Product Design Assessment (PDA) Certificate 15-GE1349075-PDA, dated 04/May/2015 remains valid until 03/May/2020 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.

STANDARDS**ABS Rules:**

2015 Rules for Conditions of Classification – Offshore Units and Structures 1-1-4/9.7, 1-1 Appendix 2 and 3

2015 Mobile Offshore Drilling Units, 4-2-1/11.29

2015 Rules for Conditions of Classification, 1-1-4/7.7, 1-1 Appendix 3 and 4,

2015 Steel Vessel Rules 4-6-2/5.7, 4-6-7/3.5.2

2015 Steel Vessels Under 90 Meters (295 Feet) in Length, 4-4-1/9.19

2015 Offshore Support Vessels, 4-6-2/5.7

National:

NA

International:

NA

Government:

NA

EUMED:

NA



INTERTRACO (ITALIA) S.P.A.

VIA E. AMALDI, 1/A-B

SUZZARA, MANTOVA

Italy 46029

Telephone: +39 0376 539742

Fax:

Email: fabio.covri@intertraco.it

Web: www.intertraco.it

Tier: 3 - Type Approved, unit certification not required

OTHERS:

NA



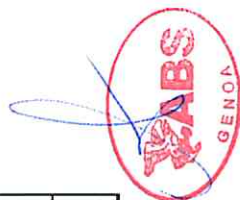
Attachment n.1 to: INTERTRACO (ITALIA) S.P.A. VIA E. AMALDI, 1/A-B, SUZZARA, MANTOVA, Italy, 46029 Models FlexIT 1T, FlexIT 2T, FlexIT SK117, FlexIT SK216, FlexIT 3T, FlexIT R5, FlexIT H4, FlexIT SHP, FlexIT 5000, FlexIT 6000 Certificate 15-GE1349075-PDA issued on 18-May-2015, expiring on 18-May-2020, Rev. 0											
POSIT	BORE			REF. STAND.	INTERTRACO REF.	TEMPER. RANGE	WORK. PRESS. [bar]	FITTINGS			
	DN	INCH	SIZE								
1	6	1/4	04	EN 853 TYPE 1SN - EXCEEDS SAE J517 100R1AT	FLEXIT 1T - 04	-40°C/+100°C	225	K04	-	-	-
2	8	5/16	05		FLEXIT 1T - 05	-40°C/+100°C	215	K05	-	-	B+SN03T
3	10	3/8	06		FLEXIT 1T - 06	-40°C/+100°C	180	K06	-	J06	-
4	12	1/2	08		FLEXIT 1T - 08	-40°C/+100°C	160	K08	-	J08	-
5	16	5/8	10		FLEXIT 1T - 10	-40°C/+100°C	130	K10	-	J10	-
6	19	3/4	12		FLEXIT 1T - 12	-40°C/+100°C	105	K12	-	J12	-
7	25	1	16		FLEXIT 1T - 16	-40°C/+100°C	88	K16	-	J16	-
8	31	1.1/4	20		FLEXIT 1T - 20	-40°C/+100°C	63	-	-	J20	-
9	38	1.1/2	24		FLEXIT 1T - 24	-40°C/+100°C	50	-	-	J24	-
10	51	2	32		FLEXIT 1T - 32	-40°C/+100°C	40	-	-	J32	-





11	6	1/4	04	EN 853 TYPE 2SN - EXCEEDS SAE J517 100R2AT				FLEXIT 2T - 04	-40°C/+100°C	400	K04	-	-	B+SN03T	-	B+S0420
12	8	5/16	05					FLEXIT 2T - 05	-40°C/+100°C	350	K05	-	-	B+SN03T	-	B+S0420
13	10	3/8	06					FLEXIT 2T - 06	-40°C/+100°C	330	K06	-	J06	B+SN03T	-	B+S0420
14	12	1/2	08					FLEXIT 2T - 08	-40°C/+100°C	275	K08	-	J08	B+SN03T	-	B+S0420
15	16	5/8	10					FLEXIT 2T - 10	-40°C/+100°C	250	K10	-	J10	B+SN03T	-	B+S0420
16	19	3/4	12					FLEXIT 2T - 12	-40°C/+100°C	215	K12	-	J12	B+SN03T	-	B+S0420
17	25	1	16					FLEXIT 2T - 16	-40°C/+100°C	165	K16	-	J16	B+SN03T	-	B+S0420
18	31	1.1/4	20					FLEXIT 2T - 20	-40°C/+100°C	125	-	-	J20	B+SN03T	-	B+S0420
19	38	1.1/2	24	PROPRIETARY				FLEXIT 2T - 24	-40°C/+100°C	90	-	-	J24	B+SN03T	-	B+S0420
20	51	2	32					FLEXIT 2T - 32	-40°C/+100°C	80	-	-	J32	B+SN03T	-	B+S0420
21	10	3/8	06					FLEXIT 3T - 06	-40°C/+100°C	500	-	-	J06	B+S312T	-	B+S0420
22	12	1/2	08					FLEXIT 3T - 08	-40°C/+100°C	470	-	-	J08	B+S312T	-	B+S0420
23	19	3/4	12					FLEXIT 3T - 12	-40°C/+100°C	375	-	-	J12	B+S312T	-	B+S0420
24	25	1	16					FLEXIT 3T - 16	-40°C/+100°C	310	-	-	J16	B+S312T	-	B+S0420

55	6	1/4	04	EN 857 TYPE 1SC - EXCEEDS SAE J517 100R17	FLEXIT SK117-04	-40°C/+100°C	250	K04	-	-	B+SCX0T	-
56	8	5/16	05		FLEXIT SK117-05	-40°C/+100°C	230	K05	-	-	B+SCX0T	-
57	10	3/8	06		FLEXIT SK117-06	-40°C/+100°C	210	K06	-	-	B+SCX0T	-
58	12	1/2	08		FLEXIT SK117-08	-40°C/+100°C	210	K08	-	-	B+SCX0T	-
59	16	5/8	10	EN 857 TYPE 1SC	FLEXIT SK117-10	-40°C/+100°C	130	K10	-	-	B+SCX0T	-
60	19	3/4	12		FLEXIT SK117-12	-40°C/+100°C	105	K12	-	-	B+SCX0T	-
61	25	1	16		FLEXIT SK117-16	-40°C/+100°C	88	K16	-	-	B+SCX0T	-
62	6	1/4	04		FLEXIT SK216 - 04	-40°C/+100°C	450	K04	-	-	B+SN03T	-
63	8	5/16	05	EXCEEDS EN 857 TYPE 2SC - R16	FLEXIT SK216 - 05	-40°C/+100°C	420	K05	-	-	B+SN03T	-
64	10	3/8	06		FLEXIT SK216 - 06	-40°C/+100°C	385	K06	-	J06	-	-
65	12	1/2	08		FLEXIT SK216 - 08	-40°C/+100°C	345	K08	-	J08	-	-
66	16	5/8	10		FLEXIT SK216 - 10	-40°C/+100°C	290	K10	-	J10	-	-
67	19	3/4	12	EXCEEDS EN 857 TYPE 2SC - EXCEEDS SAE J517 100R17	FLEXIT SK216 - 12	-40°C/+100°C	280	K12	-	J12	-	-
68	25	1	16		FLEXIT SK216 - 16	-40°C/+100°C	230	K16	-	J16	-	-



35	19	3/4	12	EN 856 TYPE 4SH	FLEXIT H4 - 12	-40°C/+100°C	420	-	-	X12	-	-	-
36	25	1	16		FLEXIT H4 - 16	-40°C/+100°C	380	J16	-	X16	-	-	-
37	31	1.1/4	20		FLEXIT H4 - 20	-40°C/+100°C	350	J20	-	X20	-	-	-
38	38	1.1/2	24		FLEXIT H4 - 24	-40°C/+100°C	300	J24	-	X24	-	-	-
39	51	2	32		FLEXIT H4 - 32	-40°C/+100°C	250	J32	-	X32	-	-	-
40	5	3/16	04	SAE J517 100R5	FLEXIT R5 - 04	-40°C/+100°C	210	R04	-	-	-	-	-
41	6	1/4	05		FLEXIT R5 - 05	-40°C/+100°C	210	R05	-	-	-	-	-
42	8	5/16	06		FLEXIT R5 - 06	-40°C/+100°C	155	R06	-	-	-	-	-
43	10	13/32	08		FLEXIT R5 - 08	-40°C/+100°C	140	R08	-	-	-	-	-
44	12	1/2	10		FLEXIT R5 - 10	-40°C/+100°C	122	R10	-	-	-	-	-
45	16	5/8	12		FLEXIT R5 - 12	-40°C/+100°C	105	R12	-	-	-	-	-
46	22	7/8	16		FLEXIT R5 - 16	-40°C/+100°C	56	R16	-	-	-	-	-
47	28	1.1/8	20		FLEXIT R5 - 20	-40°C/+100°C	43	R20	-	-	-	-	-
48	35	1.3/8	24		FLEXIT R5 - 24	-40°C/+100°C	35	R24	-	-	-	-	-
49	46	1.13/16	32		FLEXIT R5 - 32	-40°C/+100°C	24	R32	-	-	-	-	-
50	10	3/8	06	EN 856 TYPE 4SP - EXCEEDS SAE J517 100R12	FLEXIT SHIP - 06	-40°C/+100°C	450	J06	-	-	-	-	-
51	12	1/2	08		FLEXIT SHIP - 08	-40°C/+100°C	420	J08	-	-	-	-	-
52	16	5/8	10		FLEXIT SHIP - 10	-40°C/+100°C	350	J10	-	-	-	-	-
53	19	3/4	12		FLEXIT SHIP - 12	-40°C/+100°C	350	J12	-	-	-	-	-
54	25	1	16		FLEXIT SHIP - 16	-40°C/+100°C	280	J16	-	-	-	-	-



25	19	3/4	12	EN 856 TYPE R13 - SAE J517 100R13	FLEXIT 5000 - 12	-40°C/+121°C	350	-	-	I+S004I	-
26	25	1	16		FLEXIT 5000 - 16	-40°C/+121°C	350	H20	-	I+S004I	-
27	31	1.1/4	20		FLEXIT 5000 - 20	-40°C/+121°C	350	-	X20	-	-
28	38	1.1/2	24		FLEXIT 5000 - 24	-40°C/+121°C	350	H24	-	I+S006I	-
29	51	2	32	SAE J517 100R15 - EXCEEDS SAE J517 100R13	FLEXIT 5000 - 32	-40°C/+121°C	350	H32	-	I+S006I	-
30	19	3/4	12		FLEXIT 6000 - 12	-40°C/+121°C	420	X12	-	I+S004I	-
31	25	1	16		FLEXIT 6000 - 16	-40°C/+121°C	420	X16	-	I+S004I	-
32	31	1.1/4	20		FLEXIT 6000 - 20	-40°C/+121°C	420	X20	-	I+S006I	-
33	38	1.1/2	24		FLEXIT 6000 - 24	-40°C/+121°C	420	X24	-	I+S006I	-
34	51	2	32		FLEXIT 6000 - 32	-40°C/+121°C	420	-	XLZ32	Z+SZ06I	-

