

EN 10 204-3.1 (2004)

Tilaja Purchaser BE GROUP OY AB PL 54 15101 LAHTI FINLAND		Vastaanottaja Consignee BE GROUP OY AB VANHANRADANKATU 42 15520 LAHTI FINLAND		Päivämäärä Date 25.08.2021	
Tilaus nro Order No. P091546		Tilausvahvistus Order Confirmation 25405		Valmistajan merkki Mark of the Manufacturer	
Todistus Certificate 31		Laivaus Shipping		Laatumerkintä Quality Marking LSR 355 ML PLUS	
Toimitustyyppi Delivery type TOTAL DELIVERY		Sulatus nro levy nro Cast No. Plate No. XXXXX XXX XX XXX		Tarkastajan leima Stamp of Inspector	
Tuote Product HEAVY PLATES Laji Grade SSAB LASER 355ML PLUS Laatuselvitys Quality Specifications HIGH STRENGTH FORMABLE STEEL FOR LASER AND PLASMA CUTTING		Toleranssit Tolerances SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A		Vastaanottajan leima Stamp of Surveyor	
				Muut leimaukset Other Stamps	
				Tekniset vaatimukset ja/tai viralliset määräykset Technical terms of Delivery and/or Official Regulations	



Mxx

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
HOT ROLLED STEEL PLATES								
PACKED, 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								
001	25.00 X 1500	X 3000 2101430506	8	7200	76934	022	022	
001	25.00 X 1500	X 3000	8	7200	76934	032	022	
		***	16	14400				

Raahe 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

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

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 Ceç Căç 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	25.08.2021	AET
76934		001	.37	.092	.02	1.51	.011	.002	.057	.045	.048	.001	.012	0.06	0.03	.005	.004	.0002		

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 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

EN 10 204-3.1 (2004)

Tilaja Purchaser BE GROUP OY AB PL 54 15101 LAHTI FINLAND	Vastaanottaja Consignee BE GROUP OY AB VANHANRADANKATU 42 15520 LAHTI FINLAND	Päivämäärä Date 25.08.2021
Tilaus nro Order No. P091546	Tilausvahvistus Order Confirmation 25405	Valmistajan merkki Mark of the Manufacturer
Todistus Certificate 31	Laivaus Shipping	Tarkastajan leima Stamp of Inspector
Toimitustyyppi Delivery type TOTAL DELIVERY	Sulatus nro levy nro Cast No. Plate No. X X X X X X X X X X X X X X X	Vastaanottajan leima Stamp of Surveyor
Tuote Product HEAVY PLATES Laji Grade S355ML EN 10025-4:2019 Laatuseritys Quality Specifications WELDABLE FINE GRAIN STRUCTURAL STEEL	Toleranssit Tolerances SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A	Muut leimaukset Other Stamps



Mxx

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
-----------------	---------------------------	-----------------	------------	-----------------------	-----------------------------------	-----------------	----	----

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

001	25.00 X 1500	X	3000	2101430506	8	7200	76934	022	022
001	25.00 X 1500	X	3000		8	7200	76934	032	022

*** 16 14400

Raahe 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
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 Ceç Căç 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	25.08.2021	AET
76934		001	.37	.092	.02	1.51	.011	.002	.057	.045	.048	.001	.012	0.06	0.03	.005	.004	.0002		

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 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.

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, Raahe Steelworks
Raahe 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	
	$5 \leq t < 8$	-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	

EN 10 204-3.1 (2004)

Tilaja Purchaser BE GROUP OY AB PL 54 15101 LAHTI FINLAND	Vastaanottaja Consignee BE GROUP OY AB VANHANRADANKATU 42 15520 LAHTI FINLAND	Päivämäärä Date 25.08.2021
Tilaus nro Order No. P091546	Tilausvahvistus Order Confirmation 25405	Valmistajan merkki Mark of the Manufacturer
Todistus Certificate 31	Laivaus Shipping	Laatumerkintä Quality Marking LSR 355 ML PLUS
Toimitustyyppi Delivery type TOTAL DELIVERY	Sulatus nro levy nro Cast No. Plate No. XXXXX XXX XX XXX	Tarkastajan leima Stamp of Inspector <i>Mxx</i>
Tuote Product HEAVY PLATES Laji Grade SSAB LASER 355ML PLUS Laatuselvitys Quality Specifications HIGH STRENGTH FORMABLE STEEL FOR LASER AND PLASMA CUTTING	Toleranssit Tolerances SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A	Muut leimaukset Other Stamps
		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
-----------------	---------------------------	-----------------	------------	-----------------------	-----------------------------------	-----------------	----	----

HOT ROLLED STEEL PLATES

PACKED, 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

001	25.00 X 1500	X	3000	2101430506	8	7200	76934	022	022
001	25.00 X 1500	X	3000		8	7200	76934	032	022

*** 16 14400

Raahe 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

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

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 Ceç Căç 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	25.08.2021	AET
76934		001	.37	.092	.02	1.51	.011	.002	.057	.045	.048	.001	.012	0.06	0.03	.005	.004	.0002		

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 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

EN 10 204-3.1 (2004)

Tilaja Purchaser BE GROUP OY AB PL 54 15101 LAHTI FINLAND	Vastaanottaja Consignee BE GROUP OY AB VANHANRADANKATU 42 15520 LAHTI FINLAND	Päivämäärä Date 25.08.2021
Tilaus nro Order No. P091546	Tilausvahvistus Order Confirmation 25405	Valmistajan merkki Mark of the Manufacturer
Todistus Certificate 31	Laivaus Shipping	Tarkastajan leima Stamp of Inspector
Toimitustyyppi Delivery type TOTAL DELIVERY	Sulatus nro levy nro Cast No. Plate No. X X X X X X X X X X X X X X X	Vastaanottajan leima Stamp of Surveyor
Tuote Product HEAVY PLATES Laji Grade S355ML EN 10025-4:2019 Laatuseritys Quality Specifications WELDABLE FINE GRAIN STRUCTURAL STEEL	Toleranssit Tolerances SSAB TOLERANCE EN 10029, THICKN. 3/4 CL A	Muut leimaukset Other Stamps



Mxx

Laatumerkintä Quality Marking S355ML	Tarkastajan leima Stamp of Inspector
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
-----------------	---------------------------	-----------------	------------	-----------------------	-----------------------------------	-----------------	----	----

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

001	25.00 X 1500	X	3000	2101430506	8	7200	76934	022	022
001	25.00 X 1500	X	3000		8	7200	76934	032	022
			***		16	14400			

Raahe 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

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

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 Ceç Căç 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	AET	
76934		001	.37	.092	.02	1.51	.011	.002	.057	.045	.048	.001	.012	0.06	0.03	.005	.004	.0002	25.08.2021	

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 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.

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, Raahe Steelworks
Raahe 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)		
Tolerances on dimensions and shapes.	Thickness	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	