

CERTIFICATE OF COMPLIANCE



TYPE EL - CLASS I

*TUM Certification
hereby declares that the product*

Inline measuring section with PEEK windows and closed thermowell for Pt100

from

proMtec Theisen GmbH, 76275 Ettlingen, Germany

*has been evaluated for compliance with the
Hygienic Equipment Design Criteria of the EHEDG, by:*

*TUM (Forschungszentrum für Brau- u. Lebensmittelqualität) at Weihenstephan, Germany
and meets the criteria as demonstrated by:*

Evaluation Report No. 366/25.07.2012

Signed *Jürgen Hofmann*
Dr. Jürgen Hofmann Evaluation Officer

Date 18 July 2014

Signed *Fritz Jacob*
Dr. Fritz Jacob Head of Department

Date 18 July 2014

Certificate No. 05/2014

TUM FORSCHUNGSZENTRUM
WEIHENSTEPHAN
TECHNISCHE UNIVERSITÄT MÜNCHEN für Brau- und
Lebensmittelqualität

*85354 Freising-Weihenstephan, Germany
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Appendix 3

EHEDG CERTIFICATION - EQUIPMENT EVALUATION FORM
OFFICIAL ENGLISH VERSION

EQUIPMENT INTENDED FOR CLEANING WITH LIQUID WITHOUT DISMANTLING, TYPE EL CLASS I

Equipment:

Name: proMtec Theisen GmbH

Type no.: Inline measuring section with PEEK windows and closed thermowell for Pt100

Other essential identification: microwave sensor

Date: 18.07.2014

Number: 05/2014

Evaluated by:

Name: Dr. Jürgen Hofmann

EHEDG or EHEDG Authorized Organization: TUM, BLQ, Germany

Approved by:

Name: Andy Timperley

EHEDG or EHEDG Authorized Organization: Campden BRI (Chipping Campden) Limited, UK

| | |
|--|---|
| 1. Results of inspection for compliance with the EHEDG Hygienic Design Criteria. Conclusion : The equipment complies with the criteria. The use of the EHEDG Certification Type EL CLASS I logo is justified : | YES <input type="checkbox"/> |
| | MAYBE <input checked="" type="checkbox"/> |
| | NO <input type="checkbox"/> |
| 2. Only unavoidable reasons for non-compliance present. Evidence for compensation provided and convincing for Certification. Conclusion : The equipment complies with the criteria where possible. The use of the EHEDG Certification Type EL CLASS I logo is justified : | YES <input checked="" type="checkbox"/> |
| | NO <input type="checkbox"/> |

Signature :



Date : 18.07.2014

| | |
|----------------------------------|---|
| Type EL Certification: | Yes <input checked="" type="checkbox"/> |
| <i>Cross out as appropriate.</i> | |

The original of this form will be kept together by the EHEDG or the EHEDG Authorized Organisation with the application, the inspection report, the evidence provided and any other relevant documentation, as listed on the back.

| No. | Description |
|-----|---|
| 1. | EHEDG / TUM Certificate of Compliance |
| 2. | Contract to use the EHEDG Certification Logo for equipment |
| 3. | Appendix 1A: EHEDG authorized certification organisations |
| 4. | Appendix 1B: equipment intended for cleaning with liquids |
| 5. | Appendix 2: conditions for use of the EHEDG Certification Logo |
| 6. | Appendix 3: Equipment evaluation form |
| 7. | Evaluation report of the design of the Inline measuring section with PEEK windows and closed thermowell for Pt100 No. 366/25.07.2012 |
| 8. | Drawing of the Inline measuring section with PEEK windows and closed thermowell for Pt100, original stamped |

EHEDG Evaluation Report
no. 366/25.07.2012

Inline measuring section with PEEK windows and closed thermowell for Pt100

proMtec Theisen GmbH, 76275 Ettlingen, Germany

The evaluation is based on EHEDG in-line cleanability test report no. 366/25.07.2012 done by **BLQ (Forschungszentrum Weihenstephan für Brau- und Lebensmittelqualität, Technische Universität München in Weihenstephan, Germany)**, discussed with Dr.-Ing. Fritz Jacob and Dr.-Ing. Jürgen Hofmann, who is responsible for the tests.

Evaluation of the hygienic design criteria of EHEDG

Materials of construction

All used materials fulfil the specific requirements. They are corrosion resistant, non-toxic, mechanically stable, and their surface finish is not adversely affected under the conditions of intended use. The product contact surface of the sensor is made of PEEK. These PEEK plates are fitted into a ball housing (Varinline housing of GEA Tuchenhagen GmbH). The surface of the PEEK plate is smooth without pores and damages. All materials are allowed to be used in contact with food; PEEK according FDA 21 CFR title 177.2415.

Hygienic Design and construction

The sensor is outside the pipeline and has no contact with the food product. For functional reasons PEEK plates are used as interface between the product contact area and the outside of the pipeline. These PEEK plates are mounted into a ball housing of GEA Tuchenhagen GmbH, which is easy to clean. An additional temperature sensor is welded into the pipeline with a closed thermowell for PT100.

The PEEK surfaces are fine turned and the surface is smooth. The stainless steel surfaces are polished with a roughness smoother than $Ra = 0.8 \mu m$. The welding seam is according the EHEDG requirements in Doc. 35.

The sensor with the ball housing must be integrated into the pipeline with an easy cleanable connection according the EHEDG position paper or welded in (available on the EHEDG website www.ehedg.org). For drainability the position of the ball housing must be correct.

Result

The conclusion is that the ***Inline measuring section with PEEK windows and closed thermowell for Pt100*** complies with the EHEDG Hygienic Design Criteria (doc. 8, 10, 35 and 37). The measuring section is available for pipe line diameters of DN 40 to DN 150. The design is always the same and therefore cleanability is comparable.

The in-place cleanability test method has proven that the PEEK plates are easy to clean. There were no problems in cleaning the product contact surfaces. The cleanability was comparable to the reference pipe.


Dr.-Ing. J. Hofmann
18.07.2014