



Bremick Pty Ltd

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ATTESTATION OF PRODUCT CONFORMITY

TEST REPORT NUMBER: 56329-20055-824100241

DATE OF ISSUE: 28/01/2025

CERTIFICATE NUMBER: 00120Q31689R6M/3302

Bremick Fasteners manufactured K0 8.8 STRUCTURAL ASSEMBLIES M20 x 55, job number 56329 to meet the technical requirements of AS/NZS 1252.1:2016, and comply with the verification testing requirements of AS/NZS 1252.2:2016.

Initial Type Third Party Testing has been conducted by Ningbo Zhongji Inspection of Machinery Parts Co, Ltd, an ILAC accredited laboratory.

The Assembly Test requirements (as required by AS/NZS1252.2:2016) have also been conducted by the same ILAC Laboratory.

The remainder of the testing requirements for AS/NZS 1252.2:2016 have been performed by the Bremick NATA accredited Laboratory that complies to ISO/IEC 17025. The Bremick NATA accreditation number is 15567.

Product K0 8.8 STRUCTURAL ASSEMBLIES M20 x 55, job number 56329 has been tested and complies with AS/NZS 1252.1:2016 and AS/NZS 1252.2:2016 and are supported by the attached documentation.

Authorised Bremick representative

A handwritten signature in black ink, appearing to read "Afshin Mohammadiazar".

Afshin Mohammadiazar,
Quality and Technical Manager

Certificate of Conformity of Factory Production Control

This certificate is issued to:

Manufacturer: Bremick PTY LTD

Approved factory No. 3

In compliance with *Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011* (the Construction Products Regulation or CPR), this certificate applies to the construction product:

High-strength Structural Bolting Assemblies for Preloading

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in Annex ZA of the standard(s)

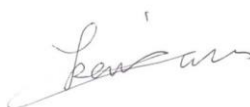
EN 14399-1:2015 High-strength Structural Bolting Assemblies for Preloading
– Part 1: General Requirements

under system 2+ are applied and that the factory production controls fulfil all the prescribed requirements set out above.

The attached Schedule, of the same date, details the manufacturing location(s), harmonised product standard and product parameters and shall form a part of this certificate.

This Certificate will remain valid as long as the test methods and/or factory production control requirements included in the harmonised standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly.

Certificate No:	0343/CPR/SHA/BJG6041035/01
Original Approval:	10 November 2016
Current Certificate:	01 April 2024
Expiry Date:	09 November 2025
LRQA Notified Body Number:	0343



Kevin Wu on behalf of LRQA Nederland B.V.

LRQA Nederland B.V. (Reg. no. 24247948) a private limited company registered in the Netherlands with registered office at George Hintzenweg 77, 3068 AX Rotterdam. A subsidiary of LRQA Group Limited.

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Certificate of Conformity of Factory Production Control No: 0343/CPR/SHA/BJG6041035/01 Schedule

Manufacturer: Bremick PTY LTD

Approved factory No. 3

Manufacturing Location and Products	Standard, Grade and Size
Bremick approved factory 3	
-Bolt	EN14399-3
-Nut	M (12-36) X (30-200) — 8.8/10.9 — HR
	M (12-36) — 8/10—HR
-Bolt	EN14399-4
-Nut	M (12-36) X (30-200) — 10.9 — HV
	M (12-36) — 10 — HV
-Bolt	EN14399-10
-Nut	M (12-36) X (30-200) —10.9 — HRC
	M (12-36) — 10 — HRC
-Washer	EN14399-5
	D (12-36)
-Washer	EN14399-6
	D (12-36)
Remark of finished surface coating type: hot dip galvanizing, electrolytic zinc plating, black/self-color	

Schedule Issue: 03

Date of Schedule Issue: 01 April 2024

LRQA Notified Body Number 0343



Kevin Wu on behalf of LRQA Nederland B.V.

Structural Assembly K0 Range

TEST REPORT No: 56329-20055-824100241 DATE OF ISSUE: 15/01/2025 HEAD No: A10

Product Information

CODE	K08MG200551	JOB NUMBER	56329
DESCRIPTION	K0 8.8 STRUCTURAL ASSEMBLIES M20 x 55	MANUFACTURE LOT QTY	29250
STANDARD	AS 1252.1-2016	TEST QTY	5
QUALITY SYSTEM	GB/T19001-2016/ISO9001:2015	CERTIFICATE NUMBER	00120Q31689R6M/3302

Chemical Composition Complies to ISO898.1-2/AS4291.1-2

PART	HEAT No	C %	Mn %	P %	S %	B %
REQUIRED		0.25-0.55	N/A	0.025 max	0.025 max	0.003 max
BOLT	824100241	0.32	0.81	0.009	0.004	0.0028
REQUIRED		0.58 max	0.25 min	0.060 max	0.150 max	N/A
NUT	G431009406	0.36	0.72	0.017	0.004	0
REQUIRED		N/A	N/A	N/A	N/A	N/A
WASHER	HA3154593	0.44	0.72	0.013	0.003	0

Mechanical Properties Tested to AS/NZS1252.1-2016 Table B1

BOLT			NUT		
TEST	REQUIREMENT	RESULT	TEST	REQUIREMENT	RESULT
Hardness	d <= 16mm 22-32 HRC d > 16mm 23-34 HRC	28-29	Hardness	24-36 HRC	32-33
Wedge Test 6 °	d <= 16mm 800MPa d > 16mm 830 MPa	955-965	Proof Stress (min)	1165 MPa	PASS
Yield	660 MPa	751-759	WASHER		
Proof Stress	d <= 16mm 580 MPa d > 16mm 600 MPa	PASS	Hardness	33-41 HRC	34-35

Hardness Test to ASTM E18 - Wedge test and proof load to ISO 898-1, Nut proof load test to AS 1252.1-2016

Assembly Test Tested to AS/NZS1252.1-2016

TEST CONDITIONS				REQUIREMENT			RESULTS		
CLAMP LENGTH (mm)	No. OF SHIMS	ROTATION SPEED	LUBRICATION CONDITIONS	BOLT LENGTH	MIN NUT Rotation °	TENSION kN MINIMUM	SAMPLE No.	NUT ROTATION DEGREES	BOLT TENSION (kN)
26	1	5	Dry to touch	L<=3d	210	183	SAMPLE 1	220	205
							SAMPLE 2	217	206
							SAMPLE 3	218	204
							SAMPLE 4	219	207.5
							SAMPLE 5	214	209

Visual, Dimensions, Coating & Markings

VISUAL INSPECTION ISO 6157-1. 2.		DIMENSIONS AS/NZS1252-2016	COATING COMPLIES TO AS/NZS1214 REQUIREMENT 50 min		MARKINGS
PART			TYPE	Av µm	
BOLT	PASS	PASS	HDG	70	Bolt : BF 8.8 THREE RADIAL LINES A10
NUT	PASS	PASS	HDG	71	Nut : BF 8 THREE ARC LINES
WASHER	PASS	PASS	HDG	72	Washer : THREE NIBS

This certificate complies with AS/NZS1252.1-2016
The results relate only to the item tested

Name: Afshin Mohammadiazar Signature : 

Position: Quality Manager

TEST REPORT

TEST REPORT No: 56329-20055-824100241

DATE OF ISSUE: 28/01/2025

PRODUCT DETAILS

ITEM CODE	K08MG200551	DESCRIPTION	K0 8.8 STRUCT ASS GAL M20 X 55
BOLT HEAT No.	824100241	MATERIAL STANDARD	AS/NZS 1252-2016
NUT HEAT No.	G431009406	JOB No.	56329
WASHER HEAT No.	24MD1392	HEAD MARK	A10

BOLT

PROOF LOAD

TEST DATE: 15/04/2025

DESCRIPTION	Proof load testing of class 8.8 Bolt to SOP 22-07, AS/NZS 1252.1 and ISO 898.1				
TEST METHOD	Proof load to ISO 898.1 and ISO 6892-1				TEST TEMP ° C
REQUIREMENTS	Minimum hold time 15 seconds - min proof load			147.00 kN	22
	PROOF LOAD (Kn)	INITIAL LENGTH (mm)	FINAL LENGTH (mm)	CHANGE (mm)	COMPLIANCE
SAMPLE 1	PASS	54.05	54.04	-0.01	COMPLIES
SAMPLE 2	PASS	54.11	54.11	0.00	COMPLIES
SAMPLE 3	PASS	54.03	54.03	0.01	COMPLIES

WEDGE LOAD TENSILE TEST

TEST DATE: 15/04/2025

DESCRIPTION	Wedge test of class 8.8 Bolt to SOP 22-05, AS/NZS 1252.1 and ISO 898.1				TEST TEMP ° C
TEST METHOD	Wedge test ISO 898.1 and ISO 6892-1				22
	TENSILE STRENGTH Mpa (Rm)	ULTIMATE TENSILE LOAD Kn (Fm)	WEDGE ANGLE	FRACTURE LOCATION	COMPLIANCE
REQUIREMENTS	830 MIN	203 MIN	10	THREAD	
SAMPLE 1	959	234.90	6	THREAD	COMPLIES
SAMPLE 2	958	234.70	6	THREAD	COMPLIES
SAMPLE 3	960	235.10	6	THREAD	COMPLIES

HARDNESS

TEST DATE: 15/04/2025

DESCRIPTION	K0 8.8 STRUCT ASS GAL M20 X 55- AS/NZS 1252-2016				
TEST METHOD	Rockwell Hardness test using scale "C" from 98N to 147N by the methods of ASTM E18				
REQUIREMENTS	d <= 16mm 22-32 HRC - d > 16mm 23-34 HRC				
	AVERAGE * HARDNESS (HRC)	COMPLIANCE	SAMPLE	AVERAGE * HARDNESS (HRC)	COMPLIANCE
SAMPLE 1	31	COMPLIES	SAMPLE 5	30	COMPLIES
SAMPLE 2	30	COMPLIES	SAMPLE 6	29	COMPLIES
SAMPLE 3	32	COMPLIES	SAMPLE 7	29	COMPLIES
SAMPLE 4	31	COMPLIES	SAMPLE 8	28	COMPLIES

* Average of 3 measurements per sample



M5/M7 Logistics Park, Warehouse 4B,
290 Kurrajong Road, Prestons NSW 2170

Accredited for compliance with
ISO/IEC 17025 - testing.
NATA Accredited Laboratory 15567



TEST REPORT

TEST REPORT No: 56329-20055-824100241

DATE OF ISSUE: 28/01/2025

PRODUCT DETAILS

ITEM CODE	K08MG200551	DESCRIPTION	K0 8.8 STRUCT ASS GAL M20 X 55
BOLT HEAT No.	824100241	MATERIAL STANDARD	AS/NZS 1252-2016
NUT HEAT No.	G431009406	JOB No.	56329
WASHER HEAT No.	24MD1392	HEAD MARK	A10

NUT

PROOF LOAD

TEST DATE: 28/03/2025

DESCRIPTION	Proof load testing of Nut to SOP 22-09, AS/NZS 1252.1 and ISO 898.2		TEST TEMP °C
TEST METHOD	Proof load to ISO 898.2 and ISO 6892-1		24
REQUIREMENTS	Minimum hold time 15 seconds - Minimum proof load		285.40 kN
	PROOF LOAD (Kn)	NUT REMOVED BY FINGER	COMPLIANCE
SAMPLE 1	PASS	YES	COMPLIES
SAMPLE 2	PASS	YES	COMPLIES
SAMPLE 3	PASS	YES	COMPLIES

HARDNESS

TEST DATE: 29/03/2025

DESCRIPTION	K0 8.8 STRUCT ASS GAL M20 X 55- AS/NZS 1252-2016				
TEST METHOD	Rockwell Hardness test using scale "C" from 98N to 147N by the methods of ASTM E18				
REQUIREMENTS	24 - 36 HRC				
	AVERAGE * HARDNESS (HRC)	COMPLIANCE	SAMPLE	AVERAGE * HARDNESS (HRC)	COMPLIANCE
SAMPLE 1	28	COMPLIES	SAMPLE 5	28	COMPLIES
SAMPLE 2	27	COMPLIES	SAMPLE 6	27	COMPLIES
SAMPLE 3	25	COMPLIES	SAMPLE 7	28	COMPLIES
SAMPLE 4	28	COMPLIES	SAMPLE 8	29	COMPLIES

* Average of 3 measurements per sample



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TEST REPORT

TEST REPORT No: 56329-20055-824100241

DATE OF ISSUE: 28/01/2025

PRODUCT DETAILS

ITEM CODE	K08MG200551	DESCRIPTION	K0 8.8 STRUCT ASS GAL M20 X 55
BOLT HEAT No.	824100241	MATERIAL STANDARD	AS/NZS 1252-2016
NUT HEAT No.	G431009406	JOB No.	56329
WASHER HEAT No.	24MD1392	HEAD MARK	A10

WASHER

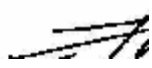
HARDNESS

TEST DATE: 15/04/2025

DESCRIPTION	K0 8.8 STRUCT ASS GAL M20 X 55- AS/NZS 1252-2016				
TEST METHOD	Rockwell Hardness test using scale "C" from 98N to 147N by the methods of ASTM E18				
REQUIREMENTS	33 - 41 HRC				
	AVERAGE * HARDNESS (HRC)	COMPLIANCE	SAMPLE	AVERAGE * HARDNESS (HRC)	COMPLIANCE
SAMPLE 1	36	COMPLIES	SAMPLE 5	33	COMPLIES
SAMPLE 2	38	COMPLIES	SAMPLE 6	36	COMPLIES
SAMPLE 3	38	COMPLIES	SAMPLE 7	34	COMPLIES
SAMPLE 4	36	COMPLIES	SAMPLE 8	34	COMPLIES

* Average of 3 measurements per sample

Signed:


Afshin Mohammadiazar

Accredited for compliance with
ISO/IEC 17025 - testing.
NATA Accredited Laboratory 15567



Issue Date: 28/01/2025

Note that this report is based on the products supplied to the laboratory and it remains the responsibility of the client to ensure the samples presented are representative of the whole batch. Reproduction of this report, other than in its entirety, must be approved by Bremick Pty Ltd

The results relate only to the item tested



M5/M7 Logistics Park, Warehouse 4B, 290 Kurrajong Road, Prestons NSW 2170



中国认可
国际互认
检测
TESTING
CNAS L4800

Ningbo Zhongji Inspection of Machinery Parts Co.,Ltd

TEST REPORT

Report number: NBZJB202411138

Page 1 of 2

Receiving Date:	18, Nov., 2024
Test Date:	19, Nov., 2024~20, Nov., 2024
Sample Source:	Supplied by client
Name of Client	Bremick Pty Ltd
Address	88 Dalmeny Avenue, Rosebery NSW 2018
Test Requirements	AS/NZS 1252.1:2016 The technical requirement supplied by client

Description	M20x55 8.8 HDG	Number of Sample(s)	3 PCS
Dimension	M20x55	Class	Bolt class 8.8 Nut class 8
Part Number	K08MG200551	PO No	56329
TRACE No	/	Heat Treatment Lot number	/
(Steel) Heat number	B:824100241 N:G431009406		

The information above is provided by the client. Our laboratory is not responsible for its authenticity



Approved by
Manager

Audit by
Engineer



Test by
Engineer



中国认可
国际互认
检测
TESTING
CNAS L4800

Ningbo Zhongji Inspection of Machinery Parts Co.,Ltd

TEST REPORT

Report number: NBZJB202411138

Page 2 of 2

NO.	Test Items	Test Method	Requirement	Test Results		Item Conclusion
1	Assembly test	EN 14399-2:2015	Bolt tension force ≥ 183 kN Nut rotation Degrees ≥ 210°	1A	230.5 kN 210°	Pass
				2A	226.0 kN 210°	Pass
				3A	215.1 kN 210°	Pass
	Equipment : Microcomputer controlled torsion tester; NBZJ/SB-Z-JC-110 WNJ-3000; Validity Of Calibration: 2025.05.16					



THE END



客户名称 Sold To		上海资申实业有限公司							产品名称 Product		热轧盘条 Hot rolled wire rods												
收货单位 Consignee		上海资申实业有限公司							提货编单号 Delivery no.		FB2411010723			证明书编号 Certificate no.		241103Q00009							
执行标准 Spec.		ZTJX-24-5021	牌号 Grade	10B33	加工用途 Purpose		客户编号 Customer no.		0201187			订单编号 Order no.		O2411011001									
							客户采购案号 Cust Order No.					证明书日期 Issue Date		20241103									
生产许可证号 Approvalcerf No.			钢筋标识 Bar Mark				交货状态 Cond. Of Supply		热轧			车船号 Train/Ship No.		苏GX6900									
项次 Item No.	轧制序号 Lot No.	炉号 Heat No.	尺寸及规格Material Description			化学成分 % Chemical Analysis											*A01 屈服 强度 (Re)	*A02 抗拉 强度 (Rm)	*A03 断后 伸长 率(A)	*A05 断面 收缩 率(Z)	*E09 总脱 碳层 深度	*O01 冷顶 锻试 验	
			产品尺寸 Product Size	数量 Qty	重量 Weight	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Al	Ti							B
						X10 ⁻²	X10 ⁻²	X10 ⁻²	X10 ⁻³	X10 ⁻³	X10 ⁻²	X10 ⁻²	X10 ⁻²	X10 ⁻³	X10 ⁻³	X10 ⁻⁴							MPa
规格 Specification						30 36	30 MAX	70 100	25 MAX	25 MAX	10 30	20 MAX	20 MAX	10 MAX	20 MIN	20 MIN	8 35					0.2 MAX	
001	G2410090023	824100241	Φ20mm	12	28.987	32	4	81	9	4	16	2	2	0	48	43	28	333 328	586 573	24.5 25	40 39	0.12 0.12	OK OK OK
001	K2408120011	824080272	Φ20mm	1	2.434	32	10	78	9	3	17	2	2	0	27	37	25	326 320	590 589	26.5 26	43 44	0.1 0.12	OK OK OK
001	K2409240005	824091138	Φ20mm	1	1.417	33	8	77	9	2	17	1	2	0	25	37	23	318 317	570 575	23.5 23.5	41 40	0.09 0.1	OK OK OK
TOTAL:						14	32.838																
注释 note		*A01=ReL;*A03=A5.65;*O01=1/2: 外观、形状、尺寸和标识依据中间检查记录判定为合格 ACCORDING TO PROCESS INSPECTION RECORD,VISUAL INSPECTION(SURFACE&SHAPE) AND CHECK OF DIMENSION&MARK: OK 注：产品牌号以质量证明书为准																					
CE 0038	1、兹证明本表所列产品，均依材料规格制造及试验，并且符合规范之要求。11月、12月、1月、2月、3月时效12天，其它月份时效7天。It is to certify that the products described herein have been manufactured and tested with satisfactory results in accordance with the requirements of the material specification. The aging time should be 12 days during November, December, January, February and March , and 7 days during the other months. 2、品质证明书影本不作有效证明文件。The copy of this Certificate is invalid except stamped. 3、用户验收后使用，如有异议应详细告知其牌号，炉号，并保留实物及标志。Please inform us the steel grade and the heat number of under qualifiedmaterial(s) found in inspection on time, and keep the material(s) and the marking card.												质量管理处 GENERAL MANAGER, REASEARCH and DEVELOPMENT DEPARTMENT:					综合判定 Comprehensive judgment					
																		合格					



江苏沙钢集团有限公司
Jiangsu Shagang Group CO., LTD.
高速线材质量证明书

SG03B-1914E

江苏省张家港市锦丰镇 邮编: 215625
Jinfeng, Zhangjiagang, Jiangsu, P. R. CHINA
TEL: (0512) 58568866, 58568829
FAX: (0512) 58550366, 58550818

沙 钢

High-speed Wire Rod Quality Certificate

订货单位CUSTOMER	宁波办事处	用户代码CUSTOMER CODE		合同号CONTRACT NO.	X4BD0002Q006	
牌号STEEL GRADE	SWRCH35K	提货单号DELIVERY	241122268001	发货日期DATE OF DELIVERY	20241125	
交 货 标 准 SPECIFICATION	Q/320582 SGY303-2024	质证书号CERTIFICATE NO.	2411222680 012179	1	签发日期DATE OF ISSUE	20241125
		用途USE			精炼方式REFINING MATHOD	炉外精炼

序号 NO	炉号 HEAT NO.	直径 Dia. mm.	盘数 Coils	重量 kg	化学成分CHEMICAL COMPOSITION %										拉伸试验TENSILE TEST				顶锻 试验 H. T.	硬度 试验 HRB	脱碳层 D. of. D	晶粒度 Micro- Grade	索氏体 Sorbite %	备注 REMARKS
					C	Si	Mn	P	S	Cr	Ni	Cu			Rm	ReL	A11.3	Z						
					2	2	2	3	3	2	2	2												
					1= $\times 10^{-1}$ 2= $\times 10^{-2}$ 3= $\times 10^{-3}$ 4= $\times 10^{-4}$ 5= $\times 10^{-5}$										MPa		%							
1	G431011188	20.0	1	2256	35	14	70	19	1	2	1	1			587			53.0	0	81.00	0.01	9		
2	G431009406	20.0	20	45347	36	14	72	17	4	3	1	2			587			53.0	1/3	83.00	0.01	9		
															591			50.0	0	80.00	0.01	8		
3	G431011194	20.0	7	15837	36	14	72	17	4	3	1	2			591			50.0	1/3	81.00	0.01	9		
															591			50.0	0	80.00	0.01	8		
4	G433008174	20.0	1	2274	35	12	74	18	3	3	1	1			591			50.0	1/3	81.00	0.01	9		
															597			44.0	0	80.00	0.01	8		
															597			44.0	1/3	83.00	0.01	9		

合计 Total		29	65714	说明 NOTES	1. 本质量证明书适用于合金类线材; 本产品不含有任何辐射元素。It is guaranteed that the products don't contain radiochemical imparities. 3. We, SHAGANG, hereby certify that the products specified in the present certificate have been fully processed in china. (facility and address information is stated above). *1. H. T. —Head-colding Test; *2 D. of D. —Depth of Decarburization;																	
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综合判定 FINAL RESULT	合格 PASS	注意事项 ATTENTIVE ITEMS	1. 质量证明书复印件不作有效证明文件, 除非盖章; The copy of this Certificate is not valid except stamped. 2. 用户验货后使用如有异议应及时告知炉号、牌号, 并保留实物及标志。Please inform us the steel grade and the heat number of under quanlified material(s) found in inspection on time, and keep the material(s) and the marking card																质检印章 SEAL		签证人 VISA
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鞍钢股份有限公司
Angang Steel Company Limited

产品质量证明书

INSPECTION CERTIFICATE



中国营口市鲅鱼圈区 邮编 115007
Bayuquan District 115007 Yingkou.P.R.China
Tel 0086 - 0417 - 8684066

制造厂: 鞍钢股份有限公司鲅鱼圈钢铁分公司热轧部
Manufacturer: Angang Steel Company Ltd. Hot Strip Making Dept. of Bayuquan Iron & Steel Subsidiary

正页 第 1 页, 共 1 页

订货单位 Buyer	德邻陆港供应链服务有限公司	产品名称 Product	热轧直发卷 Hot rolled steel strip			证书编号 Certificate No.	B02404030008
收货单位 Consignee	德邻陆港供应链服务有限公司	交货状态 Delivery Condition	热轧	合同编号 Contract No.	B2430039002		
客户名称 Customer	德邻陆港供应链服务有限公司	计重方式 Weight Mode	实际重量 Actual Weight	购单号 Purchase No.			
标准 Specification	ATQ 208-23	发货日期 Date of Delivery	20240403	商检批次号 Ins.Lot.No.			
牌号 Grade	45	规格 Nominal Dimension	厚度×宽度×长度 Thick×Width×Length	4×1250×C mm×mm×mm			

序号 No.	物料号 Pack No.	熔炼号 Heat No.	重量(kg) Weight	件数 Pieces	化学成分 Chemical Composition (%)																			
					成分 类型 C. C. T.	C	Si	Mn	P	S														
						10 -3	10 -3	10 -2	10 -3	10 -3														
1	4B14X03400	24MD1400	24380	1	0	467	198	64	10	7														
2	4B14X03500	24MD1400	24410	1	0	467	198	64	10	7														
3	4B14X03700	24MD1392	24590	1	0	482	202	64	11	2														
4	4B14X03900	24MD1399	24540	1	0	472	203	64	9	9														
5	4B14X04000	24MD1399	24220	1	0	472	203	64	9	9														
合计Total		总重量Total Weight	122140	总毛重Total Gross Weight		122140		总件数 Total Pieces		5														

序号 No.	物料号 Pack No.	批号 Batch No.	取样 位置 Sample Location	拉伸试验 Tensile Test					冷弯试验 Bend Test	冲击试验 Impact Test				冲击试样尺寸 Sample Size(mm)		落锤试验 DWTT				硬度 Hardness																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
				标距: 5.65×SQRT(S0)						a= d=	方向 Direction	温度 ℃	冲击功 (J) Impact Energy				冲击剪切面积 Impact SA %				方向 Direction	温度 ℃	剪切比 SA %			HRB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
				方向 Direction	屈服 Y.S.	抗拉 T.S.	伸长率 EL (%)	屈强比 Y.S./T.S.	1				2	3	Ave	1	2	3	Ave	1			2	Ave																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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备注 Remarks	上述元素仅列出参与复合公式的有意添加元素, 但复合元素结果是严格按公式计算得出。	说明 Description	本产品已按上述标准制造和检验, 其结果符合要求。特此证明。贵方如查询有关问题, 请与我公司联系。 We hereby certify that material described herein has been manufactured and tested in accordance with requirements of the above material specification. If you have any questions, please contact our company.
注释 Notes	成分类型 (C.C.T.=Chemical Composition Type) : 0:熔炼分析 Heat Analysis 1:产品分析Product Analysis; 拉伸试验 (Tensile Test) : Y.S.=Yield Strength T.S.=Tensile Strength EL=Elongation G.L.=Gauge Length; 取样位置 (Sample Location): B=Bottom 尾部 T= Top 头部 M= Middle 中部; 方向 (Direction): L= Long(纵向) T= Trans(横向) 3= 30° To The Rolling Direction(与轧制方向成30°) 8= Z向 9= 纵向+横向 0= 与纵向成60度 D= 45° To The Rolling Direction(与轧制方向成45°)。	质量保证负责人 Quality Manager	



鞍钢股份有限公司
Angang Steel Company Limited

产品质量证明书

INSPECTION CERTIFICATE



中国营口市鲅鱼圈区 邮编 115007
Bayuquan District 115007 Yingkou.P.R.China
Tel 0086 - 0417 - 8684066

制 造 厂 : 鞍钢股份有限公司鲅鱼圈钢铁分公司热轧部
Manufacturer: Angang Steel Company Ltd. Hot Strip Making Dept. of Bayuquan Iron & Steel Subsidiary

副页 第 1 页, 共 1 页

订货单位 Buyer	德邻陆港供应链服务有限公司	产品名称 Product	热轧直发卷 Hot rolled steel strip			证明书编号 Certificate No.	B02404030008
收货单位 Consignee	德邻陆港供应链服务有限公司	交货状态 Delivery Condition	热轧	合同编号 Contract No.	B2430039002		
客户名称 Customer	德邻陆港供应链服务有限公司	计重方式 Weight Mode	实际重量 Actual Weight	购单号 Purchase No.			
标准 Specification	ATQ 208-23	发货日期 Date of Delivery	20240403	商检批次号 Ins.Lot.No.			
牌号 Grade	45	规格 Nominal Dimension	厚度×宽度×长度 Thick×Width×Length	4*1250*C mm*mm*mm			

序号 No.	物料号 Pack No.	批号 Batch No.	取样 位置 Sample Location	非金属夹杂物 Non-Metallic Inclusion										晶粒度 Grain Size	带状 组织 Banded Structure	低 倍 Macrostr - ucture	断口 Fracture					
				A		B		C		D		DS	形貌1 纤维率				形貌2 分层状	形貌3 石板状	形貌4 裂开流线	形貌5 白点	形貌6 夹杂物	
				粗 Thick	细 Thin	粗 Thick	细 Thin	粗 Thick	细 Thin	粗 Thick	细 Thin											
1	4B14X03400	H524308699	B																			
2	4B14X03500	H524308699	B																			
3	4B14X03700	H524308709	B																			
4	4B14X03900	H524308719	B																			
5	4B14X04000	H524308719	B																			

序号 No.	物料号 Pack No.	批号 Batch No.	取样 位置 Sample Location	氢致开裂试验 HIC Test												硫化物应力开裂(SSC)		脱 碳 Decarboni - zation		
				板宽位置 Width Position	裂纹敏感率 CSR %				裂纹长度率 CLR %				裂纹宽度率 CTR %				板宽位置 Width Position	结果 Result	单 Single	双 Double
					1	2	3	Ave	1	2	3	Ave	1	2	3	Ave				
1	4B14X03400	H524308699	B														0.01	0.02		
2	4B14X03500	H524308699	B														0.01	0.02		
3	4B14X03700	H524308709	B														0.01	0.02		
4	4B14X03900	H524308719	B														0.01	0.02		
5	4B14X04000	H524308719	B														0.01	0.02		

备注 Remarks	上述元素仅列出参与复合公式的有意添加元素, 但复合元素结果是严格按公式计算得出。	说明 Description	本产品已按上述标准制造和检验, 其结果符合要求。特此证明。贵方如查询有关问题, 请与我公司联系。 We hereby certify that the material described herein has been manufactured and tested with satisfactory results in accordance with requirements of the above material specification. If you have any questions, please contact our company.
注释 Notes	成分类型 (C.C.T.=Chemical Composition Type) : 0:熔炼分析 Heat Analysis 1:产品分析Product Analysis; 拉伸试验 (Tensile Test) : Y.S.=Yield Strength T.S.=Tensile Strength EL=Elongation G.L.=Gauge Length; 取样位置(Sample Location): B=Bottom 尾部 T= Top 头部 M= Middle 中部; 方向(Direction): L= Longi(纵向) T= Trans(横向) 3= 30° To The Rolling Direction(与轧制方向成30°) 8= Z向 9= 纵向+横向 0= 与纵向成60度 D= 45° To The Rolling Direction(与轧制方向成45°)。	质量保证负责人 Quality Manager	



产品质量证明书

CERTIFICATE OF PRODUCT QUALITY



宁波钢铁有限公司
Ningbo Iron & Steel Co.,Ltd
中国 宁波市北仑区霞浦临港二路168号
No.168,Lingang 2 Road,Xiapu,Beilun District,Ningbo,China
TEL: 86-574-86859187 FAX: 86-574-86859900-1750

H0299

客户名称 SOLD TO	浙商中拓集团股份有限公司				产品名称 PRODUCT	热轧钢卷 Hot Rolled Coil			
收货人名称 SEND TO	浙商中拓集团股份有限公司				应收凭单号码 AR.NO.	AR2310007003	证明书编号 CERTIFICATE NO.	231031H0299	
标准 SPEC.	GB/T 711-2017; 45; 建议不露天储存				牌号 STEEL GRADE	客户编号 CUSTOMER NO.	00107531	订单编号 ORDER NO.	32N01222J
					45	交运日期 SHIPPING DATE	2023/10/31	证明书日期 T/C ISSUE DATE	2023/10/31
检验 INSP.	NINGBOSTEEL MILL INSPECTION			工厂许可证编号 WORKS APPROVAL LETTER NO.	客户采购案号 CUST. ORDER NO.		T/C	1/0	

项次 ITEM NO.	产品序号 SLAB NO.	钢卷编号 COIL NO.	熔炼号 HEAT NO.	尺寸及规格 MATERIAL DESCRIPTION					化学成分 CHEMICAL ANALYSIS %								拉伸试验 A01 G.L.=565S			备注 REMARK
				厚度 THICK mm	宽度 WIDTH mm	长度 LENGTH mm	数量 QTY	重量 WEIGHT t	C	Si	Mn	P	S	Cr	Ni	Cu	屈服 YS	抗拉 TS Rm	伸长 率 EL A	
14	HA3154593	3A115067	N326467	4.00	1250	C	1	21.840	44	28	72	13	3	1	0	1		691	27.5	
				TOTAL: 1 21.840																

SURVEYOR		注释 NOTES	A01 GAGE LENGTH 标距 Rm等同σb 565S: 5.65*SQRT(S) A 原始标距为5.65sqrt(S)的断后伸长率 化学成分: 熔炼分析
		兹证明本表所列产品, 均依材料规范制造及试验, 并且符合规范的要求。	
		WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY IN ACCORDANCE WITH THE REQUIREMENT OF THE ABOVE MATERIAL SPECIFICATION.	
			

Made in China

CN-code 722830

We herewith confirm that no russian raw material was used

23105945