MILL TEST CERTIFICATE

ISIK ÇELİK

THE INSPECTION CERTIFICATE ACCORDING TO EN10204/3.1 CONFORMING TO THE DEFINITION IN EN 10168

CERTIFICATE NO :	258.788
ORDER NO :	201563-2
INVOICE NO :	IHD2021000000047
NAME OF VESSEL :	LARIST MAERSK
VOYAGE NUMBER :	104W

02.02.2021

PAGE : 1 OF 1

FULL NAME AND ADDRESS OF THE MANUFACTURER :	ISIK CELIK SANAYI VE TICARET A.S. HURRIYET MAH, ZONGULDAK CAD. NO: 78 78100 KARABUK TURKEY
NAME AND ADDRESS OF THE EXPORTER:	ISIK CELIK SANAYI VE TICARET A.S. HURRIYET MAH, ZONGULDAK CAD. NO: 78 78100 KARABUK TURKEY
CUSTOMER :	THYSSENKRUPP MATERIALS TRADING NORTH AMERICA 22355 W. ELEVEN MILE RD. SOUTHFIELD, TX 48033 USA TAX ID: 38-0445860 EMAIL: TRADINGOPS@THYSSENKRUPP.COM

DESCRIPTION OF GOODS :	PRIME, NEWLY PRODUCED, HOT ROLLED STEEL EQUAL ANGLES, FLAT BARS THYSSENKRUPP MATERIALS TRADING NORTH AMERICA PO:504601-1r TOTAL THEORETICAL WEIGHT : 54,01 METRIC TONS TOTAL NUMBER OF BUNDLES: 27 BUNDLES DELIVERY TERMS: CFR CY HOUSTON , TX, U.S.A.@Incoterms 2010
QUALITY :	ASTM A36/A6
PRODUCTION STANDARD :	A6

PHYSICAL PROPERTIES										MECHANICAL PROPERTIES FOR EACH HEAT NUMBER										CHEMICAL PROPERTIES FOR EACH HEAT NUMBER														
											TENSION TEST				CHARPY TEST(1)		BEND TEST (2)	RE-BEND TEST (2)	FATIGUE TEST (4)	PRODUCT ANALYSIS													
TEST PIECES NO	HEAT NO	MATERIAL	SIZE(INCHES) / SIZES IN INCHES	LENGTH(FT..)	NUMBER OF PIECES PER BUNDLE (PIECES/BUNDLE)	TOTAL PIECES FOR EACH SIZES	NUMBER OF BUNDLES PER SIZE AND IN TOTAL	WEIGHTS IN METRIC TONS PER SIZE AND IN TOTAL	WORK ORDER	ORIENTATION(3)	YIELD S (Re)	TENSILE S (Rm)	Rm / Re	ELONGATION	TEST PIECES WIDTH (mm)	VALUE (JOULE)				C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Al	N	Fe	CARBON EQUIVALENT
											psi			%						%	%	%	%	%	%	%	%	%	%	%	%	%	%	(CEV)
1	690252	EQUAL ANGLES	1"x1"x1/4"	20	148,000	148	1	2,01	-	L	45877,05	68402,97	1,49	25						0,191	0,152	0,648	0,029	0,031	0,053	0,038	0,031	0,004	0,005	0,002	0,0052	98,616	0,313
2	690274	FLAT BARS	1/2"x1/8"	20	1084,000	1834	1	2,00	-	L	45306,82	67007,56	1,49	28						0,191	0,156	0,631	0,029	0,031	0,052	0,034	0,033	0,005	0,005	0,002	0,0053	98,629	0,313
3	690283	FLAT BARS	3/4"x1/8"	20	680,000	680	1	2,00	-	L	45832,01	68457,84	1,49	27						0,191	0,152	0,641	0,030	0,026	0,058	0,032	0,034	0,005	0,005	0,002	0,0051	98,634	0,313
4	690292	FLAT BARS	1"x1/8"	20	518,000	2590	5	9,99	-	L	46122,08	68457,94	1,48	27						0,192	0,158	0,662	0,032	0,030	0,051	0,032	0,038	0,005	0,005	0,004	0,0048	98,791	0,317
5	690294	FLAT BARS	1"x3/16"	20	346,000	692	2	4,00	-	L	45686,97	68022,82	1,49	28						0,195	0,151	0,652	0,031	0,029	0,057	0,031	0,035	0,008	0,005	0,001	0,0051	98,600	0,319
6	690313	FLAT BARS	1.1/2"x1/8"	20	346,000	1730	5	10,02	-	L	45877,05	68022,82	1,48	29						0,196	0,150	0,649	0,026	0,028	0,048	0,036	0,035	0,006	0,005	0,008	0,0047	98,810	0,319
7	690325	FLAT BARS	2"x1/8"	20	260,000	1300	5	10,03	-	L	45877,05	68457,94	1,49	27						0,190	0,151	0,640	0,034	0,026	0,052	0,031	0,040	0,006	0,004	0,002	0,0049	98,788	0,316
8	690307	FLAT BARS	1.1/4"x3/16"	20	276,000	828	3	5,99	-	L	46267,12	68402,97	1,48	28						0,193	0,152	0,648	0,030	0,024	0,056	0,036	0,035	0,005	0,001	0,001	0,0057	98,805	0,316
9	690315	FLAT BARS	1.1/2"x3/16"	20	230,000	460	2	3,99	-	L	45251,84	67877,78	1,50	29						0,198	0,156	0,647	0,034	0,028	0,054	0,038	0,038	0,004	0,005	0,001	0,0050	98,793	0,322
10	690325	FLAT BARS	2"x3/16"	20	172,000	344	2	3,98	-	L	45541,93	67877,78	1,49	28						0,194	0,152	0,652	0,028	0,026	0,048	0,031	0,036	0,005	0,004	0,003	0,0049	98,821	0,317
11																																		
12																																		
13																																		
14																																		
15																																		
16																																		
17																																		
18																																		
19																																		
20																																		
21																																		

1. WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND TEST RESULTS ARE IN COMPLIANCE WITH THE TERMS OF THE PURCHASE ORDER OR CONTRACT
2. THE CERTIFICATE SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY
3. MATERIAL FREE FROM RADIOACTIVE CONTAMINATION

NOTES:

(1) VALUES ARE AVERAGED, TEST TEMPERATURE +25 C

(2) "L" MEANS "LONGITUDINAL", "T" MEANS "TRANSVERSE"

(3) BEND & RE-BEND TESTS ARE ONLY USED REINFORCING STEEL BARS

(4) NUMBER OF CYCLES > 1 000 000

ALL PRODUCTS HAVE BEEN INSPECTED BY "VITSAN INSPECTION COMPANY - LLOYDS AGENCY

THE BILLETS USED IN THE PRODUCTION OF THE ABOVE MATERIALS WAS MELTED AND POURED IN TURKEY FROM THE KARDEMIR IRON AND STEEL INDUSTRY TRADE & CO. INC.

ISIK ÇELIK SANAYİ VE TICARET A.Ş.

QUALITY CONTROL DEPARTMENT

ISIK ÇELIK SANAYI VE TICARET A.S.
KARABUK