

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:**That****K. & H. Fischer GmbH
Raiffeisenstraße 8, 42477 Radevormwald, Germany**is an approved manufacturer of
Heat treatmentin accordance with
DNV GL rules for classification – Ships

and the following particulars:

Heat treatment	Quenching and Tempering, Annealing
Steel type	See particulars of the approval
Max. diameter/ thickness	2 650 mm
Max. weight	15 000 kg
Remarks	See particulars of the approval

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules. Materials to be applied to DNV GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2017-01-16**for **DNV GL**This Certificate is valid until **2019-12-31**.DNV GL local station: **Essen**Approval Engineer: **Christian Wildhagen**

**Thorsten Lohmann
Head of Section**

Job Id: **263.11-006711-1**
Certificate No: **AMMM000015Z**

Particulars of the approval

Heat treatment:

Material grade	Heat treatment	Thickness [mm], max.	Weight [kg], max.	Remarks
EN 10083, EN 10084, EN 10088, EN 10250, EN 10025, EN 10028, ISO 4957	Quenching and Tempering, Annealling *)	2 650 mm	15 000 kg	*) Normalizing, Soft annealing, Solution annealing, Stress relief annealing, +TH and +FP annealing

¹⁾ Starting material/semi-finished steel from manufacturers approved by DNV GL