

***Yidao* 倚道**

邯郸市倚道金属制品有限公司
HANDAN YIDAO METAL PRODUCTS CO.,LTD

Quality · Reliability · Innovation

精益求精 以质取胜



公司简介 \

邯郸市倚道金属制品有限公司，地处全国最大的标准件生产基地，地理位置优越，交通便利，是一家致力于高标准紧固件生产、科研、销售于一体的大型综合企业。

公司主营精轧螺纹钢，精轧螺纹钢配套锚具，精轧螺母，连接器，螺旋筋，钢绞线锚具，高强度钢结构螺栓，钢结构扭剪型螺栓，地脚螺栓预埋件等产品。

自1995年建厂开始，就把产品质量作为企业的生命线，选用优质钢材，引进先进的生产设备和工艺，聘用高级技术人才，工人全部培训上岗，道道工序严把质量关。公司拥有大型热锻设备、攻丝机、冲床、多工位车床、全自动网带炉、拉力机、硬度仪等检测设备。

2014年成立外贸部，迄今为止已出口到40多个国家。

COMPANY PROFILE \

Handan Yidao Metal Products Co., Ltd. is located in the largest standard parts production base in China, with a superior geographical location and convenient transportation. It is a large-scale comprehensive enterprise dedicated to the production, research, and sales of high-standard fasteners. The company primarily specializes in high-quality rolled deformed steel bars, supporting anchors for these bars, precision-rolled nuts, connectors, spiral reinforcement, steel strand anchors, high-strength steel structure bolts, steel structure torsion shear bolts, anchor bolt embedments, and other related products. Since its establishment in 1995, the company has regarded product quality as its lifeline. It selects high-quality steel, introduces advanced production equipment and processes, employs senior technical talents, and trains all workers before they take up their posts. Each process strictly controls quality. The company possesses large-scale hot forging equipment, threading machines, punching machines, multi-station lathes, fully automatic mesh belt furnaces, tensile machines, hardness testers, and other testing equipment. The Foreign Trade Department was established in 2014, and has since exported to over 40 countries.

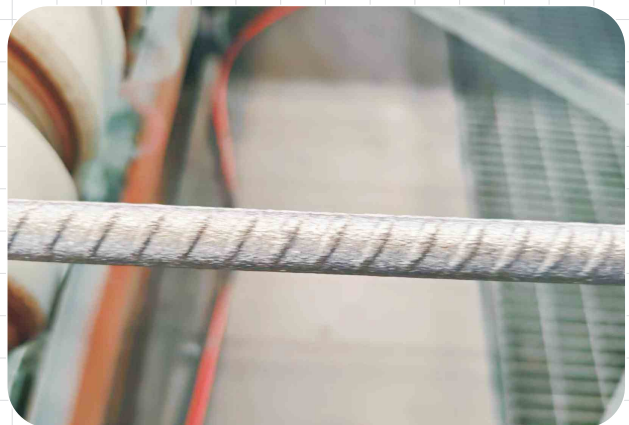


环氧钢筋生产 \

- **工艺流程**：表面处理 → 中频加热 → 静电喷涂 → 高温固化 → 质量检验
- **表面处理**：对普通钢筋进行除锈、确保表面洁净无杂质。
- **中频加热**：采用两套单对单加热装置，避免加热不均
- **静电喷涂**：将环氧树脂粉末通过高压静电喷涂至钢筋表面，粉末颗粒均匀吸附并熔融结合。
- **高温固化**：在230℃左右高温下固化，形成0.15-0.30mm连续、致密的环氧树脂保护层。
- **质量检验**：严格检测涂层厚度、附着力及耐腐蚀性，确保产品符合国家标准。

PRODUCTION OF EPOXY STEEL BARS \

- **Process flow** : Surface treatment, intermediate frequency heating, electrostatic spraying, high temperature curing, quality inspection.
- **Surface treatment** : Remove rust from ordinary steel bars and ensure that the surface is clean and free of impurities.
- **Intermediate frequency heating**: Using two sets of single to single heating devices to avoid uneven heating
- **Electrostatic spraying** : Epoxy resin powder is sprayed onto the surface of steel bars through high-voltage electrostatic spraying, and the powder particles are uniformly adsorbed and fused together.
- **High temperature curing** : Curing at around 230 °C to form a continuous and dense epoxy resin protective layer of 0.15-0.30mm.
- **Quality inspection** : Strictly test the coating thickness, adhesion, and corrosion resistance to ensure that the product meets national standards.





技术优势 \

- **耐腐蚀性**：环氧涂层隔绝水、氧气及氯化物，抗腐蚀寿命延长50年以上。
- **物理性能**：涂层延性大，可承受短半径180°弯曲无裂缝，与混凝土粘结力强。

TECHNICAL ADVANTAGES \

- **Corrosion resistance** : The epoxy coating isolates water, oxygen, and chloride, extending the corrosion resistance life by more than 50 years.
- **Physical properties** : The coating has high ductility, can withstand short radius 180 ° bending without cracks, and has strong bonding strength with concrete.

核心设备 \

- **智能除锈系统**：高效清除钢筋表面氧化层，提升涂层附着力。
- **静电喷涂设备**：精准控制粉末喷涂量，确保涂层均匀性。
- **中频加热炉**：稳定温度控制，保障涂层性能一致性。

CORE EQUIPMENT \

- **Intelligent rust removal system** : Efficiently removes the oxide layer on the surface of steel bars and improves coating adhesion.
- **Electrostatic spraying equipment** : Precise control of powder spraying volume to ensure coating uniformity.
- **Intermediate frequency heating furnace** : Stable temperature control to ensure consistent coating performance.

喷砂机

Sand Blasting Machine



静电喷涂

Electrostatic spraying



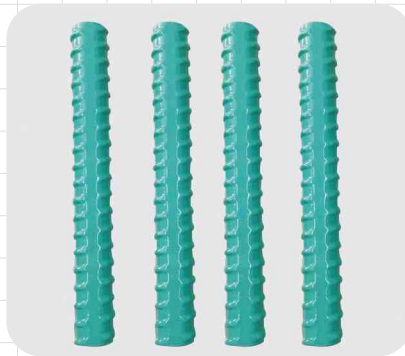
环氧表面钢筋

Rebar in Epoxy surface



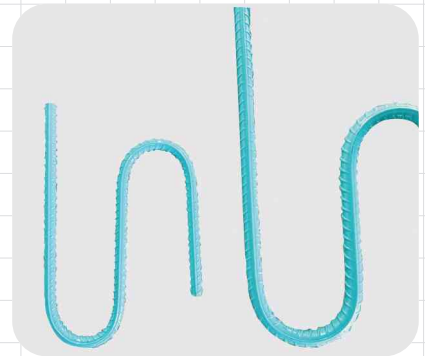
环氧表面螺纹棒

Thread bar in Epoxy surface



弯曲测试

Bending test



钢筋: HRB400, HRB400E, HRB500,
HRB500E, HPB300

直径: $\Phi 6$ - $\Phi 50$

环氧涂层厚度: 100-400um

标准: • A775/A775M-19 • IS 13620
• GB/T 25826-2010 • JG/T 502-201

Rebar: HRB400, HRB400E, HRB500,
HRB500E, HPB300

Diameter: $\Phi 6$ - $\Phi 50$

Epoxy surface thickness: 100-400um

Standard: • A775/A775M-19 • IS 13620
• GB/T 25826-2010 • JG/T 502-201

螺纹钢筋: 从500级到1230级

直径: $\Phi 15$ - $\Phi 75$

应用: •防浮锚杆 •桥梁 •铁路 •海港码头 •核电站
•污水池 •耐腐蚀石化和化学工程项目等

Thread bar: From grade 500 to grade 1230

Dimeter: $\Phi 15$ - $\Phi 75$

Application: •Anti-floating anchor bar •Bridges •Railways
•Seaport terminals •Nuclear power plants •Sewage tanks
•Corrosion resistance petrochemical and chemical engineering projects, etc

Quality Control Of Epoxy Coated Bar

环氧涂层钢筋质量控制

Inspection Items and Quantities for Pre-treatment of Coated Reinforcing Bars			
Serial Number	Inspection items	Test quantity (times/Shift)	Test method
1	Average Roughness	3	GB/T 8923.1
2	Chloride Attachment	3	Chloride Test Strip Method
3	Surface Contaminants	3	reference GB/t 502 ANNEX B.2
4	Residual amount of iron oxide scale	3	reference GB/t 502 ANNEX B.2
5	Visual assessment of rust removal grade	3	Magnifying glass or microscope
6	The surface temperature of the barsbefore Epoxy	16	Infrared Thermometer

Inspection Items and Quantities for Painting Process			
Product category	Inspection items	Inspection frequency	Test method
Epoxy-coated steel bars	Coating thickness	2 Pcs/2 h	As standard GB/T 13452.2-2008
	Coating continuity	2 Pcs/2 h	DC Micropore Detector
	Coating flexibility	1Pc/4 h	Bending machine
Galvanized + Epoxy-coated bars	Thickness of zinc layer and epoxy layer	2 Pcs/2 h	As standard GB/T 13452.2-2008
	Coating continuity	2 Pcs/2 h	DC Micropore Detector
	Coating flexibility	1 Pc/4 h	Bending machine

Inspection Items and Quantities for Factory Release			
Product category	Inspection items	Inspection frequency	Test method
Epoxy-coated steel bars	Appearance	2	Visual Inspection
	Coating thickness	2	As standard GB/T 13452.2-2008
	Coating continuity	2	DC Micropore Detector
	Coating flexibility	1	Bending machine
	Coating adhesion*	1	Appendix C.3
Galvanized + Epoxy-coated bars	Appearance	2	Visual Inspection
	Thickness of zinc layer and epoxy layer	2	As standard GB/T 13452.2-2008
	Coating continuity	2	DC Micropore Detector
	Coating flexibility	1	Bending machine
	Coating adhesion*	1	Appendix C.3

*The coating adhesion will be tested according to the requirements of the buyer,Samples should be randomly selected from the production line.

Third-Party Testing Report for Epoxy Coating

环氧涂层第三方检测报告

Sinosteel Zhengzhou Steel Wire Products Research Institute Co., Ltd



Test Report

No. JCBG(01)250609210M1E

Page: 2/3

No.	Test Items	Unit	Technical requirements	Test Result	Evaluation Result
1	Impact resistance (1.8kg ,23°C)	/	The impact absorption energy of the coating is 10J, and the surrounding coating should not be broken or cracked	The impact absorption energy of the coatings on the three samples was 10J, and no breakage or cracking occurred in the peripheral coatings	Qualified
2	Appearance	/	The appearance should be smooth and flat, with uniform color, free of bubbles, cracks and shrinkage cavities. A light orange peel-like pattern is allowed	The appearance of 2 samples are smooth and flat, with uniform color, free of bubbles, cracks, shrinkage cavities and orange peel-like pattern	Qualified
3	Coating continuity	/	After curing, the coatings of sample shall be continuous and free of holes, voids, cracks and damaged areas discernible to a person with normal or corrected vision ;There shall not be more than 2 holidays per meter of the epoxy resin coated steel reinforcing bar	After curing, the coatings of 2 samples are continuous and free of holes, voids, cracks and damaged areas discernible to a person with normal or corrected vision; The number of holidays detected on epoxy resin coated steel reinforcing bar per meter is: 0 ; 0	Qualified
4	Coating flexibility (180° ,4d)	/	No cracking or disbanding of the coating shall be visible to a person with normal or corrected vision on the outside radius of the bent test piece during the bent test	No cracking or disbanding on the coating of the 2 samples are visible to a person with normal or corrected vision on the outside radius of the bent test piece during the bent test	Qualified
5	Coating thickness	μm	Average:180~300	1#:296; 2#:293	Qualified
			144≤ Single thickness ≤360	1#:298 ,304 ,294 ,297 ,293 , 295 ,285 ,305 ,297 ,288 ; 2#:299 ,285 ,284 ,295 ,298 , 284 ,297 ,292 ,303 ,289	
6	Coating adhesion (23°C ,168h)	mm	Disbondment radius≤2	1.4	Qualified

If you need the complete English version of the report, please contact us.

Third-Party Testing Report for Epoxy Coating

环氧涂层第三方检测报告

中钢集团郑州金属制品研究院股份有限公司
国家金属制品质量检验检测中心



检测报告

报告编号: JCBG(01)250609210

共 2 页第 2 页

序号	检测项目	单位	技术要求	检测结果	单项判定
1	抗冲击性 (1.8kg, 23°C)	/	涂层的冲击吸收能量为 10J, 周边涂层不应发生破碎、开裂	三件试样涂层的冲击吸收能量为 10J, 周边涂层均未发生破碎、开裂	合格
2	外观	/	外观平整、色泽均匀、无气泡、无开裂及缩孔, 允许有轻度桔皮状花纹	2 根钢筋外观均平整、色泽均匀、无气泡、无开裂及缩孔, 均无桔皮状花纹	合格
3	涂层连续性	/	涂层固化后应连续, 不应有孔洞、空隙、裂纹或肉眼可见的其他涂层缺陷; 每米长度上的微孔(肉眼不可见的针孔)数目平均不超过 2 个	2 根钢筋涂层固化后连续, 均无孔洞、空隙、裂纹和肉眼可见的其他涂层缺陷; 2 根钢筋 1 米长度上微孔数目分别为: 0 个; 0 个	合格
4	涂层可弯性 (180°, 4d)	/	弯曲试验中, 钢筋弯曲段外半圆涂层不应有肉眼可见的裂纹或剥离出现	弯曲试验中, 2 根钢筋弯曲段外半圆涂层均无肉眼可见的裂纹和剥离出现	合格
5	涂层厚度	μm	平均值: 180~300	1#: 296; 2#: 293	合格
			144 $\leq$ 单点厚度 $\leq$ 360	1#: 298, 304, 294, 297, 293, 295, 285, 305, 297, 288; 2#: 299, 285, 284, 295, 298, 284, 297, 292, 303, 289	
6	涂层附着性 (23°C, 168h)	mm	剥离半径 $\leq$ 2	1.4	合格

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环氧钢筋应用领域 \

APPLICATION FIELDS OF EPOXY STEEL BARS \



海洋工程>>

码头、防波堤等高盐雾环境，防止氯离子侵蚀。

Marine engineering

Prevent chloride ion erosion in high salt spray environments such as docks and breakwaters.



交通基建>>

桥梁、隧道、地铁等地下工程，延长结构寿命。

Transportation infrastructure

Underground engineering such as bridges, tunnels, and subways to extend the service life of structures.



工业建筑>>

化工厂房、污水处理设施等腐蚀性环境。

Industrial buildings

Chemical plants, sewage treatment facilities, and other corrosive environments.



水利水电>>

水坝、抗浮锚杆，抵御地下水及土壤腐蚀。

Water conservancy and hydropower

Dams, anti floating anchor rods, to resist groundwater and soil corrosion.

典型案例 \

CLASSIC CASE \



港珠澳大桥 >>

采用环氧涂层钢筋提升耐久性，设计寿命120年。

Hong Kong-Zhuhai-Macao Bridge

Adopting epoxy coated steel bars to enhance durability, with a design lifespan of 120 years.

高铁项目 >>

京沪高铁、沪昆高铁等关键工程，保障结构安全。

High speed railway project

Key projects such as the Beijing Shanghai high-speed railway and the Shanghai Kunming high-speed railway ensure structural safety.



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