


Tilaja Purchaser FEON OY TEOLLISUUSKATU 33 00510 HELSINKI FINLAND	Vastaanottaja Consignee FEON OY HAKINTIE 6 01380 VANTAA FINLAND	Päivämäärä Date 16.09.2021
Tilaus nro Order No. 38746	Asiakkaan merkki Shipping mark 38746	Valmistajan merkki Mark of the Manufacturer
Tilausvahvistus Order Confirmation 26501		

Todistus Certificate 31	Laivaus Shipping	Laatumerkintä Quality Marking S355ML	Tarkastajan leima Stamp of Inspector	
Toimitustyyppi Delivery type TOTAL DELIVERY		Sulatus nro levy nro Cast No. Plate No. XXXXX XXX XX XXX	Vastaanottajan leima Stamp of Surveyor	
		Toleranssit Tolerances SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A	Muut leimaukset Other Stamps	

Tuote Product
HEAVY PLATES

Laji Grade
S355ML EN 10025-4:2019

Laatuselvitys Quality Specifications
WELDABLE FINE GRAIN STRUCTURAL STEEL

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 Safety mark
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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	38746	1014_2382374					12	10800	80465	031	031
010	25.00 X 1500	X	3000							12	10800	80465	032	032
010	25.00 X 1500	X	3000							12	10800	80465	041	041
				***						36	32400			

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
FEON OY
TEOLLISUUSKATU 33
00510 HELSINKI FINLAND
Tilaus nro Order No.
38746

Tilausvahvistus Order Confirmation
26501

Vastaanottaja Consignee
FEON OY
HAKINTIE 6
01380 VANTAA FINLAND
Asiakkaan merkki Shipping mark
38746

Päivämäärä Date
16.09.2021 TML

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	A % 50 80 200			RE / RM	RM * A5	1			RAZ % 2 3	Keskiarvo Average	K5	D = X t				
010	80465 031	TM	51						481	533										28				51	1.0		
010	80465 032	TM	51						489	538										28				51	1.0		
010	80465 041	TM	51						469	526										27				51	1.0		

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

TM=THERMOMECH. TREATED

Pos. Item	Sulatus k.erä nro Cast. test No	Iskukoe K3	Impact test				Keskiarvo Average	W (mm)	FA %			LE (mm)			*Specimen Unbroken			Erikoiskokeet Special tests			Huom Nb	Päästö Tempering °C	
			°C	1	2	3			1	2	3	1	2	3	Keskiarvo Average	K4	°C	1	2	Keskiarvo Average			
010	80465 031	151	-050	286	300	253	280																
010	80465 032	151	-050	252	260	264	259																
010	80465 041	151	-050	289	280	292	287																

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

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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	16.09.2021				TML
80465		010	.37	.095	.02	1.51	.011	.001	.046	.046	.049	.001	.013	0.05	0.03	.005	.004	.0001					

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

Raah Steel Works

Testaus ja tarkastus Testing and Inspection Испытание и контроль качества
Prüfung und Kontrolle Essais et Contrôle

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

MINNA VALKAMA

Valtuutettu tarkastaja Authorized inspection representative Уполномоченный инспектор
Sachverständiger Inspector 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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Grosse Bahnstrasse 31
D-22525 Hamburg
Germany
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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)
	≤ 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		