Certificate No: LR2002615TA
Issue Date: 26/11/2019
Expiry Date: 25/11/2024

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.

Manufacturer	**Hydrasun Ltd**
Address	Moss Road, Hydrasun Group, Gateway Business Park, Aberdeen, AB12 3GQ, United Kingdom
Place of Production	Hydrasun Ltd Moss Road, Hydrasun Group, Gateway Business Park, Aberdeen, AB12 3GQ, United Kingdom
Type	Flexible Hoses
Description	Flexible hose assemblies
Trade Name	Rockmaster 1SN
Application	General purpose hydraulic hose assemblies for marine, offshore and industrial use subject to the following operational limitations: · Not suitable for supplying fuel to burners (no external braid). · Not suitable for kill, choke or jumper hoses, or hoses serving well completion units or blow-out preventers.
Specified Standard	Lloyd's Register's Rules and Regulations for the Classification of Ships (Part 5, Chapter 12, Section 7) BS EN 853:1997 (Excluding impulse tests on completed hose assemblies)

Ratings	Nominal Dia (mm)	6	8	10	12	16

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Mohamed Mohamed Rila

Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, UK

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Max. Working pressure (psi)	3260	3110	2610	2320	1880
Nominal Dia (mm)	19	25	31	38	51
Max.Working pressure (psi)	1520	1300	940	720	580

Other Conditions

1. Hoses are to be selected, installed and tested in accordance with the manufacturer's recommendations and Lloyd's Register's Rules and Regulations for the Classification of Ships, Part 5,Chapter 12, Section 7.
2. Materials for hoses and fittings are to be manufactured and tested in accordance with the requirements for Class I piping systems.
3. Hoses are not approved for use in with flammable liquids or for essential services in locations where a source of ignition is present.
4. Hoses are not approved for use in piping systems where pressure pulses and/or high levels of vibration are expected to occur in service.
5. The each flexible hose with end fittings is to be provided with the manufacturer's pressure test report and conformity of the production and the following details are to be permanently marked:
· Manufacturer's name or trademark.
· Date of manufacture (month/year).
· Designation type reference.
· Nominal diameter.
· Pressure rating.
· Temperature range.

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. LR2002615TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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