

Our order No.: (A08) 2396311      Your order No.: (A07) 44643      Order registration date: 06.10.2022      Date of dispatch: 25.10.2022 B

## Material requirements and customer information

<b>Product:</b> <small>(A03)</small> Plate	<b>Steel standard and grade:</b> <small>(B02)</small> EN10025-2:2019 S355K2	<b>Surface tolerance:</b> EN 10163-2 B3
<b>Delivery condition:</b> <small>(B04)</small> Normalized rolled (+N)		<b>Length tolerance:</b> EN 10029 Table 3
<b>Customer name and address</b> <small>(A06)</small>	<b>Certificate address</b>	<b>Width tolerance:</b> EN 10029 Table 2
4002	4002001	<b>Thickness tolerance:</b> EN 10029 Class B
FEON OY	FEON OY	<b>Flatness tolerance:</b> EN 10029 Table 4 Class N
Teollisuuskatu 33	Finland	
00510 Helsinki		
Finland	certificates@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>
62240F3	5622B	1	8.0	2500	6000	4	3 768	S355K2+N	Head	44643
61607H4	6031B	1	8.0	2500	6000	1	942	S355K2+N	Head	44643
62033B3	5362B	3	40.0	2000	6000	1	3 768	S355K2+N	Head	44643
62033H3	5371B	3	40.0	2000	6000	1	3 768	S355K2+N	Head	44643
62032C1	5413B	3	40.0	2000	6000	1	3 768	S355K2+N	Head	44643
62032C2	5423B	3	40.0	2000	6000	1	3 768	S355K2+N	Head	44643
62034D2	6239B	3	40.0	2000	6000	2	7 536	S355K2+N	Head	44643
62034D1	6249B	3	40.0	2000	6000	2	7 536	S355K2+N	Head	44643
62033I1	6359B	3	40.0	2000	6000	2	7 536	S355K2+N	Head	44643
62033I2	6369B	3	40.0	2000	6000	2	7 536	S355K2+N	Head	44643

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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>
62032G1	6477B	3	40.0	2000	6000	2	7 536	S355K2+N	Head	44643
62032G3	6498B	3	40.0	2000	6000	2	7 536	S355K2+N	Head	44643
62035B2	6706B	3	40.0	2000	6000	1	3 768	S355K2+N	Head	44643
						22	68 766			

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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
61607	0.15	1.39	0.21	0.015	0.001	0.038	0.034	0.023	0.002	0.037	0.018	0.002	0.002	0.0042	0.0002
62032	0.18	1.47	0.20	0.007	0.005	0.021	0.034	0.027	0.001	0.040	0.044	0.001	0.002	0.0037	0.0002
62033	0.17	1.50	0.21	0.012	0.005	0.023	0.012	0.008	0.001	0.041	0.045	0.001	0.002	0.0036	0.0002
62034	0.18	1.52	0.22	0.012	0.006	0.029	0.033	0.027	0.003	0.042	0.044	0.002	0.002	0.0037	0.0003
62035	0.18	1.49	0.21	0.014	0.006	0.038	0.047	0.027	0.003	0.039	0.043	0.002	0.002	0.0040	0.0003
62240	0.15	1.38	0.19	0.007	0.003	0.034	0.047	0.021	0.002	0.038	0.017	0.001	0.002	0.0035	0.0002

Heat No. <small>(B07)</small>	CEV	Remark <small>(C70)</small>
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Set values:	min.	
	max.	0.45
61607	0.39	1 3 4 6
62032	0.43	1 3 4 6
62033	0.43	1 3 4 6
62034	0.44	1 3 4 6
62035	0.44	1 3 4 6
62240	0.39	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
62033B3	5362B-1-1	40.0	R	H	T	420	R02	542	A5	24	0.77
62033H3	5371B-1-1	40.0	R	H	T	463	REH	575	A5	28	0.81
62032C1	5413B-1-1	40.0	R	H	T	412	R02	548	A5	21	0.75
62032C2	5423B-1-1	40.0	R	H	T	412	R02	548	A5	21	0.75
62240F3	5622B-1-1	8.0	R	H	T	454	REH	538	A5	34	0.84
62240F3	5622B-1-2	8.0	R	H	T	454	REH	538	A5	34	0.84
62240F3	5622B-2-1	8.0	R	H	T	454	REH	538	A5	34	0.84
62240F3	5622B-2-2	8.0	R	H	T	454	REH	538	A5	34	0.84
61607H4	6031B-2-1	8.0	R	H	T	398	REH	522	A5	34	0.76
62034D2	6239B-1-1	40.0	R	H	T	425	R02	565	A5	21	0.75
62034D2	6239B-1-2	40.0	R	H	T	425	R02	565	A5	21	0.75
62034D1	6249B-1-1	40.0	R	H	T	425	R02	565	A5	21	0.75
62034D1	6249B-1-2	40.0	R	H	T	425	R02	565	A5	21	0.75
62033I1	6359B-1-1	40.0	R	H	T	463	REH	575	A5	28	0.81
62033I1	6359B-1-2	40.0	R	H	T	463	REH	575	A5	28	0.81
62033I2	6369B-1-1	40.0	R	H	T	463	REH	575	A5	28	0.81
62033I2	6369B-1-2	40.0	R	H	T	463	REH	575	A5	28	0.81
62032G1	6477B-1-1	40.0	R	H	T	414	R02	552	A5	23	0.75
62032G1	6477B-1-2	40.0	R	H	T	414	R02	552	A5	23	0.75
62032G3	6498B-1-1	40.0	R	H	T	414	R02	552	A5	23	0.75
62032G3	6498B-1-2	40.0	R	H	T	414	R02	552	A5	23	0.75
62035B2	6706B-1-1	40.0	R	H	T	464	REH	580	A5	27	0.80

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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 <b>mm</b>	Shape <small>(C10)</small>	Loc. <small>(C01)</small>	Dir. <small>(C02)</small>	Yield <b>MPa</b> <small>(C11)</small>	Yield <b>type</b>	UTS Rm <b>MPa</b> <small>(C12)</small>	Elong. <b>type</b>	Elongation <b>%</b> <small>(C13)</small>	Yield/UTS
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**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>
62033B3	5362B-1-1	1	CV	10x10	H	L	-20	195	185	199	193
62033H3	5371B-1-1	1	CV	10x10	H	L	-20	204	202	207	204
62032C1	5413B-1-1	1	CV	10x10	H	L	-20	209	218	202	210
62032C2	5423B-1-1	1	CV	10x10	H	L	-20	209	218	202	210
62240F3	5622B-1-1	1	CV	5x10	H	L	-20	86	88	84	86
62240F3	5622B-1-2	1	CV	5x10	H	L	-20	86	88	84	86
62240F3	5622B-2-1	1	CV	5x10	H	L	-20	86	88	84	86
62240F3	5622B-2-2	1	CV	5x10	H	L	-20	86	88	84	86
61607H4	6031B-2-1	1	CV	5x10	H	L	-20	99	102	97	99
62034D2	6239B-1-1	1	CV	10x10	H	L	-20	156	137	146	146
62034D2	6239B-1-2	1	CV	10x10	H	L	-20	156	137	146	146
62034D1	6249B-1-1	1	CV	10x10	H	L	-20	156	137	146	146
62034D1	6249B-1-2	1	CV	10x10	H	L	-20	156	137	146	146
62033I1	6359B-1-1	1	CV	10x10	H	L	-20	204	202	207	204
62033I1	6359B-1-2	1	CV	10x10	H	L	-20	204	202	207	204
62033I2	6369B-1-1	1	CV	10x10	H	L	-20	204	202	207	204
62033I2	6369B-1-2	1	CV	10x10	H	L	-20	204	202	207	204
62032G1	6477B-1-1	1	CV	10x10	H	L	-20	177	177	165	173
62032G1	6477B-1-2	1	CV	10x10	H	L	-20	177	177	165	173
62032G3	6498B-1-1	1	CV	10x10	H	L	-20	177	177	165	173
62032G3	6498B-1-2	1	CV	10x10	H	L	-20	177	177	165	173
62035B2	6706B-1-1	1	CV	10x10	H	L	-20	137	133	129	133

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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	Plate ID	Position	Notch	Shape	Loc.	Dir.	Temp.	SV	SV	SV	AV
<small>(B07)</small>	<small>(B06)</small>	<small>(C01)</small>	<small>(C40)</small>	<small>(C41)</small>	<small>(C01)</small>	<small>(C02)</small>	<small>°C (C03)</small>	<b>J</b> <small>(C42)</small>	<b>J</b> <small>(C42)</small>	<b>J</b> <small>(C42)</small>	<b>J</b> <small>(C43)</small>

**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](http://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