

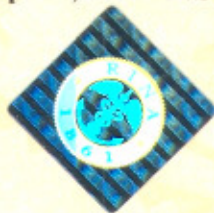


**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF  
MATERIALS  
No. FAB022410XG**

**This is to certify** that the manufacture of the product identified below is in compliance with the applicable requirements of the RINA Rules for the Approval of Manufacturers of Materials.

<i>Description</i>	<b>Steel slabs and hot rolled flat products</b>
<i>Type</i>	<b>Hot rolled plates; strip and plates from strip. Normal and higher strength steels for hull and other structural applications; quenched and tempered steels; Ferritic steels for low temperature service: steels according to RINA rules; to european standards and TKS material specifications</b>
<i>Applicant</i>	<b>THYSSENKRUPP STEEL EUROPE AG KAISER-WILHELM-STRASSE 100 47166 DUISBURG GERMANY</b>
<i>Manufacturer</i>	<b>THYSSENKRUPP STEEL EUROPE AG</b>
<i>Place of manufacture</i>	<b>Duisburg Sued, Beeckerwerth, Bruckhausen and Bochum</b>
<i>Reference standards</i>	<b>RINA Rules for the approval of manufacturers of materials</b>

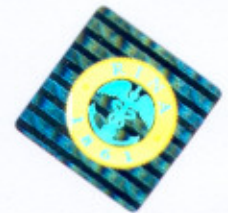
Issued in **Genoa** on **April 1, 2010**. This Certificate is valid until **March 31, 2015**



**RINA**  
H. Brunk

RINA

This certificate consists of this page and 1 enclosure



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No. **FAB022410XG**

Enclosure - Page 1 of 1

**Hot rolled plates; strip and plates from strip. Normal and higher strength steels for hull and other structural applications; quenched and tempered steels; Ferritic steels for low temperature service: steels according to RINA rules; to european standards and TKS material specifications**

**APPROVAL CONDITIONS**

**General conditions for the approval**

-The approval is granted on condition that the RINA Rules for the approval, manufacture, testing and certification of materials are complied with in all respects.

-RINA is to be notified of any change of materials, manufacturing process, quality control routines that may affect the validity of this certificate.

**Steelmaking : BOC Basic Oxygen converter**

**Casting process: CC Continuous casting**

Product	Grade	delivery condition	max. thickness in [mm]	standard
<b>Normal and higher strength steels for hull and other structural applications</b>				
plate/ strip/ plate from strip; maximal thickness of strip: 25[mm]	A - D	AR	acc. RINA-Rules (max. 50mm)	RINA-Rules
	A - E	N/NR	70	
	AH32 - EH32	N/NR	100	
	AH32 - FH32	TM	60	
	AH36 - EH36	N/NR	100	
	AH36 - EH36	TM	60	
	AH40 - EH40	TM	40	
<b>High strength quenched and tempered steels</b>				
plate	A420 - F420	TM	50	RINA-Rules
	A460 - E460	TM	40	
	A500 - D500	TM	50	
	A550 - F550	Q+T	70	
	A620 - F620	Q+T	70	
	A690 - F690	Q+T	70	
<b>Ferritic steels for low temperature service</b>				
plate	510LF (13MnNi63)	N/NR	50	RINA-Rules
	9,0 Ni	Q+T	30	
<b>Steels for industrial services according to european standards</b>				
<i>structural steels</i>				
plate	S235JR - S355K2	acc. to standard	120	EN 10025-2
	S275N - S355NL	acc. to standard	100	EN 10025-3
	S420N - S460NL		60	
	S275M - S355ML	TM	30	EN 10025-4
	S420M - S460ML		60	
	S690Q-QL1	Q+T	70	EN 10025-6
<i>steels for pressure purposes</i>				
plate	13MhNi6-3	acc. to standard	50	EN 10028-4
<b>Steels for industrial services according to TKS-material specifications</b>				
plate	N-A-XTRA (M) 700	Q+T	70	TKS-Spec. 215
	XABO 460 (T) / XABO 500 (T)	TM	50	TKS-Spec. 1205 & 1210
plate	Secure 500	Q+T	90	TKS-Spec.1943

**Survey conditions:**

The plates are to be in compliance in all respects with the relevant RINA rules and are to be tested accordingly.

**General conditions for the approval**

RINA  
Via Corsica, 12 - 16128 Genova  
Tel +39 010 53851  
Fax +39 010 5351000

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-The approval is granted on condition that the RINA Rules for the approval, manufacture, testing and certification of materials are complied with in all respects.

-RINA is to be notified of any change of materials, manufacturing process, quality control routines that may affect the validity of this certificate.

- TKS is authorized to carry out inspection on his own responsibility (CAII)



Genoa April 1, 2010

RINA  
H. Brunk

*M. Brunk*

