



Lloyd's
Register

Lloyd's Register EMEA (London Office)

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Document number 13/00024(E1)
Issue number 1

DESIGN APPRAISAL DOCUMENT

Date 11 January 2018	Quote this reference on all future communications SOUTSO/ENG/TA/MR/WP30986678
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**LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2015.
Issued to: HACI AYVAZ ENDUSTRI MAMULLERI SAN. VE. TIC. A.S.
for: FLEXIBLE METALLIC HOSE ASSEMBLIES
TYPE APPROVAL CERTIFICATE No. 13/00024(E1)**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2015 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

- Application Checklist
- Istanbul PQA report; IST 1717306, PRJ 11061683-2
- Raccord x Nipple With Braid Hose 24°-S12-M20x1,5-DN8; 701.181.092.060
- Raccord x Nipple With Braid Hose 24°-S12-M20x1,5-DN8; 701.181.092.065
- Haci Ayvaz Endustri Mamulleri hose data sheet
- Haci Ayvaz Endustri Mamulleri drawing no. YAYIN NO: 0

- undated
- 12-Dec-2017
- 23-Oct-2017
- 23-Oct-2017
- undated
- 10-Apr-2013

TEST REPORTS

- Metal Hose Braiding –DN8 PN140; Test Report
- Haci Ayvaz Endustri Mamulleri inspection and type test report, no. 1212003

- 27-Nov-2017
- 07-Dec-2012

Documentation as previously listed in Design Appraisal Document 13/00024.

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.



M.H.M.Rila,
Specialist, Engineering Systems
Southampton TSO, Lloyd's Register EMEA.



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Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	Haci Ayvaz Endustri Mamulleri San. Ve. Tic. A.S.		
PLACE OF PRODUCTION	Ataturk Sanayi Stesi Mustafa Inan Caddesi No, 44 Hadimkoy 34555 Istanbul Turkey		
DESCRIPTION	Braided corrugated metal flexible hose assembly with end fittings		
TYPE	Flexible metal hose		
APPLICATION	Marine, offshore and industrial piping systems, as short joining lengths to accommodate relative movement between items of machinery connected to permanent piping systems.		
SPECIFIED STANDARDS	Lloyd's Register's Rules and Regulations for the Classification of Ships; EN ISO 10380:2012 – Pipework - Corrugated Metal Hoses and Hose Assemblies.		
RATINGS	Material:	Hose:	316L stainless steel
		Braid:	304 stainless steel
		End fittings:	carbon steel or stainless steel
	Temperature range (°C):	– 20 to + 550	
Certificate No.	13/ 00024(E1)		
Issue Date	11 January 2018		
Expiry Date	9 April 2023		
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M.H.M Rila
Southampton Technical Support Office
Lloyd's Register EMEA

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RATINGS (cont.)

Nominal diameter (DN):

Nominal pressure (PN) (bar):

8	140
10	60
12	55
16	50
20	45
25	40
32	35
40	30
50	27
65	23
80	17
100	10

OTHER CONDITIONS

1. Hoses are to be selected and installed in accordance with the manufacturer's instructions and recommendations;
2. For use on ships, hoses are to be selected in accordance with LR Rules and Regulations for the Classification of Ships, Part 5, Chapter 12, Section 7;
3. For use on ships, hose screwed end connectors are limited to sizes up to 2" (DN50);
4. Hoses are not approved for use in piping systems where pressure pulses are expected to occur in service.

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"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. 13/00024(E1) and its supplementary Type Approval Terms and Conditions form part of this Certificate

All other details remain as the previous Certificate No. 13/ 00024 to which this extension should be attached.

Certificate No.	13/ 00024(E1)
Issue Date	11 January 2018
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