

Our order No.: (A08) 2389131 Your order No.: (A07) 43150 Order registration date: 24.05.2022 Date of dispatch: 08.06.2022 B

Material requirements and customer information

Product: <small>(A03)</small> Plate	Steel standard and grade: <small>(B02)</small> EN10025-2:2019 S355K2+N	Surface tolerance: EN 10163-2 B3
Delivery condition: <small>(B04)</small> Normalized rolled (+N)		Length tolerance: EN 10029 Table 3
Customer name and address <small>(A06)</small>	Certificate address	Width tolerance: EN 10029 Table 2
4202	4202001	Thickness tolerance: EN 10029 Class B
Oy AluSteel AB	osto_UKI@feon.fi	Flatness tolerance: EN 10029 Table 4 Class N
TELAKKATIE 4	Finland	
23500 UUSIKAUPUNKI		
Finland	a.faktarauskas@eu.nlmk.com;osto_UKI@feon.fi	

Supplementary information: (C04)

Fully Killed and Fine Grain

Visual examination and dimensional checking: Satisfactory. The results of tests performed are in compliance with the requirements. (Z01)

Details of supplied materials dimensions, weights and pieces

Heat/Slab <small>(B07)</small>	Plate No. <small>(B06)</small>	Item	Thickness <small>(B09)</small> mm	Width <small>(B10)</small> mm	Length <small>(B11)</small> mm	Pieces <small>(B08)</small>	Gross <small>(B12)</small> kg	Hard stamp	Stamp location	Customer remark <small>(B99)</small>
61585G4	4401S	2	25.0	2500	8000	2	7 850	S355K2+N	Head	43150
61589I1	4239S	3	16.0	2000	6000	2	3 014	S355K2+N	Head	43150
61589J1	4249S	3	16.0	2000	6000	2	3 014	S355K2+N	Head	43150
61587A1	4240S	5	20.0	2000	6000	1	1 884	S355K2+N	Head	43150
61585J4	4305S	5	20.0	2000	6000	1	1 884	S355K2+N	Head	43150
61586B3	4369S	5	20.0	2000	6000	2	3 768	S355K2+N	Head	43150
61586B2	4379S	5	20.0	2000	6000	1	1 884	S355K2+N	Head	43150
61586B1	4393S	5	20.0	2000	6000	1	1 884	S355K2+N	Head	43150
						12	25 182			

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Chemical composition (heat analysis) all results in %

Heat No. <small>(B07)</small>	C	Mn	Si	P	S	Cr	Cu	Ni	Mo	Al	Nb	V	Ti	N	B
Set values: min.			0.15							0.020					
max.	0.20	1.60	0.25	0.025	0.025	0.290	0.400	0.300	0.080	0.100	0.060	0.100	0.050	0.0120	0.0008
61585	0.17	1.47	0.21	0.010	0.011	0.031	0.045	0.019	0.001	0.040	0.040	0.003	0.002	0.0045	0.0003
61586	0.17	1.47	0.22	0.012	0.004	0.020	0.019	0.008	0.001	0.043	0.039	0.001	0.002	0.0030	0.0003
61587	0.17	1.49	0.21	0.014	0.007	0.044	0.028	0.017	0.001	0.036	0.040	0.002	0.002	0.0032	0.0003
61589	0.18	1.49	0.22	0.010	0.003	0.040	0.038	0.020	0.001	0.044	0.041	0.003	0.002	0.0035	0.0003

Heat No. <small>(B07)</small>	CEV	Remark <small>(C70)</small>
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Set values: min.		
max.	0.45	
61585	0.42	1 3 4 6
61586	0.42	1 3 4 6
61587	0.43	1 3 4 6
61589	0.44	1 3 4 6

Supplementary information (C99)

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

1 = Basic Oxygen Steel, 2 = Electric Arc Furnace, 3 = Ladle Refined, 4 = Calcium Treated, 5 = Vacuum Degassed, 6 = Continuous Cast, 7 = Ingot

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Tensile testing

Tensile tests were performed in accordance with EN 10002/ISO 6892-1 with results as stated below:

Heat/slab <small>(B07)</small>	Plate ID <small>(B06)</small>	Thickness mm	Shape <small>(C10)</small>	Loc. <small>(C01)</small>	Dir. <small>(C02)</small>	Yield MPa <small>(C11)</small>	Yield type	UTS Rm MPa <small>(C12)</small>	Elong. type	Elongation % <small>(C13)</small>	Yield/UTS
61589I1	4239S-2-1	16.0	R	H	T	448	REH	576	A5	30	0.78
61589I1	4239S-2-2	16.0	R	H	T	448	REH	576	A5	30	0.78
61587A1	4240S-1-2	20.0	R	H	T	440	REH	570	A5	27	0.77
61589J1	4249S-2-1	16.0	R	H	T	433	REH	570	A5	30	0.76
61589J1	4249S-2-2	16.0	R	H	T	433	REH	570	A5	30	0.76
61585J4	4305S-1-2	20.0	R	H	T	409	R02	550	A5	24	0.74
61586B3	4369S-1-1	20.0	R	H	T	421	REH	557	A5	25	0.76
61586B3	4369S-1-2	20.0	R	H	T	421	REH	557	A5	25	0.76
61586B2	4379S-2-2	20.0	R	H	T	422	R02	558	A5	28	0.76
61586B1	4393S-2-2	20.0	R	H	T	422	R02	558	A5	28	0.76
61585G4	4401S-1-1	25.0	R	H	T	409	R02	550	A5	24	0.74
61585G4	4401S-1-2	25.0	R	H	T	409	R02	550	A5	24	0.74

Supplementary Information (C99)

Loc.: (C01) H = head, T = tail

Dir.: (C02) T = transversal, L = longitudinal

Shape: (C10) Ø = round, R = rectangular

Original gauge length: 200 mm

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Impact testing (A01) Impact tests were performed in accordance with EN 10045/ISO 148-1 with results as stated below:

Heat/slab <small>(B07)</small>	Plate ID <small>(B06)</small>	Position <small>(C01)</small>	Notch <small>(C40)</small>	Shape <small>(C41)</small>	Loc. <small>(C01)</small>	Dir. <small>(C02)</small>	Temp. °C <small>(C03)</small>	SV J <small>(C42)</small>	SV J <small>(C42)</small>	SV J <small>(C42)</small>	AV J <small>(C43)</small>
61589I1	4239S-2-1	1	CV	10x10	H	L	-20	237	232	223	231
61589I1	4239S-2-2	1	CV	10x10	H	L	-20	237	232	223	231
61587A1	4240S-1-2	1	CV	10x10	H	L	-20	181	197	173	184
61589J1	4249S-2-1	1	CV	10x10	H	L	-20	206	214	217	212
61589J1	4249S-2-2	1	CV	10x10	H	L	-20	206	214	217	212
61585J4	4305S-1-2	1	CV	10x10	H	L	-20	174	162	173	170
61586B3	4369S-1-1	1	CV	10x10	H	L	-20	199	207	151	186
61586B3	4369S-1-2	1	CV	10x10	H	L	-20	199	207	151	186
61586B2	4379S-2-2	1	CV	10x10	H	L	-20	191	222	231	215
61586B1	4393S-2-2	1	CV	10x10	H	L	-20	191	222	231	215
61585G4	4401S-1-1	1	CV	10x10	H	L	-20	174	162	173	170
61585G4	4401S-1-2	1	CV	10x10	H	L	-20	174	162	173	170

Supplementary Information (C99)

Position: (C01) 1 = surface, 2 = middle, 3 = 1/3 of thickness, 4 = 1/4 of thickness

Notch: (C40) CU = Charpy U-notch, CV = Charpy V-notch, CVA = Charpy V-notch (ASTM)

Loc.: (C01) H = head, T = tail

Dir.: (C02) T = transversal, L = longitudinal

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We hereby certify that the material has been made and tested in accordance with the mentioned specification(s).
Certified according to Construction Products Regulations (305/2011/EU) by TÜV NORD Systems GmbH (Notified Body Reg. No. 0045).
For Declaration of Performance please see www.DanSteel.dk and DoP number 010CPR2013-07-01.



TÜV-NORD 0045-CPR-0554

Year of initial inspection: 2005

Intended use: Welded, bolted and riveted structures.

Our products are Cobalt, Gold, Mercury free and are free of radioactive substances and do not exceed the clearing limit value of 100 Bg/kg, which guarantees the compliance with limit values given in the Radiation Protection Ordinance (StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex III, Section 5) for ferrous nuclides.
Manufactured in Denmark

Information description

acc. to EN 10168

A Commercial transactions and parties involved

A01 Manufacturer's works
A02 Type of inspection document
A03 Document number
A04 Manufacturer's mark
A05 Originator of the inspection document
A06 Customer consignee
A07 Purchaser's order number and, where applicable, item number
A08 Manufacturer's works order number
A09 Customer article number
A10 to A99 Supplementary information

B Description of Products

B01 Product
B02 Steel designation
B03 Any supplementary requirements
B04 Product delivery condition
B05 Reference (heat) treatment of samples
B06 Marking of the product
B07 Identification of the product
B08 Number of pieces
B09 to B11 Product dimensions
B12 Theoretical mass
B13 Actual mass
B14 to B99 Supplementary information

C Inspection

C00 Identification of the sample
C01 Location of the sample
C02 Direction of the test pieces
C03 Test temperature
C04 to C09 Supplementary information

C10 Shape of the test piece
C11 Yield or proof strength
C12 Tensile strength
C13 Elongation after fracture
C14 to C29 Supplementary information
C30 Method of test
C31 Individual values
C32 Mean value
C33 to C39 Supplementary information
C40 Type of test piece
C41 Width of test piece
C42 Individual values
C43 Mean value
C44 to C49 Supplementary information
C50 to C69 Supplementary information
C70 Steelmaking process
C71 to C92 Chemical composition
C93 to C99 Supplementary information

D Other tests

D01 Marking and identification, surface appearance, shape and dimensional properties
D02 to D50 Non-destructive tests
D51 to D99 Supplementary information

Z Validation

Z01 Statement of compliance
Z02 Date of issue and validation
Z03 Stamp of the inspection representative
Z04 CE marking
Z05 to Z99 Supplementary information