

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

Ortlinghaus-Werke GmbH
Kenkhauser Straße 125,
42929 Wermelskirchen,
Germany

is an approved manufacturer of
Heat treatment

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Heat treatment workshop
Heat treatment process	Induction hardening Salt bath hardening
Product type	Clutches
Steel type	Carbon and carbon-manganese, Alloy
Max. Weight	See page 2
Max. wall thickness	See page 2
Remarks	See page 2

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 **2019-06-12**

for **DNV GL**

This Certificate is valid until **2022-06-11**.

DNV GL local station: **Essen**

Approval Engineer: **Christian Wildhagen**

Thorsten Lohmann
Head of Section



Job Id: **263.11-009519-1**
Certificate No: **AMMM00002HJ**

Particulars of the approval

Approval scope for Independent Heat Treatment Company

Item	Description
Product type	Clutches
Steel Type	Carbon and carbon-manganese, Alloy
Heat Treatment Type	Induction hardening Salt bath hardening
Furnace Details	Salt bath: max. Ø 700 mm Tempering: max Ø 1 100 mm
Heat Treatment Procedure	Doc. No. V-70503 Version 1.1 (Induction hardening) Doc. No. V-7050301 Version 1.0 (Salt bath hardening)