

EN 10 204-3.1 (2004)

A 15791 -001

14.12.2019

Tilaja Purchaser
NORSK STAL AS
BOX 123
1378 NESBRU NORWAY
Tilaus nro Order No.
P13001964

Tilausvahvistus Order Confirmation
15791

Vastaanottaja Consignee
NORSK STÅL A/S
MARGARETHE JÖRGENSENSV. 1B
9406 HARSTAD NORWAY
Asiakkaan merkki Shipping mark

Päivämäärä Date
16.12.2019
Valmistajan merkki
Mark of the Manufacturer



Todistus Certificate
31

Laivaus Shipping

Laatumerkintä Quality Marking
S355J2 N

Tarkastajan leima
Stamp of Inspector

Mxx

Toimitustyyppi Delivery type
PART DELIVERY

Sulatus nro levy nro Cast No. Plate No.
XXXXX XXX XX XXX

Vastaanottajan leima
Stamp of Surveyor

Muut leimaukset
Other Stamps

Tuote Product
HEAVY PLATES
Laji Grade
S355J2+N EN 10025-2:19/M-120 ED1.5:2008
Laatuselvitys Quality Specifications
STEEL FOR GENERAL STRUCTURAL PURPOSES

Toleranssit Tolerances
EN 10029:2010 CLASS A

Tekniset vaatimukset ja/tai viralliset määräykset Technical terms of Delivery and/or Official Regulations

Positio Item	Mitat mm Dimensions mm	Merkki Marke	Kpl Pcs	Paino kg Weight kg	Sulatus levy nro Cast plate No	SP nro SP No	UT	MT
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**HOT ROLLED STEEL PLATES
IN BUNDLES**

ACC. TO DATA SHEET MDS-Y05 REV. 3 JUNE 2007, IMPACT TEST AT -20 DEG C MIN 40J.

SURFACE CONDITION EN 10 163-2:2005 CLASS A1

010	10.00 X 1250	X	2500	312290	18	4410	45914	021	022
010	10.00 X 1250	X	2500		18	4410	45914	023	022
010	10.00 X 1250	X	2500		18	4410	45914	025	022
010	10.00 X 1250	X	2500		20	4900	45914	027	022

ACC. TO DATA SHEET MDS-Y05 REV. 3 JUNE 2007, IMPACT TEST AT -20 DEG C MIN 40J.

SURFACE CONDITION EN 10 163-2:2005 CLASS A1

020	10.00 X 2000	X	6000	312292	4	3768	45914	022	022
020	10.00 X 2000	X	6000		2	1884	45914	024	022

ACC. TO DATA SHEET MDS-Y05 REV. 3 JUNE 2007, IMPACT TEST AT -20 DEG C MIN 40J.

SURFACE CONDITION EN 10 163-2:2005 CLASS A1

030	20.00 X 1000	X	2000	10950	16	5024	45909	061	061
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*** 96 28806

Raah Steel Works

Täten todistamme, että toimitus on tilausvahvistuksen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order confirmation.

Testaus ja tarkastus Testing and Inspection

Minna Valkama

MINNA VALKAMA

Valtuutettu tarkastaja Authorized inspection representative

Yhtiön nimi Company Name: SSAB Europe Oy
Kotipaikka Registered Office: HÄMEENLINNA

Osoite Address: PL 93, P.O Box 93
FIN-92101 RAAHE, FINLAND

Puhelin Telephone: 020 5911
+358 20 5911

Y-tunnus Business ID: 2389445-7

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Päivämäärä Date
16.12.2019

TPE

Valmistajan merkki
Mark of the Manufacturer



Laji Grade
S355J2+N

Lisävaatimukset Additional requirements

Jatkuvavalettua happiterästä
Oxygen steel, continuous casting

Laatuselvitys Quality Specifications

Fully killed, Fine grain practiced

STEEL FOR GENERAL STRUCTURAL PURPOSES

Pos. Item	Sulatus, k. erä nro Cast. test No	T-tila Cond	Vetokoe Tensile test	Tensile test										Taivutuskoee Bend test		Huom Nb	Päästö Tempering °C										
				K2	°C	RP02 MPa	RT05 MPa	REL MPa	REH MPa	1	2	3	50	80	200			REH /RM	RM * A5	1	2	3	Keskiarvo Average	K5	D = X t		
010	45914	022	NR 11								435	571															
020	45914	022	NR 11								435	571															
030	45909	061	NR 11								457	569															

K2: 11=TOP,TRANSV.

NR=NORMALIZING ROLLING

Pos. Item	Sulatus k. erä nro Cast. test No	Iskukoe Impact test	FA %										LE (mm)						Erikoiskokeet Special tests				Huom Nb	Päästö Tempering °C				
			K3	°C	1	2	3	Keskiarvo Average	W (mm)	1	2	3	Keskiarvo Average	1	2	3	Keskiarvo Average	K4	°C	1	2	Keskiarvo Average						
010	45914	022	115	-020	137	142	116	132																				
020	45914	022	115	-020	137	142	116	132																				
030	45909	061	111	-020	203	212	181	199																				

FA = Sitkeämurtuman osuus Shear fracture appearance

LE = Poikittainen laajenema Lateral Expansion

K3: 115=CH-V/ISO-V(J),7.5X10, TOP, LONGIT, KV600 111=CH-V/ISO-V(J), 10X10, TOP, LONGIT, KV600

Raah Steel Works

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We hereby certify that the material described above has been tested and complies with the terms of the order confirmation.

Testaus ja tarkastus Testing and Inspection

MINNA VALKAMA

Valtuutettu tarkastaja Authorized inspection representative

Yhtiön nimi Company Name: SSAB Europe Oy
Kotipaikka Registered Office: HÄMEENLINNA

Osioite Address: PL 93, P.O Box 93
FIN-92101 RAAHE, FINLAND

Puhelin Telephone: 020 5911
+358 20 5911

Y-tunnus Business ID: 2389445-7

Sulatus nro Cast No Schmelzen Nr. No de coulén № Плавки	Koe nro Test No Prüf Nr. Essai No № Пробы	Positio Item Pos. Poste Поз.	Cekv Ceq Caq Cég Cekv	Analyysi % Chemical composition % Chemisch Zusammensetzung % Composition Chimique % Анализ плавки % (*=ppm)																Päivämäärä Date Datum Date Дата			
				C	SI	MN	P	S	AL	NB	V	TI	CU	CR	NI	MO	N	B	16.12.2019				TPE
45914		010	.41	.156	.43	1.42	.010	.004	.034	.017	.010	.005	.012	0.05	0.04	.004	.004	.0004					
45914		020	.41	.156	.43	1.42	.010	.004	.034	.017	.010	.005	.012	0.05	0.04	.004	.004	.0004					
45909		030	.41	.157	.46	1.42	.011	.002	.038	.041	.010	.006	.012	0.04	0.04	.004	.003	.0003					

CEQ=C+Mn/6+(Cr+M0+V)/5+(Ni+Cu)/15

Raahe Steel Works

Testaus ja tarkastus Testing and Inspection Испытание и контроль качества
Prüfung und Kontrolle Essais et Contrôle

Steel manufactured and supplied by Raahe Steel Works is free from radiation.
Производимая на металлургическом комбинате «Raahe Steel Works» и поставляемая
заказчику сталь не излучают радиации.

MINNA VALKAMA

Valtuutettu tarkastaja Authorized inspection representative Уполномоченный инспектор
Sachverständiger Inspecteur autorisé

Yhtiön nimi Company Name: SSAB Europe Oy Osoite Address: PL 93, P.O Box 93
Kotipaikka Registered Office: HÄMEENLINNA FIN-92101 RAAHE, FINLAND

Puhelin Telephone: 020 5911
+358 20 5911

Y-tunnus Business ID: 2389445-7

Declaration of performance
(according to EU No 305/2011 and 574/2014)

DoP id. P010_02

Hot rolled Plate product S355J2 / 1.0577
according to
EN 10025-2:2019
for bolted, welded and riveted structures.

SSAB
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TÜV NORD Systems GmbH & Co. KG
Grosse Bahnstrasse 31
D-22525 Hamburg
Germany
T: +49 40 8557 2368

Assessment system and verification for constancy
of performance
System 2+

The performance of the product identified in this document is
in conformity with the set of declared performance. This declaration of performance
is issued in accordance with Regulations (EU) No 305/2011 and 574/2014,
under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:



Jarkko Matkala
Vice President, hot rolled plate and strip products,
SSAB Europe Oy, Raahе Steelworks
Raahе 2015-06-09



05

0045-CPR-0573

EN 10025-1:2004

Dop id: P010_02 EN 10025-2:2019		Performance		Harmonized technical specification
S355J2	Thickness	Tolerances on the nominal thickness (acc. EN 10029 Class A unless otherwise stated)		EN 10025-1:2004
Tolerances on dimensions and shapes.	Nominal thickness (mm)	Lower	Upper	
		$3 \leq t < 5$	-0,3	
	$5 \leq t < 8$	-0,4	+0,8	
	$8 \leq t < 15$	-0,5	+0,9	
	$15 \leq t < 25$	-0,6	+1,0	
	$25 \leq t < 40$	-0,7	+1,3	
	$40 \leq t < 80$	-0,9	+1,7	
	$80 \leq t < 150$	-1,1	+2,1	
$150 \leq t < 250$	-1,2	+2,4		
Width	Nominal thickness	Tolerances		
		Lower	Upper	
	$t < 40$	0	+20	
	$40 \leq t < 150$	0	+25	
	$150 \leq t < 400$	0	+30	
Tolerances on width for plates with untrimmed edges (NK) shall be the subject of agreement between the manufacturer and purchaser at the time of enquiry and order				
Length	Nominal length	Tolerances		
	l	Lower	Upper	
	$l < 4000$	0	+20	
	$4000 \leq l < 6000$	0	+30	
	$6000 \leq l < 8000$	0	+40	
	$8000 \leq l < 10\ 000$	0	+50	
	$10\ 000 \leq l < 15\ 000$	0	+75	
$15\ 000 \leq l < 20\ 000$	0	+100		
Tolerances on plates with nominal length $l > 20\ 000$ mm shall be agreed at the time of enquiry and order.				
Flatness	Nominal thickness t	Measuring length		
	t	1000	2000	
	$3 \leq t < 5$	9	14	
	$5 \leq t < 8$	8	12	
	$8 \leq t < 15$	7	11	
	$15 \leq t < 25$	7	10	
	$25 \leq t < 40$	6	9	
	$40 \leq t < 250$	5	8	

Yield strength	thickness mm	min (Mpa)	
	≤ 16	355	
	$> 16 \leq 40$	345	
	$> 40 \leq 63$	335	
	$> 63 \leq 80$	325	
	$> 80 \leq 100$	315	
	$> 100 \leq 150$	295	
	$> 150 \leq 200$	285	
$> 200 \leq 250$	275		
Tensile strength	thickness mm	min (Mpa)	max (Mpa)
	< 3	510	680
	$\geq 3 \leq 100$	470	630
	$> 100 \leq 150$	450	600
	$> 150 \leq 250$	450	600
Elongation	thickness mm	min %	
	$\geq 3 \leq 40$	20	
	$> 40 \leq 63$	19	
	$> 63 \leq 100$	18	
	$> 100 \leq 150$	18	
	$> 150 \leq 250$	17	
Impact strength	thickness mm	temperature, °C	min. energy, J
	≤ 150	-20	27
	$> 150 \leq 250$	-20	27
Weldability CEV	thickness mm	CEV max %	
	≤ 30	0,45	
	$> 30 \leq 40$	0,47	
	$> 40 \leq 150$	0,47	
	$> 150 \leq 250$	0,49	
Durability (chemical composition)	element	Value	
		≤ 30	> 30
	C, max	0,20	0,22
	Si, max	0,55	
	Mn, max	1,60	
	P, max	0.025	
	S, max	0.025	
	N, max		
	Cu, max	0.55	
	Ni, max	0,42	
	Cr, max	0,29	
	Mo, max	0,11	