

APPROVAL OF SERVICE SUPPLIERS

Certificate No:
AOSS0000ED7
Revision No:
3

This is to certify that

Internationale Hydraulik Akademie GmbH
Dresden, Germany

is granted acceptance for
Mechanical and analytical testing , in accordance with Class Programme DNVGL-CP-0484.

This service supplier certificate will be accepted for use with all rule sets published by DNV.
See the following page(s) for details regarding application.

This Certificate is valid from **2021-11-13** to (inclusive) **2024-11-12**.

This Certificate is issued on **2022-03-16**.



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signatures

Kühne, Dennis
Surveyor

This Certificate may be withdrawn if:

1. The service provided has been improperly carried out or the results improperly reported.
2. The surveyor has found any deficiencies in the accepted operating systems of the service supplier.
3. The firm has failed to inform of any major changes having effect on the quality of the service rendered.
4. The conditions listed in the certificate are changed and/or are not fulfilled.

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.



Application:

Fire resistance test bench according to ISO 15541 and ISO 19922

Approval Standard:

ISO 15540:2016, ISO 15541:2016
ISO 19921:2005, ISO 19922:2005

Remarks:

The test bench consist of

- a burning chamber installed in a separate room with gas detection
- monitoring system for parameter recording as required by the standard
- pc and plc controlled gas supply and cooling water system
- pressure test facility for in-situ proof pressure testing

Range of Application/Limitation:

- I. The fire resistance test bench of IHA Dresden is approved for fire resistance tests of:
- non-metallic hose assemblies, compensators and fire sleeves up to DN400
 - mechanical joints up to DN400
 - fuel oil and lubricating oil filters up to outer dimension to ensure proper flame engulfment
- II: The testing of larger dimension than specified above requires a separate approval.
- III: This DNV approval of service supplier is not applicable for obtaining EU marine equipment directive (MED) certificates!

Confidential text:

Documents

- Operational Manual - Betriebsanleitung Brandprüfstand, vers. 12.1
- Document Overview IHA "Flammprüfstand", rev. B, dt. 2022-01-12

Drawings

- Wasserkreisläufe Flammenprüfstand, rev. B, dt. 2017-11-29
- Gasversorgung Flammenprüfstand, rev. C, dt. 2013-04-04
- Stromlaufplan no. 0115032010, pages 1 to 28, last rev. 2011-01-14

Test Reports

- A0515103 - Certification of 1 x Initial AoSS for Internationale Hydraulik _ AOSS CHECKLIST 2017-11-23_CP-0484
- Checklist Laborbewertung, dated 2017-11-23
- Example test report no. 060-17, 2017-11-23 of fire resistance tests according to ISO 15540, ISO 19921
- A1094676 - Renewal of AOSS0000ED7 for Internationale Hydraulik Akademie GmbH based on B10 DNV AOSS CHECKLIST_CP-0484, dated 2022-01-12

Remarks

- Test plan is to be submitted to DNV Hamburg prior to start with fire resistance tests
- The test report shall include in addition to the standard form the following test specimen data for:
Non-metallic hose assemblies
Hose specification, e.g. rubber compound, material specification for liner, cover, re-enforcement material
Hose end fitting type, design drawing, material designation
Hose assembly crimping specification
Non-metallic compensator
Bellow design drawing/specification
Flange design drawing including material specification, specification of screws and nuts, tightening torque
Mechanical joints
Design drawings including material specification, tightening torque