

Tilaja Purchaser KONTINO OY AB PL 27 01301 VANTAA FINLAND	Tilausvahvistus Order Confirmation 21023	Vastaanottaja Consignee OY KONTINO AB HAKINTIE 6 01380 VANTAA FINLAND	Asiakkaan merkki Shipping mark 1114531	Päivämäärä Date 07.12.2020	
				Valmistajan merkki Mark of the Manufacturer	

Todistus Certificate 31	Laivaus Shipping	Laatumerkintä Quality Marking S355ML	Tarkastajan leima Stamp of Inspector <i>Mxx</i>
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Toimitustyyppi Delivery type PART DELIVERY	Sulatus nro levy nro Cast No. Plate No. XXXXX XXX XX XXX	Muut leimaukset Other Stamps
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Tuote Product HEAVY PLATES	Toleranssit Tolerances SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A	Tekniset vaatimukset ja/tai viralliset määräykset Technical terms of Delivery and/or Official Regulations
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Laji Grade  
S355ML EN 10025-4:2019  
Laatuseelvitys Quality Specifications  
WELDABLE FINE GRAIN STRUCTURAL STEEL

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**

CEV MAX 0.38%, IMPACT TEST AT -50 C MIN 40J, SI MAX 0.03%  
SURFACE CONDITION EN 10 163-2:2005 CLASS A3

010	25.00 X 1500	X 3000 XR355258 1114531	8	7200	62281 022	022		
010	25.00 X 1500	X 3000	8	7200	62281 023	022		
010	25.00 X 1500	X 3000	8	7200	62281 031	031		
010	25.00 X 1500	X 3000	7	6300	62281 032	031		

CEV MAX 0.38%, IMPACT TEST AT -50 C MIN 40J, SI MAX 0.03%  
SURFACE CONDITION EN 10 163-2:2005 CLASS A3

020	30.00 X 1500	X 3000 XR355308 1114531	8	8640	62281 013	011		
020	30.00 X 1500	X 3000	8	8640	62281 012	012		

\*\*\* 47 45180

**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**

Valtuutettu tarkastaja Authorized inspection representative

Tilaja Purchaser  
KONTINO OY AB  
PL 27  
01301 VANTAA FINLAND  
Tilaus nro Order No.  
1114531

Tilausvahvistus Order Confirmation  
21023

Vastaanottaja Consignee  
OY KONTINO AB  
HAKINTIE 6  
01380 VANTAA FINLAND  
Asiakkaan merkki Shipping mark  
1114531

Päivämäärä Date  
07.12.2020

AMH

Valmistajan merkki  
Mark of the Manufacturer



Laji Grade  
S355ML

Lisävaatimukset Additional requirements

Jatkuvavalettua happiterästä  
Oxygen steel, continuous casting

Fully killed, Fine grain practiced

Laatuselvitys 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	50	A % 80	200	RE / RM	RM * A5	1			RAZ % 2	3	Keskiarvo Average	K5	D = X t					
010	62281 022	TM	51								485	541			27												51	1.0	
010	62281 031	TM	51								462	524			28												51	1.0	
020	62281 011	TM	51								485	545			27												51	1.0	
020	62281 012	TM	51								475	531			26												51	1.0	

K2: 51=BOTTOM, TRANSV.  
K5: 51=BENDING TEST

TM=THERMOMECH. TREATED

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	62281 022	151	-050	250	43	199	164																							
010	62281 031	151	-050	238	235	176	216																							
020	62281 011	151	-050	233	246	236	238																							
020	62281 012	151	-050	224	229	255	236																							

FA = Sitkeämurtuman osuus Shear fracture appearance

LE = Poikittainen laajenema Lateral Expansion

K3: 151=CH-V/ISO-V(J),10X10,BOTTOM, LONGIT, KV600

## 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

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	07.12.2020			
62281		010	.37	.095	.02	1.51	.011	.002	.037	.047	.050	.001	.013	0.04	0.04	.003	.005	.0003	AMH			
62281		020	.37	.095	.02	1.51	.011	.002	.037	.047	.050	.001	.013	0.04	0.04	.003	.005	.0003				

CEQ=C+Mn/6+(Cr+Mo+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. P023\_02

Hot rolled Plate product S355ML / 1.8834  
according to  
EN 10025-4:2019  
for bolted, welded and riveted structures.

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101 20 Stockholm  
SWEDEN  
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Email: info@ssab.com  
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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



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0045-CPR-0573

EN 10025-1:2004

Dop id: P023_02 EN 10025-4:2019		Performance		Harmonized technical specification
S355ML	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)
	$\leq 16$	355	
	$> 16 \leq 40$	345	
	$> 40 \leq 63$	335	
	$> 63 \leq 80$	325	
	$> 80 \leq 100$	325	
	$> 100 \leq 120$	320	
Tensile strength	thickness mm	min (Mpa)	max (Mpa)
	$\leq 40$	470	630
	$> 40 \leq 63$	450	610
	$> 63 \leq 80$	440	600
	$> 80 \leq 100$	440	600
	$> 100 \leq 120$	430	590
Elongation	thickness mm	min %	
		22	
Impact strength	thickness mm	temperature, °C	min. energy, J
		-50	27
Weldability CEV	thickness mm	CEV max %	
	$\leq 16$	0.39	
	$> 16 \leq 40$	0.39	
	$> 40 \leq 63$	0.40	
	$> 63 \leq 120$	0.45	
	$> 120 \leq 150$	0.45	
Durability (chemical composition)	element	Value	
	C, max	0.14	
	Si, max	0.50	
	Mn, max	1.60	
	P, max	0.025	
	S, max	0.020	
	Nb, max	0.05	
	V, max	0.10	
	Al, min	0.02	
	Ti, max	0.05	
	Cr, max	0.30	
	Ni, max	0.50	
	Mo, max	0.10	
	Cu, max	0.55	
N, max	0.015		