

Päivämäärä Date

21.01.2020

Valmistajan merkki

Mark of the Manufacturer



Vastaanottaja Consignee

OY KONTINO AB

HAKINTIE 6

01380 VANTAA FINLAND

Asiakkaan merkki Shipping mark

1113504

Tilauksen vahvistus Order Confirmation

16241

Laivaus Shipping

Laatumerkintä Quality Marking

S355ML

Toimitustyyppi Delivery type

PART DELIVERY

Sulatus nro levy nro Cast No. Plate No.

X.X.X.X X.X.X X.X.X.X

Toleranssit Tolerances

SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A

Tarkastajan leima

Stamp of Inspector

Vastaanottajan leima

Stamp of Surveyor

Muut leimaukset

Other Stamps

Technical terms of Delivery and/or Official Regulations

Mxx

Tekniset vaatimukset ja/tai viralliset määräykset

Technical terms of Delivery and/or Official Regulations

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Technical terms of Delivery and/or Official Regulations

Positio

Item

Mitat mm

Dimensions mm

Merkki

Mark

Kpl

Pcs

Paino kg

Weight kg

Sulatus levy nro

Cast plate No

SP nro

SP No

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CEV MAX 0.38%, IMPACT TEST AT -50 C MIN 40J, SI MAX 0.03%.

SURFACE CONDITION EN 10 163-2:2005 CLASS A3

080 25.00 X 1500 X 3000 XR355258

080 25.00 X 1500 X 3000

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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.

Raabe Steel Works

Testaus ja tarkastus Testing and Inspection

*M. Vakkari*

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

FIN-92101 RAAHE, FINLAND

Puhelin Telephone: 020 5911

+358 20 5911

Y-tunnus Business ID: 2389445-7

EN 10 204-3.1 (2004)

Tilaja Purchaser KONTINO OY AB PL 27 01301 VANTAA FINLAND	Vastaanottaja Consignee OY KONTINO AB HAKINTIE 6 01380 VANTAA FINLAND	Päivämäärä Date 21.01.2020	TPE
Tilaus nro Order No. 1113504	Tilauksen vahvistus Order Confirmation 16241	Vaimistajan merkki Mark of the Manufacturer	

Jakuvuvallettua happoterästä  
Oxygen steel, continuous casting  
Fully killed, Fine grain practiced

### Laatuseilytykset Quality Specifications WELDABLE FINE GRAIN STRUCTURAL STEEL

Pos. Item	Sulatus, k era nro Cast. test No	T-tila Cond	Vetokoe Tensile test				REH MPa	REL MPa	RT05 MPa	RP02 MPa	°C	RM MPa			A %	RAZ %	Keskiarvo Average	K5	Taitutuskoe Bend test	Huom Nb	Päästö Tempering °C
			K2	1	2	3						1	2	3							
080	47768	022	TM	51	488	538	26	26	26	26	26	51	1.0	51	1.0	51	1.0	51	1.0	51	1.0
080	47768	031	TM	51	484	539	29	29	29	29	29	51	1.0	51	1.0	51	1.0	51	1.0	51	1.0
080	47768	032	TM	51	481	544	27	27	27	27	27	51	1.0	51	1.0	51	1.0	51	1.0	51	1.0
080	47768	051	TM	51	482	548	26	26	26	26	26	51	1.0	51	1.0	51	1.0	51	1.0	51	1.0

TM=THERMOMECH. TREATED

Pos. Item	Sulatus, k era nro Cast. test No	K3	°C	Iskukoe Impact test			W (mm)	FA %	LE (mm)			K4	°C	Erikoiskokeet Special tests		Huom Nb	Päästö Tempering °C		
				K1	1	2			3	1	2			3	1			2	
080	47768	022	151	-050	267	282	253	267	1	2	3	1	2	1	2	1	2	1	2
080	47768	031	151	-050	267	280	223	257	1	2	3	1	2	1	2	1	2	1	2
080	47768	032	151	-050	211	232	218	220	1	2	3	1	2	1	2	1	2	1	2
080	47768	051	151	-050	270	265	269	268	1	2	3	1	2	1	2	1	2	1	2

K3: 151=CH-VISO-(V)10X10;BOTTOM;LONGIT;KV600

LE = Polkittainen laajenema Lateral Expansion

FA = Sitkeämurtuman osuus Shear fracture appearance

### Raahe Steel Works

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

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.

Osote Address: PL 93, P.O.Box 93  
FIN-92101 RAAHE, FINLAND  
Puhelin Telephone: 020 5911  
+358 20 5911

Y-tunnus Business ID: 2389445-7



ANALYYSITODISTUS ANALYSIS CERTIFICATE  
 ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT  
 СЕРТИФИКАТ АНАЛИЗА

3/3  
 A 16241 -006 A  
 20.01.2020

Sulatus no Cast No	Koe no Test No	Positio Item	Cekv Ceq	Analysi % Chemical composition %	Chemisch Zusammensetzung % Composition Chimique %	Анализа плавки % (*-ppm)												
Schmelzen Nr. No de coulées № Плавки	Prüf Nr. Essai No № Типов	Pos. Poste Поз.	Ceq Ceq Cekv	C	SI	MN	P	S	AL	NB	V	TI	CU	CR	NI	MO	N	B
47768	080	.38	.099	.02	1.53	.009	.004	.046	.046	.048	.001	.014	0.04	0.04	0.04	.005	.004	.0001

Päivämäärä Date Datum Date Дата  
 21.01.2020

TYPE

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

Raabe Steel Works

Testaus ja tarkastus  
 Prüfung und Kontrolle

Испытание и контроль качества

Steel manufactured and supplied by Raabe Steel Works is free from radiation.  
 Произведённая на металлургическом комбинате «Раабе Стeel Works» и поставленная заказчику сталь не содержит радиации.

Minna Valkama

MINNA VALKAMA

Ullommočenный инспектор

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

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

Puhelin Telephone: 020 5911  
 +359 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.

SSAB  
P.O Box 70  
101 20 Stockholm  
SWEDEN  
T: +46 8 45 45 700  
Email: info@ssab.com  
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 Mäkelä  
Vice President, hot rolled plate and strip products,  
SSAB Europe Oy, Raahе Steelworks  
Raahе 2015-06-09


# CE

05

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	
Thickness	3 ≤ t < 5	-0,3 +0,7	
	5 ≤ t < 8	+0,8	
	8 ≤ t < 15	+0,9	
	15 ≤ t < 25	+1,0	
	25 ≤ t < 40	+1,3	
	40 ≤ t < 80	+1,7	
	80 ≤ t < 150	+2,1	
	150 ≤ t < 250	+2,4	
Width	Nominal thickness	Tolerances	
	t < 40	Lower Upper	
	40 ≤ t < 150	0 +20	
	150 ≤ t ≤ 400	0 +25	
	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 ≤ l < 6000	0 +30	
	6000 ≤ l < 8000	0 +40	
	8000 ≤ l < 10 000	0 +50	
	10 000 ≤ l < 15 000	0 +75	
	15 000 ≤ 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 ≤ t < 5	9 14	
	5 ≤ t < 8	8 12	
	8 ≤ t < 15	7 11	
	15 ≤ t < 25	7 10	
	25 ≤ t < 40	6 9	
	40 ≤ t < 250	5 8	

Yield strength	thickness mm	min (Mpa)	max (Mpa)
	≤ 16	355	
	> 16 ≤ 40	345	
	> 40 ≤ 63	335	
	> 63 ≤ 80	325	
	> 80 ≤ 100	325	
	> 100 ≤ 120	320	
Tensile strength	thickness mm	min (Mpa)	max (Mpa)
	≤ 40	470	630
	> 40 ≤ 63	450	610
	> 63 ≤ 80	440	600
	> 80 ≤ 100	440	600
	> 100 ≤ 120	430	590
Elongation	thickness mm	min %	max %
		22	
Impact strength	thickness mm	temperature, °C	min. energy, J
		-50	27
Weldability CEV	thickness mm	CEV max %	
	≤ 16	0.39	
	> 16 ≤ 40	0.39	
	> 40 ≤ 63	0.40	
	> 63 ≤ 120	0.45	
	> 120 ≤ 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	

Tilaaja Purchaser KONTINO OY AB PL 27 01301 VANTAA FINLAND	Vastaanottaja Consignee OY KONTINO AB HAKINTIE 6 01380 VANTAA FINLAND	Päivämäärä Date 21.01.2020
Tilauksen nro Order No. 1113504	Tilauksen vahvistus Order Confirmation 16241	Vaimistajan merkki Mark of the Manufacturer
Todistus Certificate 31	Laivaus Shipping	
Toimitustyyppi Delivery type PART DELIVERY	Laalumerkintä Quality Marking LSR 355 ML PLUS	Tarkastajan leima Stamp of Inspector Vastaanottajan leima Stamp of Surveyor Muut leimaukset Other Stamp(s)

Sulatus nro levy nro Cast No. Plate No.  
X X X X X X X X X X X X X X X X X X

Toleranssit Tolerances  
SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A

Tuote Product  
HEAVY PLATES

Leiji Grade  
SSAB LASER 355ML PLUS

Laatuvaatimukset Quality Specifications  
HIGH STRENGTH FORMABLE STEEL FOR LASER AND PLASMA CUTTING

Positio Item	Mitat mm Dimensions mm	Merkki Mark	Kpl Pes	Paino kg Weight kg	Sulatus levy nro Cast Plate No	SP nro SP No	UT UT	MT MT
<b>HOT ROLLED STEEL PLATES</b>								
<b>IN BUNDLES</b>								
CEV MAX 0.38%, IMPACT TEST AT -50 C MIN 40J, SI MAX 0.03%, CORRESPONDS TO EN 10025-4 S355ML SURFACE CONDITION EN 10 163-2:2005 CLASS A3								
080	25.00 X 1500	X	3000	8100	47768	042	022	
080	25.00 X 1500	X	3000	10800	47768	031	031	
080	25.00 X 1500	X	3000	10800	47768	032	032	
080	25.00 X 1500	X	3000	10800	47768	051	051	
080	25.00 X 1500	X	3000	9000	47768	052	051	

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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.

Tarkastus ja tarkastus Testing and Inspection

*Minna Valikama*

**MINNA VALIKAMA**  
Valtuutettu tarkastaja Authorized inspection representative  
Yhtiön nimi Company Name: SSAB Europe Oy  
Kotipaikka Registered Office: HAMEENLINNA

Puhelin Telephone: 020 5911 +358 20 5911  
Puhelin Telephone: PL 93, P.O. Box 93  
FIN-92101 RAAHE, FINLAND

EN 10 204-3.1 (2004)

Tilaja Purchaser  
KONTINO OY AB  
PL 27  
01301 VANTAA FINLAND  
Tilaus nro Order No.  
1113504

Vastaanottaja Consignee  
OY KONTINO AB  
HAKINTIE 6  
01380 VANTAA FINLAND  
Asiakkaan merkki Shipping mark  
1113504

Päivämäärä Date  
21.01.2020  
TPE  
Valmistajan merkki  
Mark of the Manufacturer



Laji Grade  
SSAB LASER 355ML PLUS

Lisävaatimukset Additional requirements

Jakuvavailettua happilerästä  
Oxygen steel, continuous casting  
Fully killed, Fine grain practiced

Laatuseivitys Quality Specifications  
HIGH STRENGTH FORMABLE STEEL FOR LASER AND PLASMA CUTTING

Pos. Item	Sulatus, k era nro Cast. test No	T-tila Cond	Veikokoe Tensile test				REH MPa	REL MPa	RT05 MPa	RP02 MPa	°C	RM MPa	1	2	3	A %	50	80	200	REH / RM	RM * A5	1	2	3	RAZ %	Keskiarvo Average	Keskianvo Average	K5	D = X t	Huom Nb	Päästö Tempering °C
			K2	K3	K4	K5																									
080	47768	022	TM	51		488	538				26														51	1.0					
080	47768	031	TM	51		484	539				29															51	1.0				
080	47768	032	TM	51		481	544				27															51	1.0				
080	47768	051	TM	51		482	548				26															51	1.0				

TM=THERMOMECH. TREATED

Pos. Item	Sulatus, k era nro Cast. test No	K3	°C	Iskukoe Impact test			W (mm)	FA %	LE (mm)			Keskianvo Average	K4	°C	1	2	3	Keskianvo Average	Keskianvo Average	2	Huom Nb	Päästö Tempering °C	
				K1	K2	K3			1	2	3												
080	47768	022	151	-050	267	282	253	267															
			151	-020	277	279	274	277															
080	47768	031	151	-050	267	280	223	257															
			151	-020	268	271	270	270															
080	47768	032	151	-050	211	232	218	220															
			151	-020	267	280	257	268															
080	47768	051	151	-050	270	265	269	268															
			151	-020	278	285	279	281															

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

Erikoiskokeet Special tests  
K4 °C 1 2  
Keskianvo Average  
LE = Poikittainen laajenema Lateral Expansion

Raah Steel Works

Testaus ja tarkastus Testing and inspection

*Minna Valkama*

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Y-tunnus Business ID: 2389445-7

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ANALYYSITODISTUS ANALYSIS CERTIFICATE  
 ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT  
 СЕРТИФИКАТ АНАЛИЗА

3/3  
 A 16241 -006  
 20.01.2020

Sulatus nro Cast No Schmelzen Nr. No de coulén № Плавки	Koe nro Test No Prüf Nr. Essai No № Пробки	Posito Item Pos. Poste Поз.	Cekv Ceq Cqg Cég Cekv	Analysi % Chemical composition % Chimisch Zusammensetzung % Composition Chimique % Анализа плавки % (*-ppm)	C	SI	MN	P	S	AL	NB	V	TI	CU	CR	NI	MO	N	B	
47768	080	.38	.099	.02	1.53	.009	.004	.046	.046	.046	.048	.001	.014	0.04	0.04	0.005	.004	.0001		

Päivämäärä Date Datum Date Дата  
 21.01.2020

TPE

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

Raabe Steel Works

Testaus ja tarkastus  
Prüfung und Kontrolle  
Essais et Contrôle

Steel manufactured and supplied by Raabe Steel Works is free from radiation.  
 Прокат произведен на металлургическом комбинате «Раабе Стeel Works» и поставленная заказчику сталь не содержит радиации.

*Minna Valkama*

MINNA VALKAMA  
 Valtuutettu tarkastaja  
 Sachverständiger  
 Authorized inspection representative  
 Уполномоченный инспектор  
 Inspector autorisé

Yhtiön nimi Company Name: SSAB Europe Oy  
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