



Certificate No : MD00/0899/0009/1

THYSSENKRUPP STEEL EUROPE AG
Works Bochum
Kaiser-Wilhelm-Straße 100
D-47166 Duisburg
Germany

has been approved as a manufacturer in accordance with the requirements of Lloyd's Register for :-

Steel Hot Rolled Coil and Plates from coils

This approval is subject to compliance with the Rules for the Manufacture, Testing and Certification of Materials. The full details of the processes and grades to which this approval applies are given in the Appendix of this certificate.

Lloyd's Register is to be notified of any change that may affect the validity of this Certificate.

This Certificate is issued to the above manufacturer and is valid until the date given below.

Valid Until : 22 August 2020
Date of Issue : 30 August 2017

A handwritten signature in blue ink, appearing to read 'Lili Hou', is written over a horizontal line.

Lili Hou
Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group



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Appendix 1

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Hot Rolled Coil	Normal Strength	Grades	mm thickness Maximum
Normalizing Rolled	Fine Grain Al	A, B, D, E	20.0
As Rolled and Hot Coiled	Fine Grain Al	A, B, D, E	20.0
Hot Rolled Coil	Higher Strength	Grades	mm thickness Maximum
Normalizing Rolled	Fine Grain Al+Nb	AH27S, AH32, AH36, DH27S, DH32, DH36	20.0
As Rolled and Hot Coiled	Fine Grain Al+Nb	AH27S, AH32, AH36, DH27S, DH32, DH36	20.0
Hot Rolled Coil	Boiler & Pressure Vessel	Grades	mm thickness Maximum
Hot Coiled	Fine Grain Al+Nb	360FG, 410FG, 460FG, 490FG, 510FG	20.0
Hot Coiled	Fine Grain Al	360FG, 410FG	20.0
Hot Coiled	Killed	360, 410	20.0
Plates from coils	Normal Strength	Grades	mm thickness Maximum
As Rolled	Fine Grain Al	A, B, D, E	20.0
Normalizing Rolled	Fine Grain Al	A, B, D, E	20.0
Plates from coils	Higher Strength	Grades	mm thickness Maximum
As Rolled	Fine Grain Al+Nb	AH27S, DH27S, AH32, DH32, AH36, DH36	20.0
Normalizing Rolled	Fine Grain Al+Nb	AH27S, DH27S, AH32, DH32, AH36, DH36	20.0
Plates from coils	Boiler and Pressure Vessel	Grades	mm thickness Maximum
Normalizing Rolled	Fine Grain Al+Nb	410 FG, 460 FG, 360 FG, 490FG, 510FG	20.0
Normalizing Rolled	Fine Grain Al	410 FG, 360 FG	20.0
Normalizing Rolled	Killed	360, 410	20.0

Valid Until : 22 August 2020
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Lili Hou

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