



## **VERBÄNDEVEREINBARUNG**

Nummer: V-DK-002

Titel: **Hinweise zu Testläufen im Rahmen der Inbetriebsetzung sowie Erprobung während des Betriebs von Dampfkesselanlagen**

Unterzeichner: FDBR  
Vd-TÜV  
VGB

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## **Agreement Steam Boiler 002**

**2010-10**

between

FDBR	Fachverband Dampfkessel-, Behälter- und Rohrleitungsbau e. V., Düsseldorf
VdTÜV	Verband der TÜV e. V., Berlin
VGB	VGB PowerTech e. V., Essen

on

### **Instructions for trial runs during the putting into operation as well as for trial runs during the operation of steam boiler plants**

#### **Preamble**

This agreement is intended to supplement the pertinent rules and regulations. It is a collection of experience made, recommendations and, where required, a concretization of the rules and regulations, which, to the best of our knowledge, reflects the state-of-the-art at its date of publication. This agreement aims at ensuring the operational safety of steam boiler plants and their components.

No liability will be taken for the correctness of the contents of this agreement. Patents and other protective rights shall be clarified under the responsibility of the user

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## **1 Scope**

This agreement applies to trial runs of steam boiler plants or their components within the putting into operation by the manufacturer to verify their usability as intended as well as to trial runs during operation to verify their proper condition.

Trial runs by manufacturer and plant owner shall consist of:

- (1) functional testing,
- (2) the ascertainment and verification of safety-relevant performance data as well as
- (3) the adjustment and setting activities on the operational plant or their components.

## **2 Planning of trial runs to be performed by manufacturer or plant owner**

2.1 For trial runs to be performed by manufacturer and plant owner written programs are required to determine the sequence of individual stages as well as the measures to be taken.

2.2 The programs shall be designed such that the trial runs by the manufacturer and by the plant owner are performed in due consideration of the pertinent laws and ordinances, the regulations of the federal accident insurance corporations, and in addition to the generally accepted rules of technology. Where deviations from the aforementioned rules and regulations are necessary or other additional risks may arise during trial runs performed by manufacturer or plant owner, measures shall be laid down in the programs to ensure that safety is maintained in another way.

2.3 The programs shall provide that the various adjustment and setting work and the checking activities are distributed over several chronological stages as far as this is relevant to safety. No stage shall be initiated until the required safety measures have been taken.

2.4 Within the individual stages a sequence shall be selected which bears the least possible risks.

2.5 Furthermore, possibilities shall be utilized to adjust safety devices prior to installation or on the shut down steam boiler plant.

2.6 Where difficulties arise or doubt exists as to the program's proper design regarding safety requirements, an expert shall be consulted. This may be a notified body or competent accredited inspection body (ZÜS).

2.7 Each person employed in trial runs performed by the manufacturer or the plant owner shall be exactly assigned his tasks. The employees shall be made familiar with the program and their assigned tasks as well as with possible dangers and the escape routes provided.

2.8 For the individual stages, the respective danger areas shall be laid down.

## **3 Direction and supervision of trial runs performed by the manufacturer or the plant owner**

An experienced person familiar with the task shall be nominated to be responsible for the direction and supervision of the trial runs and the observance of the program, and who is able to take the required defence measures against dangers without delay in the case of irregularities or operational troubles.

## **4 Employment and behaviour of personnel**

4.1 Only persons having completed their 18th year of life shall be trusted with trial runs.

4.2 The persons employed in trial runs shall report, without delay, to the responsible supervisor any irregularity detected in the trial runs, where required by suitable means of communication.

4.3 Persons who are engaged to replace and supervise the function of bridged or shut-off safety devices, shall have been informed on the measures to be taken by them in case of irregularities and shall be allowed to take these measures where such irregularities occur. They shall only be allowed to perform this task.

4.4 Persons engaged as per section 4.3 shall be relieved at adequate time intervals. These time intervals shall be fixed in accordance with the personal strain arising from the increased attention and the external conditions at the location of observation.

4.5 Persons engaged in trial runs shall not be impaired as regards their faculty of perception, as for example under the influence of alcohol, intoxicating means or medicaments.

4.6 During trial runs, persons shall only be allowed to be present in the respective danger areas of the steam boiler plant as far as they are required for the supervision and performance of trial runs. Operating personnel of adjacent plants being busy in danger areas shall be allowed to further perform their functions, but shall be informed of the specific dangerous condition. Protective clothing shall be placed at the disposal of specifically endangered persons.

## **5 Performance of trial runs by manufacturer or plant owner**

5.1 During trial runs to be performed by the manufacturer or the plant owner the technical rules and the health and labour protection regulations for the operation of steam boiler plants shall be observed, wherever possible.

5.2 The safety devices intended for operation shall be kept ready to function – as far as the required trial runs and the type of plant make this possible.

5.3 Safety devices shall only be bridged or shut down for an as short as possible time and to the extent required to achieve the trial run objectives. Where, in exceptional cases, the safety devices are bridged or shut off, their function shall be replaced.

5.4 Deviations from the generally accepted rules of technology are permitted where observance of the rules is not possible due to plant type, an objective or partial objective of the trial runs cannot be achieved when observing the rules, and safety is ensured by other measures.

5.5 Where steam boiler plants not complying with the technical rules and health and labour protection regulations are subjected to trial runs - plants to comply with foreign rules and regulations - at least the following equipment shall be provided to comply with the Pressure Equipment Directive 97/23/EC Annex I:

(1) Safety valves which as a whole ensure a discharge capacity of at least 100% of the maximum steam or hot-water output,

(2) Flame monitoring equipment with pertinent automatic quick-acting device installed in the fuel supply line.

Where redundancies (double systems) of safety devices are required by the respective rules and regulations, one single system will suffice during trial runs if its effectiveness has been verified by functional testing.

The function of further safety devices, e.g. water level limiters, pressure limiters, temperature limiters may be taken over by persons.

Düsseldorf, 22<sup>nd</sup> of October 2010

Fachverband Dampfkessel-, Behälter- und Rohrleitungsbau e. V.

Signed: Dr. Maaß

Berlin, 03<sup>rd</sup> of November 2010

Verband der TÜV e. V.

Signed: Dr. Brüggemann

Essen, den 21<sup>st</sup> of October 2010

VGB PowerTech e. V.

Signed: Dr. Theis