

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00001WJ
Revision No:
3

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 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 and compensators

with type designation(s)
SP33 series (3SPT, 3SPG), 1SN Temp-tech (1SN COMMANDER)

Issued to

Alfagomma Hydraulic S.p.A.
Castelnuovo Vomano – Castellalto, TE, Italy

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

Regulation (EU) 2021/1158,
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

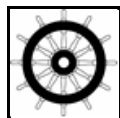
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-10-11**.

Issued at **Høvik** on **2021-10-28**

DNV local station:
Italy/Malta CMC

Approval Engineer:
Andreas Hansen



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

- (a) **Designation:** 1SN Temp-tech acc. to EN 853 1SN and SAE 100 R1AT (1SN COMMANDER)
 Tube: Oil resistant synthetic rubber compound
 Reinforcement: One high tensile steel braid
 Cover: Synthetic rubber compound, weather, oil, abrasion, ozone and hydrocarbon resistant
- (b) **Designation:** Dunlop Hiflex SP33 Series (3SPT, 3SPG)
 Tube: Oil resistant synthetic rubber compound
 Reinforcement: Three high tensile steel braids
 Cover: Synthetic rubber compound, weather, oil, abrasion and ozone resistant
 Black rubber cover (3SPT)

Couplings manufacturer: Alfagomma Hydraulic S.p.A., Zona Industriale Piano Lago, Mangone, Italy
 Hose manufacturers: Alfagomma Hydraulic S.p.A., Castelnuovo, Vomano, Italy (Except SP33)
 Alfagomma Hydraulic S.p.A., Industriale Piano Lago, Figline Vegliaturo, Italy

Carbon Steel 11SMnPb30 according UNI EN 10277 Stainless Steel AISI 304 - AISI 316							
Hose size			1SN Temp-tech (1SN COMMANDER)				
			Skive fittings			No skive fittings	
DASH	DN	inch	AG Branding		DH Branding	AG Branding	DH Branding
- 04	6	¼	H1100204-04	H1100SK1-04	D330000-04	H1200AD1-04	D110000-04
- 06	10	3/8	H1100204-06	H1100SK1-06	D330000-06	H1200AD1-06	D110000-06
- 08	12	½	H1100204-08	H1100SK1-08	D330000-08	H1200AD1-08	D110000-08
- 10	16	5/8	H1100204-10	H1100SK1-10	D330000-10	H1200AD1-10	D110000-10
- 12	19	¾	H1100204-12	H1100SK1-12	D330000-12	H1200AD1-12	D110000-12
- 16	25	1	H1100204-16	H1100SK1-16	D330000-16	H1200AD1-16	D110000-16
- 20	31	1 ¼	H1100104-20	-	-	H1200AD1-20	D110000-20
- 24	38	1 ½	H1100104-24	-	-	H1200AD1-24	D110000-24
- 32	51	2	H1100104-32	-	-	H1200AD1-32	D110000-32

Carbon Steel 11SMnPb30 according UNI EN 10277 Stainless Steel AISI 304 - AISI 316						
Hose size			Dunlop Hiflex SP33 Series (3SPT, 3SPG) Couplings designation (Skive fittings)			
			AG Branding		DH Branding	
DASH	DN	Inch	AG Branding		DH Branding	
-06	10	3/8	H1100404-06		D440000-06	
-08	12	½	H1100404-08		D440000-08	
-10	16	5/8	H1100404-10		D440000-10	
-12	19	¾	H1100404-12		D440000-12	
-16	25	1	H1100404-16		D330000-16	
-20	31	1 ¼	H1100404-20		D330000-20	

Application/Limitation

Hose assemblies covered by this certificate are tested according to:

- 1) EN ISO 15540:2016 - Fire resistance of hose assemblies- Test methods
- 2) EN ISO 15541:2016 - Fire resistance of hose assemblies - Requirements for the test bench

Hose size			Maximum working pressure (bar)	
DASH	DN	inch	SP33 series	1 SN Temp-tech
- 04	6	¼	-	225
- 05	8	5/16	-	-
- 06	10	3/8	500	180
- 08	12	½	470	160
- 10	16	5/8	410	130
- 12	19	¾	375	105
- 16	25	1	327	88

Hose size			Maximum working pressure (bar)			
DASH	DN	inch	SP33 series		1 SN Temp-tech	
		1 ¼	31	- 20	240	63
		1 ½	38	-24	-	50
		2	51	-32	-	40

Type Examination documentation

LAPI test reports Test report n. 1413, 1414 and 1415.0ISO0110//09 dated 2009-11-09 and 2009-11-05 and 2093, 2094 & 2095 .0ISO0110/16 dated 2016-12-12

LAPI fire test report nos 530/04, 531/04 dated 2004-06-21

WTD71 fire test report nos 25/98 dated 1998-01-24

Tests carried out

Fire testing according to ISO 15540 and ISO 15541

Marking of product

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

- Manufacturer's name or trademark
- Manufacturer's address
- Specification or hose name
- Hose size (inside diameter in inches)
- Data code (quarterly and daily production code)
- Mark of conformity according to Article 10 of the Council Directive 2014/90/EU

Mark of Conformity may only be affixed to the product when the corresponding certification related to production-control phase module (D, E, or F) is valid.