

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

Hans Körber GmbH
Am Straßenverkehrsamt 7-9
Kirchlengern, Germany

is an approved manufacturer of
Pressed Parts

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Product	Pressed vessel heads (e.g. torispherical heads)
Grade(s)	Rolled steel for boilers, pressure vessels and special applications
Dimensions	max. Ø610 x 10 mm
Delivery Condition	Normalized, normalized + tempered
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.

This Certificate is valid until **2019-02-21**.

Issued at **Hamburg** on **2016-02-22**

DNV GL local station: **Magdeburg**

Approval Engineer: **Oliver Krömer**

for **DNV GL**

Thorsten Lohmann
Head of Section

Job Id: **263.11-005453-1**
 Certificate No: **AMMM00000CZ**

Particulars of the approval

Pressed parts:

Grade	Product	Supply Condition	Thickness [mm], max.	Outer Diameter [mm], max.
Steels for boilers and pressure vessels				
VL 360-0N, VL 360-1FN, VL 360S-1FN VL 410-0N, VL 410-1FN, VL 410S-1FN VL 0.3Mo, VL 0.3MoS	HD	N	10	610
VL 1Cr0.5Mo, VL 1Cr0.5MoS VL 2.25Cr1Mo, VL 2.25Cr1MoS	HD	N+T	10	610
Non-alloy structural steels acc. to EN 10025-2				
S235JR	HD	N	10	610
Non-alloy and alloy steels with specified elevated temperature properties acc. to EN 10028-2				
P235GH, P265GH 16Mo3	HD	N	10	610
13CrMo4-5 10CrMo9-10	HD	N+T	10	610

HD: heads N: normalized N+T: normalized + tempered

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

**Hans Körber GmbH
Am Straßenverkehrsamt 7-9
Kirchlengern, Germany**is an approved manufacturer of
Steel Pipes and Fittingsin accordance with
DNV GL rules for classification – Ships

and the following particulars:

Product	Pipe fittings (e.g. elbows, tees and reducers)
Steel type(s)	Pipes for pressure systems Boiler and superheater tubes
Process	Hot forming process
Dimensions	max. Ø355.6 x 12.5 mm
Welding Method	Not applicable
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.

This Certificate is valid until **2019-02-21**.Issued at **Hamburg** on **2016-02-22**DNV GL local station: **Magdeburg**Approval Engineer: **Oliver Krömer**for **DNV GL**

**Thorsten Lohmann
Head of Section**

Job Id: **263.11-005457-1**
Certificate No: **AMMM00000D0**

Particulars of the approval

Connecting elements and fittings:

Grade	Product	Supply Condition	Wall Thickness [mm], max.	Outer Diameter [mm], max.
P235TR2 acc. to EN 10253-2	RF	N	12.5	355.6
P265TR2 acc. to EN 10253-2	RF	N	12.5	355.6
P235GH acc. to EN 10253-2	RF	N	12.5	355.6
P265GH acc. to EN 10253-2	RF	N	12.5	355.6
16Mo3 acc. to EN 10253-2	RF	N	12.5	355.6
10CrMo5-5 acc. to EN 10253-2	RF	N+T	12.5	355.6
13CrMo4-5 acc. to EN 10253-2	RF	N+T	12.5	355.6
10CrMo9-10 acc. to EN 10253-2	RF	N+T	12.5	355.6
WPA acc. to ASTM A234	RF	N	12.5	355.6
WPB acc. to ASTM A234	RF	N	12.5	355.6
WPC acc. to ASTM A234	RF	N	12.5	355.6
WP1 acc. to ASTM A234	RF	N	12.5	355.6
WP11 acc. to ASTM A234	RF	N+T	12.5	355.6
WP12 acc. to ASTM A234	RF	N+T	12.5	355.6
WP22 acc. to ASTM A234	RF	N+T	12.5	355.6

RF: pipe fittings N: normalized or normalized formed N+T: normalized + tempered Q+T: quenched + tempered