

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Materials other than steel for pipes conveying oil or fuel oil: flexible pipe assemblies

with type designation(s)

DS-17, DS-19, FIGHTER DS 2SC/R16, 2 STARK, DS1-T, DS2-T, JCK (Jack Hose), FAHRENHEIT 302/2, XFIGHT 4000, XFIGHT 5000, XFIGHT 6000, DS-4SP, DS-4SH, FGT-12 (Fight R12), DS13, DS15

Issued to

Diesse Rubber Hoses S.p.A.
Filago, BG, Italy

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2018/773**,

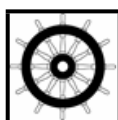
item No. MED/3.15c. SOLAS 74 as amended, Regulation II-2/4 & X/3 and 2000 HSC Code 7 & 10 and IMO MSC/Circ.1120

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-02-05**.

Issued at **Høvik** on **2019-02-06**

DNV GL local station:
Milan



for **DNV GL AS**

Approval Engineer:
Adel Samiei

Notified Body
No.: **0575**

Roald Vårheim
Head of Notified Body



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

DS-17

According to SAE100R17
Tube: Black synthetic rubber resistant to oil
Reinforcement: One high tensile steel braid up to -8, two braids from -10 to -16 and 4 spirals for -20 and -24
Cover: Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Coupling: Intertraco fitting type K DN≤25
Intertraco fitting type J DN>25

DS-19

According to SAE100R19
Tube: Black synthetic rubber resistant to oil
Reinforcement: Two high tensile steel braids
Cover: Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Coupling: Intertraco fitting type K

FIGHTER DS 2SC/R16

Constructed according to EN857-2SC/SAE100R16
Tube: Black synthetic rubber resistant to oil
Reinforcement: Two high tensile steel braids
Cover: Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Coupling: Intertraco fitting type K DN≤25
Intertraco fitting type J DN>25

2 STARK

Tube: Black synthetic rubber resistant to oil
Reinforcement: Two high tensile steel braids
Cover: Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Coupling: Intertraco fitting type K DN≤25
Intertraco fitting type J DN>25

DS1-T

According to EN 853 1SN
Tube: Black synthetic rubber resistant to oil
Reinforcement: One high tensile steel braid
Cover: Black, synthetic rubber resistant to oil, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Coupling: Intertraco coupling type K DN≤25
Intertraco coupling type J DN>25

DS2-T

According to EN 853 2SN
Tube: Black synthetic rubber resistant to oil
Reinforcement: Two high tensile steel braids
Cover: Black, synthetic rubber resistant to oil, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Coupling: Intertraco coupling type K DN≤25
Intertraco coupling type J DN>25

JCK (Jack Hose)

Tube: Black synthetic rubber resistant to oil
Reinforcement: Two high tensile steel braids
Cover: Black, synthetic rubber resistant to oil, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Coupling: Intertraco coupling type K

FAHRENHEIT 302/2

According to EN 853 2SN
Tube: Black synthetic rubber resistant to oil
Reinforcement: Two high tensile steelbraids
Cover: Black or blue, synthetic rubber resistant to oil, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Coupling: Intertraco coupling type K DN≤25
Intertraco coupling type J DN>25

XFIGHT 4000

Tube:	Black synthetic rubber resistant to oil
Reinforcement:	Four high tensile steel spirals
Cover:	Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Couplings:	Intertraco couplings type J
<u>XFIGHT 5000</u>	
Tube:	Black synthetic rubber resistant to oil
Reinforcement:	Four high tensile steel spirals up to -20, six spirals - 24
Cover:	Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Couplings:	Intertraco couplings type J DN≤31 / Intertraco couplings type H DN=38
<u>XFIGHT 6000</u>	
Tube:	Black synthetic rubber resistant to oil
Reinforcement:	Four high tensile steel spirals up to -16, six spirals -20 and -24
Cover:	Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Couplings:	Intertraco couplings type J DN≤25/ Intertraco couplings type H DN>25
<u>DS-4SP</u>	
Tube:	Black synthetic rubber resistant to oil
Reinforcement:	Four high tensile steel spirals
Cover:	Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Couplings:	Intertraco couplings type B+S0420 DN≤25 Intertraco couplings type X DN>25
<u>DS-4SH</u>	
Tube:	Black synthetic rubber resistant to oil
Reinforcement:	Four high tensile steel spirals
Cover:	Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Couplings:	Intertraco couplings type B+S0420, S0430 DN≤19 Intertraco couplings type J DN>19
<u>FGT-12 (Fight R12)</u>	
Tube:	Black synthetic rubber resistant to oil
Reinforcement:	Four high tensile steel spirals
Cover:	Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Couplings:	Intertraco couplings type J
<u>DS13</u>	
Tube:	Black synthetic rubber resistant to oil
Reinforcement:	Four high tensile steel spirals up to -16, six spirals -20 and -24
Cover:	Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Couplings:	Intertraco couplings type J DN≤25 / Intertraco couplings type H DN>25
<u>DS15</u>	
Tube:	Black synthetic rubber resistant to oil
Reinforcement:	Four high tensile steel spirals up to -16, six spirals -20 and -24
Cover:	Black, synthetic rubber resistant to oils, abrasion and weather condition STANDARD,MSHA, MSHA HARC, MSHA ENDLESS, HARC, ENDLESS COVERS
Couplings:	Intertraco couplings type J DN≤25 / Intertraco couplings type H DN>25

Hoses are manufactured by: Diesse Rubber Hoses S.P.A.

Coupling Material: 11SMnPb30 EN 10277-3, 11SMnPb37 EN 10277-3, 36SMnPb14 EN 10277-3,
C45 EN 10277-2, S355J2 EN 10277-2, X2CrNiMo 17-12-2 EN 10088-3 (AISI 316)
Couplings are manufactured by: Intertraco according Intertraco fitting catalogue 1P013 /September 2013

Application/Limitation

Job Id: **344.1-008704-1**
Certificate No: **MEDB00004MZ**

Hose assemblies covered by this certificate are tested according to:

- 1) EN ISO 15540: Fire resistance of hose assemblies- Test methods
- 2) EN ISO 15541: Fire resistance of hose assemblies - Requirements for the test bench

Hose assemblies are suitable for use with petroleum base hydraulic fluids and water base hydraulic fluids.

Maximum working pressure (bar):

Size		DS-17	DS-19	FIGHTER DS 2SC/R16	2 STARK	DS1-T	DS2-T	JCK (Jack Hose)	FAHRENHEIT 302/2
DN	DASH								
06	-4	210	280	420	450	225	400	700	400
08	-5	210	-	380	420	215	350	-	350
10	-6	210	280	350	390 420 (*)	180	330	700	330
12	-8	210	280	310	350	160	275	-	275
16	-10	210	280	280	290	130	250	-	250
19	-12	210	280	240	280	105	215	-	225
25	-16	210	280	185	200	87	165	-	165
31	-20	210	-	165	175	62	125	-	125
38	-24	210	-	135	-	50	90	-	90
51	-32	-	-	-	-	40	80	-	80

(*) STARK Plus

SIZE		XFIGHT 4000	XFIGHT 5000	XFIGHT 6000	DS-4SP	DS-4SH	Fight R12	DS13	DS15
DN	DASH								
6	-4	-	-	-	500	-	-	-	-
10	-6	280	380	420	460	-	350	-	420
12	-8	280	380	420	440	-	350	-	420
16	-10	280	380	420	400	450	350	-	420
19	-12	280	380	420	380	425	350	350	420
25	-16	280	350	420	325	400	350	350	420
31	-20	280	350	420	240	350	280	350	420
38	-24	280	350	420	210	300	255	350	420
51	-32	-	-	-	-	250	210	350	420

Type Examination documentation

Tests carried out

Fire tests carried out according to ISO 15540/15541

Marking of product

As a minimum, the final products (hoses with couplings) are to be marked with:

- Manufacturers name or trademark;
- Manufacturer's address;
- Specification or hose name;
- Hose size;
- Date code (quarterly and daily production code).