

DNV

DET NORSKE VERITAS

APPROVAL OF MANUFACTURER

CERTIFICATE

CERTIFICATE NO. AMM-5015

This is to certify that

ThyssenKrupp Steel Europe AG
Duisburg, Germany

is an approved manufacturer of

Steelmaking and Rolled Steel Products

in accordance with

Det Norske Veritas' Rules for Classification Pt. 2

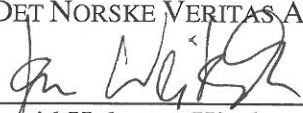
and the following particulars:

Product	Semi-finished products: Slabs, Plates from hot rolled strip (coils)
Grades	Hull structural steels, see page 2, Low temperature steels, see page 2
Steelmaking	BOC (TBM), Continuous casting
Deoxidation	Killed
Fine grain elements	See page 2
Delivery conditions	See page 2
Max. thickness	See page 2

Place and date

Høvik, 2011-03-29

for DET NORSKE VERITAS AS


Astrid Holmsen Kjesbu
Head of Section



Local Office
DNV Essen

This Certificate is valid until

2014-12-31



Dechun Lou
Surveyor

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



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Particulars of the approval:

Semi-finished products: Slabs		
Hull structural steels	Normal strength	All grades
	High strength	All grades
	Extra high strength	NV A690, NV D690, NV E690, NV F690
Low temperature steels	Carbon-manganese steel	All grades
	Nickel alloy steel	NV 5 Ni

Plates from hot rolled strip				
Grade	Steelmaking ¹⁾	Fine grain elements	Delivery conditions ²⁾	Max. thickness (mm)
NV A, NV B, NV D, NV A27S, NV D27S, NV A32, NV D32, NV A36, NV D36	BOC, CC	Al, Al+N or Al+Nb	AR	15
NV E, NV E27S, NV E32, NV E36	BOC, CC	Al, Al+N or Al+Nb	N	15

Remarks:

¹⁾ BOC: Basic Oxygen Converter; Continuous Casting.

²⁾ AR: As-rolled; N: Normalising.