

Tilaja Purchaser BE GROUP OY AB PL 54 15101 LAHTI FINLAND	Tilaus nro Order No. P103951	Tilausvahvistus Order Confirmation 16142	Vastaanottaja Consignee BE GROUP OY AB METSÄKIVENTIE 4 62100 LAPUA FINLAND	Asiakkaan merkki Shipping mark P103951	Päivämäärä Date 01.03.2023	Valmistajan merkki Mark of the Manufacturer
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Todistus Certificate 31	Laatumerkintä Quality Marking S420ML	Tarkastajan leima Stamp of Inspector <i>Mxx</i>
Toimitustyyppi Delivery type PART DELIVERY	Sulatus nro levy nro Cast No. Plate No. XXXXX XXX XX XXX	Vastaanottajan leima Stamp of Surveyor
Tuote Product HEAVY PLATES Laji Grade S420ML EN 10025-4:2019 Laatuseelvitys Quality Specifications WELDABLE FINE GRAIN STRUCTURAL STEEL	Toleranssit Tolerances EN 10029:2010 CLASS A	Muut leimaukset Other Stamps

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	Turvamerkki Safetymark
<b>HOT ROLLED STEEL PLATES</b>									
<b>FLATNESS MAX 6MM/M. .SURFACE CONDITION EN 10 163-2:2005 CLASS B3</b>									
001	12.00 X 2000	X 6000 2101466100	3	3456	29313	042	042		
001	12.00 X 2000	X 6000	2	2304	29313	043	043		
<b>FLATNESS MAX 6MM/M. .SURFACE CONDITION EN 10 163-2:2005 CLASS B3</b>									
003	20.00 X 2000	X 6000 2101466500	4	7680	21886	041	041		
003	20.00 X 2000	X 6000	4	7680	21886	341	341		
			***	13	21120				

### Raahe 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: HAMEENLINNA

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

Puhelin Telephone: 020 5911  
+358 20 5911

Y-tunnus Business ID: 2389445-7

Tilaja Purchaser  
BE GROUP OY AB  
PL 54  
15101 LAHTI FINLAND  
Tilaus nro Order No.  
P103951

Tilausvahvistus Order Confirmation  
16142

Vastaanottaja Consignee  
BE GROUP OY AB  
METSÄKIVENTIE 4  
62100 LAPUA FINLAND  
Asiakkaan merkki Shipping mark  
P103951

Päivämäärä Date  
01.03.2023  
AMT

Valmistajan merkki  
Mark of the Manufacturer



Laji Grade  
S420ML

Lisävaatimukset Additional requirements

Jatkuvavalettua happiterästä  
Oxygen steel, continuous casting

Fully killed, Fine grain practiced

Laatuseelvitys Quality Specifications

**WELDABLE FINE GRAIN STRUCTURAL STEEL**

Pos. Item	Sulatus, k. erä nro Cast. test No	T-tila Cond	Vetokoe Tensile test													Taivutuskoe Bend test		Huom Nb	Päästö Tempering °C										
				K2	°C	RP02 MPa	RT05 MPa	REL MPa	REH MPa	1	RM MPa 2	3	A %			RE / RM	RM * A5			RAZ %			Keskiarvo Average	K5	D = X t				
001	29313 042	TM	11		503						598																		
001	29313 043	TM	11		509						605																		
003	21886 041	TM	11		443						580																		
003	21886 341	TM	11		483						590																		

K2: 11=TOP,TRANSV.

TM=THERMOMECH. TREATED

Pos. Item	Sulatus k. erä nro Cast. test No	Iskukoe Impact test	FA %							LE (mm)		*Specimen Unbroken		Erikoiskokeet Special tests				Huom Nb	Päästö Tempering °C											
			K3	°C	1	2	3	Keskiarvo Average	W (mm)	1	2	3	Keskiarvo Average	K4	°C	1	2			Keskiarvo Average										
001	29313 042	115	-050	252	246	219	239																							
001	29313 043	115	-050	170	235	203	203																							
003	21886 041	111	-050	257	71	261	196																							
003	21886 341	111	-050	275	281	302	286																							

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

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Kotipaikka Registered Office: HAMEENLINNA

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Puhelin Telephone: 020 5911  
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Y-tunnus Business ID: 2389445-7

Sulatus nro Cast No Schmelzen Nr. No de coulén	Koe nro Test No Prüf Nr. Essai No	Positio Item Pos. Poste	Cekv Ceq Câq Cég Cekv	Analyysi % Chemical composition % Chemisch Zusammensetzung % Composition Chimique % (*-ppm)																Päivämäärä Date Datum Date		
				C	SI	MN	P	S	AL	NB	V	TI	CU	CR	NI	MO	N	B	01.03.2023	AMT		
29313		001	.21	.056	.30	0.85	.009	.003	.043	.040	.007	.002	.012	0.04	0.04	.002	.004	.0005				
21886		003	.22	.060	.31	0.86	.010	.002	.039	.042	.009	.003	.012	0.05	0.04	.005	.004	.0006				

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

### Raahe Steel Works

Testaus ja tarkastus  
Prüfung und Kontrolle

Testing and Inspection  
Essais et Contrôle

SSAB Europe Oy, Raahe Steel Works testing laboratories T002 and T010 are accredited by the FINAS accreditation service, accreditation requirement SFS-EN ISO/IEC 17025.

Steel manufactured and supplied by Raahe Steel Works is free from radiation.



### MINNA VALKAMA

Valtuutettu tarkastaja  
Sachverständiger

Authorized inspection representative  
Inspector autorisé

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

DoP id. P025\_02

Hot rolled Plate product S420ML / 1.8836  
according to  
EN 10025-4:2019  
for bolted, welded and riveted structures.

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101 20 Stockholm  
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Website: ssab.com

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, Raahe Steelworks  
Raahe 2015-06-09



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0045-CPR-0573

EN 10025-1:2004

Dop id: P025_02 EN 10025-4:2019		Performance		Harmonized technical specification
S420ML	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	+0,7	
	$5 \leq t < 8$	-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	
	$150 \leq t \leq 400$	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	
	$15\ 000 \leq l \leq 20\ 000$	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)	max (Mpa)
	$\leq 16$	420	
	$> 16 \leq 40$	400	
	$> 40 \leq 63$	390	
	$> 63 \leq 80$	380	
	$> 80 \leq 100$	370	
	$> 100 \leq 120$	365	
Tensile strength	thickness mm	min (Mpa)	max (Mpa)
	$\leq 40$	520	680
	$> 40 \leq 63$	500	660
	$> 63 \leq 80$	480	640
	$> 80 \leq 100$	470	630
	$> 100 \leq 120$	460	620
Elongation	thickness mm	min %	
		19	
Impact strength	thickness mm	temperature, °C	min. energy, J
		-50	27
Weldability CEV	thickness mm	CEV max %	
	$\leq 16$	0.43	
	$> 16 \leq 40$	0.45	
	$> 40 \leq 63$	0.46	
	$> 63 \leq 120$	0.47	
	$> 120 \leq 150$	0.47	
Durability (chemical composition)	element	Value	
	C, max	0.16	
	Si, max	0.50	
	Mn, max	1.70	
	P, max	0.025	
	S, max	0.020	
	Nb, max	0.05	
	V, max	0.12	
	Al, min	0.02	
	Ti, max	0.05	
	Cr, max	0.30	
	Ni, max	0.80	
	Mo, max	0.20	
	Cu, max	0.55	
N, max	0.025		

**Declaration of performance**  
(according to UK CPR 2020 No 1359)

DoP id. P025\_02

Hot rolled Plate product S420ML / 1.8836  
according to  
EN 10025-4:2019  
for bolted, welded and riveted structures.

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1 Trinity Park, Bickenhill Lane  
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B37 7ESA

Assessment system and verification for constancy  
of performance  
**System 2+**

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in conformity with the set of declared performance. This declaration of performance  
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Signed for and on behalf of the manufacturer by:



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



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0038/CPR/PRJ11100341405/ 01

EN 10025-1:2004

Dop id: P025_02 EN 10025-4:2019		Performance		Harmonized technical specification
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	$10\ 000 \leq l < 15\ 000$	0	+75	
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