



Europe – Plate

# Inspection Certificate (A02)

EN 10204:2004/3.1

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Date of creation: (Z02) 09.05.2022

Certificate No.: (A03) 143320

Our order No.: (A08) 2380361

Your order No.: (A07) P096585

Order registration date: 02.02.2022

Date of dispatch: 09.05.2022 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
4102	4102001	<b>Thickness tolerance:</b> EN 10029 Class A
BE Group Oy AB	certificates@begroup.fi;	<b>Flatness tolerance:</b> EN 10029 Table 4 Class N
BOX 54		
15101 LAHTI	Finland	
Finland	CERTIFICATES@BEGROUP.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 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>
60648B1	3593N	1	20.0	2000	6000	1	1 884	S355K2+N	Head	P096585
61072H3	4367N	1	20.0	2000	6000	2	3 768	S355K2+N	Head	P096585
61072H2	4397N	1	20.0	2000	6000	2	3 768	S355K2+N	Head	P096585
						5	9 420			



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## Chemical composition (heat analysis) all results in %

Heat No. (B07)	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
60648	0.17	1.47	0.22	0.019	0.013	0.034	0.043	0.027	0.003	0.043	0.040	0.001	0.001	0.0038	0.0002
61072	0.18	1.47	0.22	0.016	0.003	0.022	0.014	0.010	0.002	0.042	0.042	0.001	0.001	0.0037	0.0004

Heat No. (B07)	CEV	Remark (C70)
Set values:	min.	
	max.	0.45
60648	0.42	1 3 4 6
61072	0.43	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 <sup>(B07)</sup>	Plate ID <sup>(B06)</sup>	Thickness mm	Shape <sup>(C10)</sup>	Loc. <sup>(C01)</sup>	Dir. <sup>(C02)</sup>	Yield MPa <sup>(C11)</sup>	Yield type	UTS Rm MPa <sup>(C12)</sup>	Elong. type	Elongation % <sup>(C13)</sup>	Yield/UTS
60648B1	3593N-1-1	20.0	R	H	T	477	REH	592	A5	27	0.81
61072H3	4367N-1-1	20.0	R	H	T	418	REH	560	A5	24	0.75
61072H3	4367N-2-1	20.0	R	H	T	418	REH	560	A5	24	0.75
61072H2	4397N-1-1	20.0	R	H	T	418	REH	560	A5	24	0.75
61072H2	4397N-2-1	20.0	R	H	T	418	REH	560	A5	24	0.75

**Supplementary Information** <sup>(C99)</sup>**Loc.:** <sup>(C01)</sup> H = head, T = tail**Dir.:** <sup>(C02)</sup> T = transversal, L = longitudinal**Shape:** <sup>(C10)</sup> Ø = round, R = rectangular**Original gauge length:** 200 mm**Impact testing** Impact tests were performed in accordance with EN 10045/ISO 148-1 with results as stated below:

Heat/slab <sup>(B07)</sup>	Plate ID <sup>(B06)</sup>	Position <sup>(C01)</sup>	Notch <sup>(C40)</sup>	Shape <sup>(C41)</sup>	Loc. <sup>(C01)</sup>	Dir. <sup>(C02)</sup>	Temp. °C <sup>(C03)</sup>	SV J <sup>(C42)</sup>	SV J <sup>(C42)</sup>	SV J <sup>(C42)</sup>	AV J <sup>(C43)</sup>
60648B1	3593N-1-1	1	CV	10x10	H	L	-20	88	131	130	116
61072H3	4367N-1-1	1	CV	10x10	H	L	-20	189	197	211	199
61072H3	4367N-2-1	1	CV	10x10	H	L	-20	189	197	211	199
61072H2	4397N-1-1	1	CV	10x10	H	L	-20	189	197	211	199
61072H2	4397N-2-1	1	CV	10x10	H	L	-20	189	197	211	199

**Supplementary Information** <sup>(C99)</sup>**Position:** <sup>(C01)</sup> 1 = surface, 2 = middle, 3 = 1/3 of thickness, 4 = 1/4 of thickness**Notch:** <sup>(C40)</sup> CU = Charpy U-notch, CV = Charpy V-notch, CVA = Charpy V-notch (ASTM)**Loc.:** <sup>(C01)</sup> H = head, T = tail**Dir.:** <sup>(C02)</sup> 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



DanSteel  
Havnevej 33  
DK - 3300 Frederiksværk

<sup>(A01)</sup>



<sup>(A04)</sup>

Inspection representative NLMK DanSteel A/S <sup>(A05)</sup>

Zibrandt Greisen

## 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