

INSPECTION CERTIFICATE

In accordance with EN 10204: 3.1

Customer: **PRETEC AS**

Purchasing order No: **EX2019089/193506**

Order Quantity: **5000pcs**

Part Name: **M20 NC-Bolt L=5000**

Material: **Rebar Bolt:HRB500E acc. to GB 1499.2-2018**

Grouting head:20;Steel tube:Q235B

Nut: CK35

Finishing: **Pc-Coat**

Article No: **5060004**

Drawing No: **PTC-173 of Jan.23.2019;PTC-173-1 of Jun.18.2015**

PTC-173-3 of May.28.2015;PTC-173-4 of Jan.23.2019



No. 9, Jinchang Rd,Haining

Zhejiang Pro. - China

www.chinapretec.com

Certificate No:23929

Date:2020-01-09

Chemical composition analysis for material,ref certificate from mill:191213C00246

Batch No.	B31912050014	C	Si	Mn	P	S	CEV
Requirements (Before processing)	Max	0.25	0.80	1.60	0.045	0.045	0.55
	Min	/	/	/	/	/	/
Test Report	/	0.22	0.46	1.45	0.027	0.016	0.49

Mechanical tests for material,ref certificate from mill:191213C00246

Batch No.	B31912050014	Yield ReH(MPa)	Tensile Rm(MPa)	Agt %
Requirements (Before processing)	Min	500	600	8
	Max	650	/	/
Test Report	/	530	700	13.1
	/	535	710	13.0

Chemical composition analysis for grouting head material,ref certificate from mill:2017-2-12

Batch No.	/	C	Si	Mn	P	S
Requirements	Max	0.20	0.35	1.40	0.045	0.045
	Min	/	/	/	/	/
Test Report	/	0.15	0.30	0.55	0.045	0.045

Mechanical tests for grouting head material,ref certificate from mill:2017-2-12

Batch No.	/	Yield	Tensile	Elongation
		Rp0.2(MPa)	Rm(MPa)	(EL)%
Requirements	Min	235	375	9
	Max	/	/	/
Test Report	/	235	410	31

Chemical composition analysis for steel tube material,ref certificate from mill:TS2510G68-2020

Batch No.	/	C	Si	Mn	P	S
Requirements	Max	0.24	0.37	0.62	0.035	0.035
	Min	0.17	0.17	0.35	/	/
Test Report	/	0.20	0.23	0.47	0.018	0.006

Zhejiang Pretec Metal Products Co., Ltd.

TEL:+86-573-87878119/80700633 FAX:+86-573-87878229

Mechanical tests for steel tube material,ref certificate from mill:TS2510G68-2020

Batch No.		Yield	Tensile	Elongation
		Rp0.2(MPa)	Rm(MPa)	(EL)%
Requirements	Min	245	410	25
	Max			
Test Report		316/335	472/500	26/28

Chemical composition analysis for nut material,ref certificate from supplier:

Batch No.	G831006247	C	Si	Mn	P	S
Requirements	Max	0.38	0.35	0.90	0.035	0.035
	Min	0.32	0.10	0.60		
Test Report		0.36	0.14	0.76	0.012	0.002

Mechanical property form the test report:B2019050620

Batch No.		Hardness HRC	Proof Load Test N
Requirements	Min	19	225400
	Max	36	
Test Report		25.5	ok

Mechanical property for plastic tube form the test :

Batch No.		Burst Pressure Bar
Requirements	Min	17
	Max	
Test Report		23

Inspection of execution:

DIM.	Rebar bolt				HDG	Epoxy Coating
	Middle Dia	L	Straightness	Thread L	Thickness	Thickness
Spec/mm	17.681-17.851	5000±6	8	150 +10/-0	≥85um	≥70um
1	17.78	4998	ok	156	96	92
2	17.77	5001	ok	157	88	100
3	17.79	4997	ok	156	102	98
4	17.81	5002	ok	155	94	92
5	17.80	5000	ok	158	111	89

Inspection of execution:

DIM.	Half ball					HDG	Epoxy Coating
	Dim	L1	Hole 1	Hold 2	outer dim	Thickness	Thickness
Spec/mm	Ø38±0.2	45±3	Ø15+0.5/-0	22.5+0.5/-0	65+1.5/-1	≥70um	≥70um
1	38.0	45.3	14.9	22.8	65.4	108	82
2	38.1	45.4	15.0	22.6	65.6	95	105
3	38.0	45.3	14.9	22.6	65.3	93	97
4	37.9	45.5	15.1	22.8	65.5	91	99
5	38.0	45.4	15.0	22.7	65.2	87	100

Zhejiang Pretect Metal Products Co., Ltd.

TEL:+86-573-87878119/80700633 FAX:+86-573-87878229

Inspection of execution:

DIM.	Nut				HDG	Epoxy Coating
	nut s	nut e	nut m	Thread	Thickness	Thickness
Spec/mm	29.16-30	min 32.95	20±1	M20+2/10	≥70um	≥70um
1	29.41	33.86	19.8	ok	76	104
2	29.32	33.87	20.1	ok	94	96
3	29.38	33.79	19.9	ok	86	100
4	29.40	33.67	20.0	ok	101	86
5	29.42	33.72	19.7	ok	77	103

Inspection of execution:

DIM.	Plastic tube			
Spec/mm	109	4577±10	Min 1.8	φ 32.8+0.5
1	105	4581	2.1	33.3
2	105	4578	2.1	32.9
3	105	4577	2.0	33.1
4	106	4576	2.1	33.0
5	106	4579	2.0	33.2

General appearance:

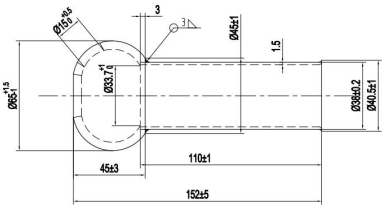
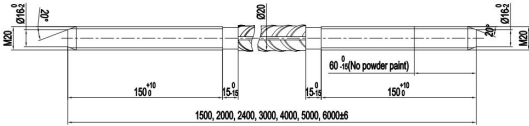
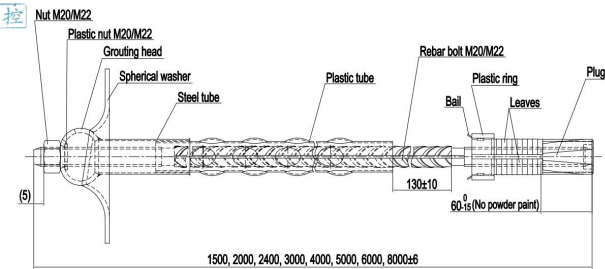
Pc-Coat acc.to ISO 1461:2009/ Q/PTC-T19A:

☒ approved

☐ not approved

☒ approved

☐ not approved



All the data on the above form is real and valid.

Conclusion :

☒ Yes

☐ No

3.1 Inspection certificate are subject to change without notice.

Works inspector:Echo Xiang

Checked by:Jianbo Gu

Date:2020-01-09

Zhejiang Pretec Metal Products Co., Ltd.

TEL:+86-573-87878119/80700633 FAX:+86-573-87878229