

Tilaja Purchaser
FEON OY
TEOLLISUUSKATU 33
00510 HELSINKI FINLAND
Tilaus nro Order No.
45537

Tilausvahvistus Order Confirmation
15468

Vastaanottaja Consignee
FEON OY
TELAKKATIE 4 23500
23500 UUSIKAUPUNKI FINLAND
Asiakkaan merkki Shipping mark

Päivämäärä Date
21.02.2023

Valmistajan merkki
Mark of the Manufacturer



Todistus Certificate
31

Laatumerkintä Quality Marking
S355ML

Tarkastajan leima
Stamp of Inspector

Mxx

Toimitustyyppi Delivery type
REST 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
S355ML EN 10025-4:2019
Laatuselvitys Quality Specifications
WELDABLE FINE GRAIN STRUCTURAL STEEL

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

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
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**HOT ROLLED STEEL PLATES
PACKED, 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	45537	2382374	12	10800	28285	021	021
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010	25.00 X 1500	X	3000			12	10800	28285	022	022
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010	25.00 X 1500	X	3000			12	10800	28285	031	031
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010	25.00 X 1500	X	3000			10	9000	28285	032	031
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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

030	30.00 X 1500	X	3000	45537	2381313	10	10800	28283	011	011
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***			56	52200						
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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

M. 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
FI-92101 RAAHE, FINLAND

Puhelin Telephone: 020 5911
+358 20 5911

Y-tunnus Business ID: 2389445-7

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TAH

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	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 %	50	80			200	RE / RM	RM * A5	1	RAZ %	2	3	Keskiarvo Average	K5
010	28285 021	TM	51							454	512		26											51	1.0		
010	28285 022	TM	51							470	524		27											51	1.0		
010	28285 031	TM	51							476	525		27											51	1.0		
030	28283 011	TM	51							454	520		25											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)			*Specimen Unbroken					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	28285 021	151	-050	266	299	298	288																			
010	28285 022	151	-050	291	288	292	290																			
010	28285 031	151	-050	312	299	294	302																			
030	28283 011	151	-050	227	268	258	251																			

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.

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Testaus ja tarkastus Testing and Inspection

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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 CaQ 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	21.02.2023	TAH		
28285		010	.37	.093	.02	1.54	.011	.001	.035	.046	.050	.001	.012	0.03	0.04	.003	.003	.0002				
28283		030	.37	.095	.02	1.52	.012	.004	.032	.044	.048	.001	.015	0.05	0.04	.003	.005	.0003				

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

Raah Steel Works

Testaus ja tarkastus Testing and Inspection
Prüfung und Kontrolle Essais et Contrôle

SSAB Europe Oy, Raah 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 Raah Steel Works is free from radiation.

MINNA VALKAMA

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Sachverständiger Inspector autorisé

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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
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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, Raahе Steelworks
Raahе 2015-06-09



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	
	$3 \leq t < 5$	-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)
	≤ 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)
	≤ 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 %	
	≤ 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		

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

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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Assessment system and verification for constancy
of performance
System 2+

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



05

0038/CPR/PRJ11100341405/ 01

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	
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	$10\ 000 \leq l < 15\ 000$	0	+75	
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	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		