

Design Approval Certificate



This is to certify that the design of undernoted products has been examined in accordance with the relevant requirements of the GL Rules and Guidelines for Classification and Construction.

Certificate No. **94131-10 HH**

Company / Manufacturer **Universal Hydraulik GmbH**
Siemensstr. 33
61267 Neu-Anspach, GERMANY

Product Description **Oilcooler / Tube Bundle Heat Exchanger**

Types **EKM 700, EKM 1000, SKM 1200**

Technical Data / Conditions **Design pressure: Shell side: 16 bar / Tube side: 10 bar**
Design temperature: 95°C
Operating Medium: Shell side: Oil / Tube side: Water
Material: according to approved drawings
GL Pressure Vessel Class: II

Design Approval Standard **GL Rules for Classification and Construction "I – Ship Technology, Part 1 – Seagoing Ships, Chapter 2 – Machinery Installations, Section 8 – Pressure Vessels**

Approved Documents **Drawing No. ABZ-10018208/1, GL Ref. No. 09-163911/Hpe of 2010-01-28**
Drawing No. ABZ-10018209/0, GL Ref. No. 09-163920/Hpe of 2010-01-28
Drawing No. ABZ-10018512/0, GL Ref. No. 09-176829/Hpe of 2010-02-01

Remarks **None**

Valid until **2015-01-28**

File no.: **X.B.03**

Final acceptance of design approval items depends on satisfactory inspection and testing of GL Surveyor witnessed with a relevant GL Test Certificate.

Germanischer Lloyd

Hamburg, 2010-03-15

Harald Pauli

A handwritten signature in blue ink, appearing to read 'Pauli', is written over the name Harald Pauli.

Holger Peters

A handwritten signature in blue ink, appearing to read 'Holger Peters', is written over the name Holger Peters.



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Siemensstr. 33
61267 Neu-Anspach, GERMANY

Product Description **Oilcooler / Tube Bundle Heat Exchanger**

Types **UKM 500, UKM 700, UKM 1000, UKM 1200**

Technical Data / Conditions **Design pressure: Shell side: 20 bar / Tube side: 16 bar**
Design temperature: 95°C
Operating Medium: Shell side: Oil / Tube side: Water
Material: according to approved drawings

Design Approval Standard **GL Rules for Classification and Construction "I – Ship Technology, Part 1 – Seagoing Ships, Chapter 2 – Machinery Installations, Section 8 – Pressure Vessels"**

Approved Documents **General Drawing Approval Oil- / Watercooler Type UKM**
GL Ref. No.: 06-152084/HPe of 2007-01-15
Drawing Nos.: ABZ-10006500/0, ABZ-10006505/0, ABZ-10006521/0, ABZ-10006507/0

Remarks **None**

Valid until **2012-01-15**

File no.: **X.B.03**

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Germanischer Lloyd

Hamburg, 2010-03-22

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GL Pressure Vessel Class: II

Design Approval Standard **GL Rules for Classification and Construction "I – Ship Technology, Part 1 – Seagoing Ships, Chapter 2 – Machinery Installations, Section 8 – Pressure Vessels**

Approved Documents **Dwg. ABZ-10019321/0, GL Ref. No. 09-163914/Hpe of 2010-05-06**
Dwg. ABZ-10018208/1, GL Ref. No. 09-163911/Hpe of 2010-01-28
Dwg. ABZ-10018209/0, GL Ref. No. 09-163920/Hpe of 2010-01-28
Dwg. ABZ-10018512/0, GL Ref. No. 09-176829/Hpe of 2010-02-01

Remarks **None**

Valid until **2015-01-28**

File no.: **X.B.03**

Final acceptance of design approval items depends on satisfactory inspection and testing of GL Surveyor witnessed with a relevant GL Test Certificate.

Germanischer Lloyd

Hamburg, 2010-05-07

Harald Pauli

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