

Our order No.: (A08) 2399741 Your order No.: (A07) 45036 Order registration date: 09.11.2022 Date of dispatch: 06.01.2023 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
4002	4002001	Thickness tolerance: EN 10029 Class B
FEON OY	FEON OY	Flatness tolerance: EN 10029 Table 4 Class N
Teollisuuskatu 33	Finland	
00510 Helsinki		
Finland		
	certificates@feon.fi;janne.myllynen@feon.fi;a.faktarauskas@eu.nlmk.com	

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 mm <small>(B09)</small>	Width mm <small>(B10)</small>	Length mm <small>(B11)</small>	Pieces <small>(B08)</small>	Gross kg <small>(B12)</small>	Hard stamp	Stamp location	Customer remark <small>(B99)</small>
62979D3	6051C	1	20.0	2000	6000	4	7 536	S355K2+N	Head	45036
62943A4	6082C	1	20.0	2000	6000	4	7 536	S355K2+N	Head	45036
62943A3	6083C	1	20.0	2000	6000	4	7 536	S355K2+N	Head	45036
62943A2	6088C	1	20.0	2000	6000	3	5 652	S355K2+N	Head	45036
62942A3	6089C	1	20.0	2000	6000	4	7 536	S355K2+N	Head	45036
						19	35 796			

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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	0.400	0.080	0.100	0.060	0.100	0.050	0.0120 0.0008
62942	0.17	1.53	0.24	0.013	0.005	0.037	0.032	0.020	0.002	0.047	0.046	0.003	0.002	0.0050	0.0004
62943	0.17	1.53	0.22	0.016	0.004	0.038	0.024	0.018	0.002	0.037	0.045	0.003	0.002	0.0040	0.0003
62979	0.17	1.52	0.22	0.013	0.004	0.040	0.045	0.027	0.003	0.045	0.045	0.004	0.002	0.0040	0.0003

Heat No. (B07) CEV Remark (C70)

Set values:	min.	
	max.	0.45
62942	0.44	1 3 4 6
62943	0.44	1 3 4 6
62979	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
62979D3	6051C-1-1	20.0	R	H	T	433	R02	577	A5	27	0.75
62979D3	6051C-1-2	20.0	R	H	T	433	R02	577	A5	27	0.75
62979D3	6051C-2-1	20.0	R	H	T	433	R02	577	A5	27	0.75
62979D3	6051C-2-2	20.0	R	H	T	433	R02	577	A5	27	0.75
62943A4	6082C-1-1	20.0	R	H	T	446	REH	581	A5	25	0.77
62943A4	6082C-1-2	20.0	R	H	T	446	REH	581	A5	25	0.77
62943A4	6082C-2-1	20.0	R	H	T	448	R02	584	A5	25	0.77
62943A4	6082C-2-2	20.0	R	H	T	448	R02	584	A5	25	0.77
62943A3	6083C-1-1	20.0	R	H	T	448	R02	584	A5	25	0.77
62943A3	6083C-1-2	20.0	R	H	T	448	R02	584	A5	25	0.77
62943A3	6083C-2-1	20.0	R	H	T	448	R02	584	A5	25	0.77
62943A3	6083C-2-2	20.0	R	H	T	448	R02	584	A5	25	0.77
62943A2	6088C-1-1	20.0	R	H	T	448	R02	584	A5	25	0.77
62943A2	6088C-1-2	20.0	R	H	T	448	R02	584	A5	25	0.77
62943A2	6088C-1-3	20.0	R	H	T	448	R02	584	A5	25	0.77
62942A3	6089C-1-1	20.0	R	H	T	460	REH	580	A5	25	0.79
62942A3	6089C-1-2	20.0	R	H	T	460	REH	580	A5	25	0.79
62942A3	6089C-2-1	20.0	R	H	T	460	REH	580	A5	25	0.79
62942A3	6089C-2-2	20.0	R	H	T	460	REH	580	A5	25	0.79

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

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>
62979D3	6051C-1-1	1	CV	10x10	H	L	-20	226	200	203	210
62979D3	6051C-1-2	1	CV	10x10	H	L	-20	226	200	203	210
62979D3	6051C-2-1	1	CV	10x10	H	L	-20	226	200	203	210
62979D3	6051C-2-2	1	CV	10x10	H	L	-20	226	200	203	210
62943A4	6082C-1-1	1	CV	10x10	H	L	-20	199	186	194	193
62943A4	6082C-1-2	1	CV	10x10	H	L	-20	199	186	194	193
62943A4	6082C-2-1	1	CV	10x10	H	L	-20	211	186	188	195
62943A4	6082C-2-2	1	CV	10x10	H	L	-20	211	186	188	195
62943A3	6083C-1-1	1	CV	10x10	H	L	-20	211	186	188	195
62943A3	6083C-1-2	1	CV	10x10	H	L	-20	211	186	188	195
62943A3	6083C-2-1	1	CV	10x10	H	L	-20	211	186	188	195
62943A3	6083C-2-2	1	CV	10x10	H	L	-20	211	186	188	195
62943A2	6088C-1-1	1	CV	10x10	H	L	-20	211	186	188	195
62943A2	6088C-1-2	1	CV	10x10	H	L	-20	211	186	188	195
62943A2	6088C-1-3	1	CV	10x10	H	L	-20	211	186	188	195
62942A3	6089C-1-1	1	CV	10x10	H	L	-20	184	202	190	192
62942A3	6089C-1-2	1	CV	10x10	H	L	-20	184	202	190	192
62942A3	6089C-2-1	1	CV	10x10	H	L	-20	184	202	190	192
62942A3	6089C-2-2	1	CV	10x10	H	L	-20	184	202	190	192

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