

APPROVAL CERTIFICATE

This is to certify, that the undernoted company has been approved in accordance with the relevant requirements of the DNV GL Approval System.

Certificate No.	86 310 - 09 HH
Company	HKS GmbH Schonenfahrerstr. 1 18057 Rostock, GERMANY
Description	MANUFACTURER OF FIRE RESISTANCE HOSE ASSEMBLIES
Type/Equipment/System	PTFE HOSE ASSEMBLY with FIRE SLEEVE S 032/050
Technical Data/ Application	TECHNICAL DATA Hose Construction: PTFE inner tube, stainless steel wire braids reinforcement, fire sleeve cover. Sizes: DN 32, DN 50 M.A.W.P.: 16 [bar] M.A.W.T.: 150 [°C] Hose fittings: Flanges PTFE Hose: Type R272 / R276 Fire sleeve: Type 624 acc. to GLType Approval Certificate 84 559-93 HH APPLICATION Fuel-, lubricating oil-, hydraulic oil-, fresh water cooling- and seawater cooling systems and auxiliary piping system. The installation requirements of the manufacturer and the Rules I - 1-2 - Section 11.U are to be observed.
Approval Standard	GL VI-3-9 Regulations for the Recognition of Manufacturers of Hose Assemblies and Compensators: 1998
Documents	- Burst pressure report dated 12.10.2009 - Drawings 2906334-01,-02, 05 - Work instruction AA_7001 - Production of fuel hose assemblies
Remarks	Each batch of hose assemblies is subject to final inspection by DNVGL surveyor in the manufacturers work shop.

Valid until **2019-12-02**
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LIMITATION

Non-metallic hose assemblies are not permitted:

- In permanently pressurized starting air lines of Diesel engines
- In cargo lines of tankers
- At the ship side

For further information refer to the Rules I-1-2 Machinery Installations, Section 11 U.

Marking

Each hose assemblies and compensator is to be marked at least with the following information:

- Manufacturer's trade mark
- GL test certificate number
- Maximum allowable working pressure or PN
- Nominal diameter DN

The selection of the hose assemblies and compensators for the corresponding application and the right installation is to be in accordance with the requirements of the manufacturer.

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