



Europe – Plate

Inspection Certificate

EN 10204:2004/3.1

Our order No.: (A08)7248241

Your order No.: (A07)1111416

Order registration date: 07.12.2017

Date of dispatch: 25.01.2018

B

Material requirements and customer information

Product: (A03)	Plate	Steel standard and grade: (B02)	EN10025-2:2004 S355K2	Surface tolerance:	EN 10163-2 A2
Delivery condition: (B04)	Furnace normalized (N)			Length tolerance:	EN 10029 Table 3
Customer name and address (A06)		Certificate address	4118001	Width tolerance:	EN 10029 Table 2
4118				Thickness tolerance:	EN 10029 Class A
OY Kontino AB		kristina.raisanen@kontino.fi;		Flatness tolerance:	EN 10029 Table 4 Class N
PL 27		a.faktarauskas@eu.nlmk.com			
01301 VANTAA		Kontino Oy Ab			
Finland		Finland			
		KRISTINA.RAISANEN@KONTINO.FI;a.faktarauskas@eu.nlmk.com;a.faktarauskas@eu.nlmk.com			

Supplementary information: (C04)

Fully Killed and Fine Grain

Plates <= 25mm are Normalised at 900°C for 3 minutes.

Plates > 25mm are Normalised at 900°C for 5 minutes.

Visual examination and dimensional checking: Satisfactory. The results of tests performed are in compliance with the requirements. (201)

Details of supplied materials dimensions, weights and pieces

Heat/Slab (B07)	Plate No. (B06)	Item	Thickness mm (B09)	Width mm (B10)	Length mm (B11)	Pieces (B08)	Gross Kg (B12)	Hard stamp	Stamp location	Customer remark (B09)
52173C3	6270A	14	45.0	2000	6000	2	8 478	S355K2+N	Head	1111416
52232A1	6460A	14	45.0	2000	6000	2	8 478	S355K2+N	Head	1111416
52173A1	6271A	15	50.0	2000	6000	2	9 420	S355K2+N	Head	1111416
52173B6	6272A	15	50.0	2000	6000	2	9 420	S355K2+N	Head	1111416
52171E1	6273A	15	50.0	2000	6000	2	9 420	S355K2+N	Head	1111416
52173C2	6274A	15	50.0	2000	6000	2	9 420	S355K2+N	Head	1111416
52422J1	7378A	15	50.0	2000	6000	1	4 710	S355K2+N	Head	1111416
52424H2	7380A	15	50.0	2000	6000	2	9 420	S355K2+N	Head	1111416
52424H1	7421A	15	50.0	2000	6000	2	9 420	S355K2+N	Head	1111416



Inspection representative NLMK DanSteel AIS (A05)

Zibrandt Greisen

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(A02)

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Date of creation: (Z02)

25.01.2018

Certificate No.: (A03)

074820/1

Our order No.: (A08) 7248241

Your order No.: (A07) 1111416

Order registration date: 07.12.2017

Date of dispatch: 25.01.2018 B

Details of supplied materials dimensions, weights and pieces

Head/Slab (B07)	Plate No. (B06)	Item	Thickness mm (B09)	Width mm (B10)	Length mm (B11)	Pieces (B08)	Gross kg (B12)	Hard stamp	Stamp location	Customer remark (B09)
524221	7423A	15	50.0	2000	6000	1	4 710	S355K2+N	Head	1111416
52424G2	7424A	15	50.0	2000	6000	2	9 420	S355K2+N	Head	1111416
52424G1	7425A	15	50.0	2000	6000	2	9 420	S355K2+N	Head	1111416
52424G3	7426A	15	50.0	2000	6000	1	4 710	S355K2+N	Head	1111416
52424H3	7427A	15	50.0	2000	6000	1	4 710	S355K2+N	Head	1111416
5242213	7429A	15	50.0	2000	6000	1	4 710	S355K2+N	Head	1111416
52422J3	7430A	15	50.0	2000	6000	1	4 710	S355K2+N	Head	1111416
52173C1	6275A	16	50.0	2500	6000	2	11 776	S355K2+N	Head	1111416
52173A6	6321A	16	50.0	2500	6000	1	5 888	S355K2+N	Head	1111416
52173A4	6323A	16	50.0	2500	6000	1	5 888	S355K2+N	Head	1111416
51906G2	6467A	16	50.0	2500	6000	2	11 776	S355K2+N	Head	1111416
52424J1	7451A	16	50.0	2500	6000	1	5 888	S355K2+N	Head	1111416
52424J2	7452A	16	50.0	2500	6000	1	5 888	S355K2+N	Head	1111416
52424J3	7453A	16	50.0	2500	6000	1	5 888	S355K2+N	Head	1111416
52422B1	7584A	16	50.0	2500	6000	1	5 888	S355K2+N	Head	1111416
52422B3	7586A	16	50.0	2500	6000	1	5 888	S355K2+N	Head	1111416
52171E2	6276A	17	55.0	2000	6000	2	10 362	S355K2+N	Head	1111416
						39	195 706			



DanSteel

(A01)



(A04)

Inspection representative NLMK DanSteel AS (A05)

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(A02)

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Our order No.: (A08) 7248241

Your order No.: (A07) 1111416

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Date of dispatch: 25.01.2018 B

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.			0.22	1.60	0.25	0.025	0.025	0.300	0.400	0.300	0.080	0.100	0.060	0.100	0.050	
51906	0.17	1.52	0.18	0.010	0.006	0.018	0.035	0.015	0.004	0.038	0.040	0.002	0.001	0.0042	0.0003		
52171	0.17	1.51	0.19	0.021	0.005	0.032	0.039	0.021	0.002	0.041	0.042	0.004	0.002	0.0030	0.0003		
52173	0.16	1.50	0.18	0.012	0.006	0.028	0.040	0.019	0.002	0.042	0.039	0.003	0.002	0.0041	0.0003		
52232	0.17	1.48	0.20	0.012	0.004	0.031	0.032	0.023	0.003	0.043	0.043	0.003	0.002	0.0036	0.0003		
52422	0.17	1.51	0.17	0.011	0.006	0.031	0.040	0.020	0.001	0.037	0.038	0.002	0.002	0.0041	0.0003		
52424	0.17	1.50	0.17	0.010	0.007	0.027	0.040	0.024	0.001	0.038	0.040	0.001	0.002	0.0031	0.0003		

Heat No. (B07)

CEV

Remark (C70)

Set values: min. max. 0.45

51906	0.43	1 3 4 5 6
52171	0.43	1 3 4 6
52173	0.42	1 3 4 6
52232	0.43	1 3 4 6
52422	0.43	1 3 4 6
52424	0.43	1 3 4 6

Supplementary information (C98)

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



DanSteel
Harcourt 33
DK-3300 Fredensborg

(A01)



(A04)

Inspection representative NLMK DanSteel A/S (A05)

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Our order No.: (A08) 7248241

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Order registration date: 07.12.2017

Date of dispatch: 25.01.2018 B

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

Heat/lab (B07)	Plate ID (B06)	Thickness mm	Shape (C10)	Loc. (C01)	Dir. (C02)	Yield MPa (C11)	Yield type	UTS Rm MPa (C12)	Elong. type	Elongation % (C13)	Yield/UTS
52173C3	6270A-1-1	45.0	R	H	T	378	REH	508	A5	33	0.74
52173C3	6270A-1-2	45.0	R	H	T	378	REH	508	A5	33	0.74
52173A1	6271A-1-1	50.0	R	H	T	369	REH	510	A5	31	0.72
52173A1	6271A-1-2	50.0	R	H	T	378	REH	508	A5	33	0.74
52173B6	6272A-1-1	50.0	R	H	T	371	REH	511	A5	30	0.73
52173B6	6272A-1-2	50.0	R	H	T	371	REH	511	A5	30	0.73
52171E1	6273A-1-1	50.0	R	H	T	393	REH	527	A5	30	0.75
52171E1	6273A-1-2	50.0	R	H	T	388	REH	514	A5	24	0.75
52173C2	6274A-1-1	50.0	R	H	T	371	REH	511	A5	30	0.73
52173C2	6274A-1-2	50.0	R	H	T	371	REH	511	A5	30	0.73
52173C1	6275A-1-1	50.0	R	H	T	369	REH	510	A5	31	0.72
52173C1	6275A-1-2	50.0	R	H	T	369	REH	510	A5	31	0.72
52171E2	6276A-1-1	55.0	R	H	T	388	REH	514	A5	24	0.75
52171E2	6276A-1-2	55.0	R	H	T	388	REH	514	A5	24	0.75
52173A6	6321A-1-1	50.0	R	H	T	371	REH	511	A5	30	0.73
52173A4	6323A-1-1	50.0	R	H	T	378	REH	508	A5	33	0.74
52232A1	6460A-1-1	45.0	R	H	T	376	REH	518	A5	30	0.73
52232A1	6460A-1-2	45.0	R	H	T	348	REH	524	A5	30	0.66
51906G2	6467A-1-1	50.0	R	H	T	371	REH	511	A5	28	0.73
51906G2	6467A-1-2	50.0	R	H	T	371	REH	511	A5	28	0.73
52422J1	7378A-1-2	50.0	R	H	T	384	REH	519	A5	28	0.74
52424H2	7380A-1-1	50.0	R	H	T	377	REH	516	A5	29	0.73
52424H2	7380A-1-2	50.0	R	H	T	377	REH	516	A5	29	0.73
52424H1	7421A-1-1	50.0	R	H	T	377	REH	516	A5	29	0.73
52424H1	7421A-1-2	50.0	R	H	T	377	REH	516	A5	29	0.73



DanSteel
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DK - 3300 Frederiksberg

(A01)



(A04)

Inspection representative NLMK DanSteel A/S (A05)

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Date of creation: (A02)

25.01.2018

Certificate No.: (A03)

074820/1

Our order No.: (A06) 7248241

Your order No.: (A07) 1111416

Order registration date: 07.12.2017

Date of dispatch: 25.01.2018 B

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

Heat/slab (B07)	Plate ID (B06)	Thickness mm	Shape (C10)	Loc. (C01)	Dir. (C02)	Yield MPa (C11)	Yield type	UTS Rm MPa (C12)	Elong. type	Elongation % (C13)	Yield/UTS
5242211	7423A-1-1	50.0	R	H	T	384	REH	519	A5	28	0.74
52424G2	7424A-1-1	50.0	R	H	T	377	REH	516	A5	29	0.73
52424G2	7424A-1-2	50.0	R	H	T	377	REH	516	A5	29	0.73
52424G1	7425A-1-1	50.0	R	H	T	377	REH	516	A5	29	0.73
52424G1	7425A-1-2	50.0	R	H	T	377	REH	516	A5	29	0.73
52424G3	7426A-1-1	50.0	R	H	T	389	REH	521	A5	31	0.75
52424H3	7427A-1-1	50.0	R	H	T	389	REH	521	A5	31	0.75
5242213	7429A-1-1	50.0	R	H	T	390	REH	529	A5	30	0.74
52422J3	7430A-1-1	50.0	R	H	T	390	REH	529	A5	30	0.74
52424J1	7451A-1-1	50.0	R	H	T	389	REH	521	A5	31	0.75
52424J2	7452A-1-1	50.0	R	H	T	389	REH	521	A5	31	0.75
52424J3	7453A-1-1	50.0	R	H	T	389	REH	521	A5	31	0.75
52422B1	7584A-1-1	50.0	R	H	T	390	REH	529	A5	30	0.74
52422B3	7586A-1-1	50.0	R	H	T	390	REH	529	A5	30	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



(A01)



(A04)

Inspection representative NLMK DanSteel A/S (A05)

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Date of creation: (Z02) 25.01.2018
Certificate No.: (A03) 07482011

Our order No.: (A08) 7248241

Your order No.: (A07) 1111416

Order registration date: 07.12.2017

Date of dispatch: 25.01.2018 B

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

Heat/slab (B07)	Plate ID (B06)	Position (C01)	Notch (C40)	Shape (C41)	Loc. (C01)	Dir. (C02)	Temp. °C (C03)	SV J (C42)	SV J (C42)	SV J (C42)	AV J (C43)
52173C3	6270A-1-1	1	CV	10x10	H	L	-20	224	233	205	221
52173C3	6270A-1-2	1	CV	10x10	H	L	-20	224	233	205	221
52173A1	6271A-1-1	1	CV	10x10	H	L	-20	229	228	224	227
52173A1	6271A-1-2	1	CV	10x10	H	L	-20	224	233	205	221
52173B6	6272A-1-1	1	CV	10x10	H	L	-20	177	214	209	200
52173B6	6272A-1-2	1	CV	10x10	H	L	-20	177	214	209	200
52171E1	6273A-1-1	1	CV	10x10	H	L	-20	231	226	223	227
52171E1	6273A-1-2	1	CV	10x10	H	L	-20	184	238	184	202
52173C2	6274A-1-1	1	CV	10x10	H	L	-20	177	214	209	200
52173C2	6274A-1-2	1	CV	10x10	H	L	-20	177	214	209	200
52173C1	6275A-1-1	1	CV	10x10	H	L	-20	229	228	224	227
52173C1	6275A-1-2	1	CV	10x10	H	L	-20	229	228	224	227
52171E2	6276A-1-1	1	CV	10x10	H	L	-20	180	199	189	189
52171E2	6276A-1-2	1	CV	10x10	H	L	-20	180	199	189	189
52173A6	6321A-1-1	1	CV	10x10	H	L	-20	177	214	209	200
52173A4	6323A-1-1	1	CV	10x10	H	L	-20	224	233	205	221
52232A1	6460A-1-1	1	CV	10x10	H	L	-20	203	239	228	223
52232A1	6460A-1-2	1	CV	10x10	H	L	-20	192	249	228	223
51906G2	6467A-1-1	1	CV	10x10	H	L	-20	212	171	195	193
51906G2	6467A-1-2	1	CV	10x10	H	L	-20	212	171	195	193
52422J1	7378A-1-2	1	CV	10x10	H	L	-20	229	202	223	218
52424H2	7380A-1-1	1	CV	10x10	H	L	-20	222	194	200	205
52424H2	7380A-1-2	1	CV	10x10	H	L	-20	222	194	200	205
52424H1	7421A-1-1	1	CV	10x10	H	L	-20	222	194	200	205
52424H1	7421A-1-2	1	CV	10x10	H	L	-20	222	194	200	205



DanSteel

(A01)



(A04)

Inspection representative NLMK DanSteel A/S (A05)

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Date of creation: (202) 25.01.2018
Certificate No.: (A03) 07482011

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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 (B07)	Plate ID (B06)	Position (C01)	Notch (C40)	Shape (C41)	Loc. (C01)	Dir. (C02)	Temp. °C (C03)	SV J (C42)	SV J (C42)	SV J (C42)	AV J (C43)
5242211	7423A-1-1	1	CV	10x10	H	L	-20	229	202	223	218
52424G2	7424A-1-1	1	CV	10x10	H	L	-20	222	194	200	205
52424G2	7424A-1-2	1	CV	10x10	H	L	-20	222	194	200	205
52424G1	7425A-1-1	1	CV	10x10	H	L	-20	222	194	200	205
52424G1	7425A-1-2	1	CV	10x10	H	L	-20	222	194	200	205
52424G3	7426A-1-1	1	CV	10x10	H	L	-20	226	189	232	216
52424H3	7427A-1-1	1	CV	10x10	H	L	-20	226	189	232	216
5242213	7429A-1-1	1	CV	10x10	H	L	-20	224	240	201	222
52422J3	7430A-1-1	1	CV	10x10	H	L	-20	224	240	201	222
52424J1	7451A-1-1	1	CV	10x10	H	L	-20	226	189	232	216
52424J2	7452A-1-1	1	CV	10x10	H	L	-20	226	189	232	216
52424J3	7453A-1-1	1	CV	10x10	H	L	-20	226	189	232	216
52422B1	7584A-1-1	1	CV	10x10	H	L	-20	224	240	201	222
52422B3	7586A-1-1	1	CV	10x10	H	L	-20	224	240	201	222

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



DanSteel
(A01)
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Inspection representative NLMK DanSteel A/S (A05)
Zibrandt Greisen
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(A02)

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Date of creation: (Z02)

25.01.2018

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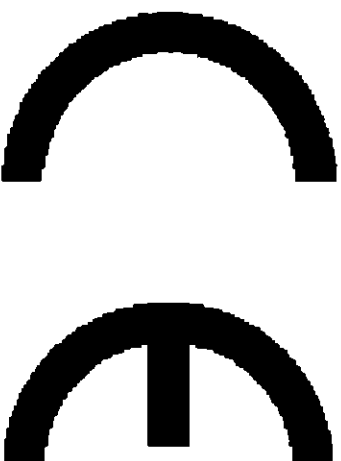
Our order No.: (A08) 7248241

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Date of dispatch: 25.01.2018 B

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).
DOP's could be down-loaded from www.dansteeel.dk



TÜV-NORD 0045-CPR-0554

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



DanSteel
Larsvej 33
DK - 3150 Fredensborg

(A01)



(A04)

Inspection representative NLMK DanSteel A/S (A05)

Zibrandt Greisen

Z. Greisen

