

Tilaaaja Purchaser: KONTINO OY AB
 PL 27
 01301 VANTAA FINLAND
 Tilaus nro Order No: 1113092

Tilauksen vahvistus Order Confirmation: 14272

Vastaanottaja Consignee: OY KONTINO AB
 HAKINTIE 6
 01380 VANTAA FINLAND
 Asiakkaan merkki Shipping mark: 1113092

Päivämäärä Date: 10.09.2019

Valmistajan merkki Mark of the Manufacturer: 

Todistus Certificate: 31

Laivaus Shipping: Laitumerkintä Quality Marking: LSR 355 ML PLUS

Toimitustyyppi Delivery type: PART DELIVERY

Tuote Product: HEAVY PLATES

Laji Grade: SSAB LASER 355ML PLUS

Laatuselitys Quality Specifications: HIGH STRENGTH FORMABLE STEEL FOR LASER AND PLASMA CUTTING

Tarkastajan leima Stamp of Inspector: *Mxx*

Vastaanottajan leima Stamp of Surveyor: *Mxx*

Muut leimaukset Other Stamps: *Mxx*

Tekniset vaatimukset/jäljäl viralliset määräykset Technical terms of Delivery and/or Official Regulations: SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A

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 UT	MT 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%, CORRESPONDS TO EN 10025-4 S355ML								
SURFACE CONDITION EN 10 163-2:2005 CLASS A3								
020	25.00 X 1500 X 3000	XR355258	10	9000	42336	021	021	021
020	25.00 X 1500 X 3000		10	9000	42336	023	023	023
020	25.00 X 1500 X 3000		10	9000	42336	031	023	023
020	25.00 X 1500 X 3000		10	9000	42336	033	033	033
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								
030	30.00 X 1500 X 3000	XR355308	1	1080	39594	313	313	313
030	30.00 X 1500 X 3000		4	4320	41457	053	054	054
030	30.00 X 1500 X 3000		4	4320	41457	054	054	054

*** 49 45720

Raabe Steel Works Testing and Inspection

Täiden 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.

M. V. Valkama

MINNA VALKAMA
 Valtuutettu tarkastaja Authorized inspection representative

Yhtiön nimi Company Name: SSAB Europe Oy
 Yhtiön osoite Address: PL 93, P.O. Box 93, FIN-00009 RAABE, FINLAND
 Puhelin Telephone: 020 5911 3260 ext. 2044
 Y-tunnus Business ID: 2389445-7

Tilaaja Purchaser
KONTINO OY AB
PL 27
01301 VANTAA FINLAND
Tilaus nro. Order No.
1113092

Vastaanottaja Consignee
OY KONTINO AB
HAKINTIE 6
01380 VANTAA FINLAND
Asiakkaan merkki Shipping mark
1113092

Päivämäärä Date
10.09.2019
AMH



Valmistajan merkki
Mark of the Manufacturer

Lisävaatimukset Additional requirements

Jakkuvalettua happiterästä
Oxygen steel, continuous casting
Fully killed, Fine grain practiced

Laji Grade
SSAB LASER 355ML PLUS
Laatuselitys Quality Specifications

HIGH STRENGTH FORMABLE STEEL FOR LASER AND PLASMA CUTTING

Pos. Item	Sulatus, k. erä nro Cast, test No	T-tila Cond	Vetoakoe Tensile test			REH MPa	REL MPa	RT05 MPa	RM MPa	A %			REH / RM	RAZ %			Taitvutuskoe Bend test		Huom Nb	Päästö Tempering °C
			K2	°C	RPO2 MPa					1	2	3		50	80	200	1	2		
020	42336	021	TM	51		457			522	26							51	1.0		
020	42336	023	TM	51		457			520	27							51	1.0		
020	42336	033	TM	51		475			536	27							51	1.0		
030	39594	313	TM	51		488			538	27							51	1.0		
030	41457	054	TM	51		474			534	25							51	1.0		

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

TM=THERMOMECH. TREATED

Pos. Item	Sulatus, k. erä nro Cast, test No	Iskuakoe Impact test	K3	°C	W (mm)	FA %	LE (mm)			Erikoistestit Special tests			Huom Nb	Päästö Tempering °C
							Keskisarvo Average	1	2	K4	°C	1		
020	42336	021	151	-050	240	244	249	244	249	244	249			
			151	-020	260	257	256	258						
020	42336	023	151	-050	224	219	186	210						
			151	-020	260	263	276	266						
020	42336	033	151	-050	217	212	214	214						
			151	-020	241	256	249	249						
030	39594	313	151	-050	228	217	212	219						
			151	-020	238	228	219	228						
030	41457	054	151	-050	216	180	202	199						
			151	-020	245	278	231	251						

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

LE = Poikittainen laajenema Lateral Expansion

FA = Sitkeämurtuman osuus Shear fracture appearance

Raabe Steel Works

Testaus ja tarkastus Testing and Inspection

Minna Valkama

Yhtiön nimi Company Name: SSAB Europe Oy
Valtuutettu tarkastaja Authorized inspection representative

Osoite Address: PL 93, P.O. Box 93
FIN-00000 RAABE FINLAND

Puhelin Telephone: 020 5911
0360 20 2044

Y-tunnus Business ID: 2389445-7

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.

Sulatus nro Cast No Schmelzen Nr. No de coulée № Плавки	Koe nro Test No Pruf Nr. Essai No № Пробки	Positio Item Pos. Poste Поз.	Analyysi % Chemical composition % Chemisch Zusammensetzung % Composition Chimique % Анализ сплава % (* = ppm)														Päivämäärä Date Datum Date Дата 10.09.2019	AMH
			C	SI	MN	P	S	AL	NB	V	TI	CU	CR	NI	MO	N		

42336	020	.37	.094	.02	1.50	.010	.002	.045	.046	.047	.001	.013	0.04	0.04	.003	.004	.0001
39594	030	.37	.101	.02	1.49	.011	.002	.036	.039	.047	.002	.011	0.05	0.03	.003	.004	.0002
41457	030	.36	.093	.02	1.49	.009	.003	.043	.047	.049	.001	.013	0.03	0.04	.004	.004	.0002

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

Raabe Steel Works

Testaus ja tarkastus
Prüfung und Kontrolle
Испытание и контроль качества

Minna Valkama

MINNA VALKAMA
Valtuutettu tarkastaja
Sachverständiger
Yhtiön nimi Company Name: SSAB Europe Oy
Yhteystiedot Contact Data: SUOMEN VALKEA


Authorized inspection representative
Ugólnomocnyy inspektor
Osoite Address: PL 93, P.O. Box 93
FIN-02011 RAABE FIN FIN

Puhelin Telephone: 020 5911
+358 9 250 5911

Y-tunnus Business ID: 2389445-7

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

EN 10 204-3.1 (2004)

Tilaaja Purchaser: KONTINO OY AB
 Vastaanottaja Consignee: OY KONTINO AB
 PL 27 HAKINTIE 6
 01301 VANTAA FINLAND
 Tilauksen vahvistus Order Confirmation: 14272
 Tilauksen nro Order No.: 1113092
 Laivastus Shipping: Laivastus Shipping: 1113092
 Pääväimä Date: 10.09.2019
 Valmistajan merkki Mark of the Manufacturer: 

Tuote Product: HEAVY PLATES
 Laji Grade: S355ML EN 10025-4:2004
 Laatuvaatimukset Quality Specifications: WELDABLE FINE GRAIN STRUCTURAL STEEL
 Toimitustyyppi Delivery type: PART DELIVERY
 Tarkastajan leima Stamp of Inspector: 
 Vastaaottajan leima Stamp of Surveyor: 
 Muut leimatukset Other Stamps: 

Positio Mitat mm Dimensions mm: Merkki Mark:

SP no	UT	MT	SP no	UT	MT
10	021	021	1	313	313
10	023	023	4	054	054
10	031	031	4	054	054
10	033	033			

Tekniset vaatimukset ja/tai viralliset määräykset Technical terms of Delivery and/or Official Regulations: SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A

Toleranssit Tolerances: Sulatus nro levy nro Cast No., Plate No.: X.X.X.X X.X.X X.X.X.X.X

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

Positio	Mitat mm	Dimensions mm	Merkki	Mark	Kpl	Pcs	Paino kg	Weight kg	Sulatus levy nro	Cast Plate No	SP no	UT	MT	SP no	UT	MT
020	25.00	X 1500	X	3000	10	9000	42336	021	021	021	1	313	313	1	313	313
020	25.00	X 1500	X	3000	10	9000	42336	023	023	023	4	054	054	4	054	054
020	25.00	X 1500	X	3000	10	9000	42336	031	031	031	4	054	054	4	054	054
020	25.00	X 1500	X	3000	10	9000	42336	033	033	033						

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

030 30.00 X 1500 X 3000 XR355258
 030 30.00 X 1500 X 3000
 030 30.00 X 1500 X 3000
 030 30.00 X 1500 X 3000

*** 49 45720

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.

Raah Steel Works
 Testaus ja tarkastus Testing and Inspection



MINNA VALKAMA
 Valtuutettu tarkastaja Authorized inspection representative

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

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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 14272 -002 A
09.09.2019

Päivämäärä Date Datum Date Дата
10.09.2019

Analysi % Chemical composition % Zusammensetzung % Composition Chimique % Анализа пробы % (*-ppm)

Sulatus no Cast No	Posiitio Item	Cekiv Ceq	C	SI	MN	P	S	AL	NB	V	TI	CU	CR	NI	MO	N	B
Schmelzen Nr. No de coulé	Prüf Nr. Essai No	№ Пробы № Проб															
42336	020	.37	.094	.02	1.50	.010	.002	.045	.046	.047	.001	.013	0.04	0.04	.003	.004	.0001
39594	030	.37	.101	.02	1.49	.011	.002	.036	.039	.047	.002	.011	0.05	0.03	.003	.004	.0002
41457	030	.36	.093	.02	1.49	.009	.003	.043	.047	.049	.001	.013	0.03	0.04	.004	.004	.0002

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

Raabe Steel Works

Testaus ja tarkastus
Prüfung und Kontrolle
Испытание и контроль качества

M. Vakkari

Valtuutettu tarkastaja
Sachverständiger
Authorized inspection representative
Inspektor autorisé

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

Osoite Address: PL 93, P.O. Box 93
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Puhelin Telephone: 020 5911
+358 20 5911

Y-tunnus Business ID: 2389445-7

Steel manufactured and supplied by Raabe Steel Works is free from radiation.
Производимая на металлургическом комбинате «Raabe Steel Works» и поставляемая заказчику сталь не излучает радиацию.

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

DoP id. P023_01

Hot rolled Plate product S355ML / 1.8834
according to
EN 10025-4:2004
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 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: P023_01		Harmonized technical specification
S355ML Tolerances on dimensions and shapes.	Thickness	Performance Tolerances on the nominal thickness (acc. EN 10029 Class A unless otherwise stated)
	Nominal thickness (mm)	Lower Upper
Thickness	3 ≤ t < 5	-0,3 +0,7
	5 ≤ t < 8	-0,4 +0,8
	8 ≤ t < 15	-0,5 +0,9
	15 ≤ t < 25	-0,6 +1,0
	25 ≤ t < 40	-0,7 +1,3
	40 ≤ t < 80	-0,9 +1,7
Width	80 ≤ t < 150	-1,1 +2,1
	150 ≤ t < 250	-1,2 +2,4
Length	Nominal thickness	Tolerances
	t < 40	Lower Upper
	40 ≤ t < 150	0 +20
Flatness	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.	
	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	
Tensile strength	thickness mm	min (Mpa)	max (Mpa)
	≤ 40	470	630
	> 40 ≤ 63	450	610
	> 63 ≤ 80	440	600
	> 80 ≤ 100	440	600
Elongation	thickness mm	min %	
	> 100 ≤ 120	430	22
Impact strength	thickness mm	temperature, °C	min. energy, J
	> 100 ≤ 120	-50	27
Weldability CEV	thickness mm	CEV max %	
	≤ 16	0.39	
	> 16 ≤ 40	0.39	
	> 40 ≤ 63	0.40	
	> 63 ≤ 120	0.45	
Durability (chemical composition)	thickness mm	min %	max %
	≤ 16	0.39	
	> 16 ≤ 40	0.39	
	> 40 ≤ 63	0.40	
	> 63 ≤ 120	0.45	
	> 120 ≤ 150	0.45	
	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		