

APPROVAL OF SERVICE SUPPLIERS

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 GL.
See the following page(s) for details regarding application.

This Certificate is valid until **2022-08-06**.

Issued at **Magdeburg** on **2018-08-07**



for **DNV GL**

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

Vogel, Joerg
Principal 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This Certificate may be withdrawn if: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.

Application:

Fire resistance test bench according to ISO 15541 and 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

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

The testing of larger dimension than specified above requires a separate approval.

Confidential text:

Documents

- Operational Manual - Betriebsanleitung Brandprüfstand, vers. 12.1
- Document Overview IHA "Flammprüfstand", rev. A, dt. 2017-12-05

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

Remarks

- Test plan is to be submitted to DNVGL 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



Certificate No: **AOSS0000ED7**