

***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



About *Yidao*

Established in 2014 ,Yidao Metal is now a leading enterprise focusing on research, production, sales for high strength full thread bar and accessories and related construction products.

High Strength Thread Bar

Diameter 15, 20, 25,28, 32, 36, 40, 50, 63.5, 75mm

Grade 500/630, 670/800, 830/1030, 930/1080, 1080/1230Mpa.

Accessory

Hex Nut, Spherical Hex Nut, Rock Bolt, Domed Nut, Anchor Bolt, Couplers, Spring Bar, Bearing Plate, Plate Washer, etc.

Application

Our products are widely used in Post-Tensioning, Geotechnical, Formworks, Marine Tie, Formwork Ties,Ground Anchors, Soil Nailing, Tunneling, Mining.



Yidao

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，聘用高级技术人员，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。

CORPORATE CULTURE 企业文化

Honest
诚信做人

Focus
认真做事

Smart Working
努力进取

Innovation
勇于创新

Team Work
团队第一

Safe Production
安全生产

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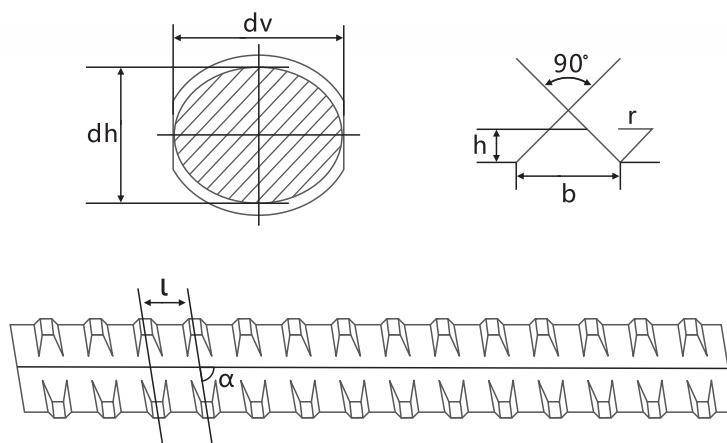
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Yidao Thread Bar System

精轧螺纹钢



Yidao stress bar
Hot rolled-Right hand thread

Diameter /mm	dh/mm		dv/mm		h/mm		b/mm		l/mm		r/mm	α
	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance		
15	14.7	± 0.2	14.4	± 0.5	1.0	± 0.2	4.2	± 0.3	10.0	± 0.2	0.5	78.5°
20	20.0	± 0.4	20.0	+0.4-0.8	1.3	± 0.3	4.8	± 0.5	10.0	± 0.2	1.2	80.5°
25	25.0	± 0.4	25.0	+0.4-0.8	1.6	± 0.3	6.0	± 0.5	12.0	± 0.2	1.5	81°
28	27.3	± 0.4	26.8	+0.4-0.8	1.8	± 0.3	6.5	± 0.3	14.0	± 0.3	2.0	81.5°
32	32.0	± 0.5	32.0	+0.5-1.2	2.0	± 0.4	7.0	± 0.5	16.0	± 0.2	2.0	81.5°
36	36.0	± 0.5	36.0	+0.5-1.2	2.2	± 0.4	8.0	± 0.5	18.0	± 0.3	2.5	81.5°
40	40.0	± 0.5	40.0	+0.5-1.2	2.5	± 0.5	8.0	± 0.5	20.0	± 0.3	2.5	81.5°
50	50.0	± 0.5	50.0	+0.5-1.2	3.0	-0.5	9.0	± 0.5	24.0	± 0.3	2.5	81.8°
63.5	63.5	± 0.5	63.5	+0.5-1.2	3.0	± 0.6	12.0	± 0.5	22.0	± 0.4	2.5	84°
75	75	± 0.5	75	+0.4-1.2	3.0	± 0.6	12.0	± 0.4	20.0	± 0.4	2.5	85°

Yidao Thread Bar System

精轧螺纹钢



Mechanical Properties of High Strength Thread Bar

精轧螺纹钢的机械性能

Mechanical Properties										
Diameter /mm	Cross-sectional area/mm²	Weight (kg/m)	PSB500				PSB670			
			Min Yield Stress/Load		Min Ultimate Stress/Load		Min Yield Stress/Load		Min Ultimate Stress/Load	
			Mpa	KN	Mpa	KN	Mpa	KN	Mpa	KN
15	177	1.4	<u>500</u>	89	<u>630</u>	112	<u>670</u>	119	<u>800</u>	142
20	314	2.47	<u>500</u>	157	<u>630</u>	198	<u>670</u>	210	<u>800</u>	251
25	491	4.1	<u>500</u>	246	<u>630</u>	309	<u>670</u>	329	<u>800</u>	393
28	616	5.1	<u>500</u>	308	<u>630</u>	388	<u>670</u>	413	<u>800</u>	493
32	804	6.65	<u>500</u>	402	<u>630</u>	507	<u>670</u>	539	<u>800</u>	643
36	1018	8.41	<u>500</u>	509	<u>630</u>	641	<u>670</u>	682	<u>800</u>	814
40	1257	10.34	<u>500</u>	629	<u>630</u>	792	<u>670</u>	842	<u>800</u>	1006
50	1963	16.28	<u>500</u>	982	<u>630</u>	1237	<u>670</u>	1315	<u>800</u>	1570
63.5	3167	26.5	<u>500</u>	1584	<u>630</u>	1995	<u>670</u>	2122	<u>800</u>	2534
75	4418	36.9	<u>500</u>	2209	<u>630</u>	2783	<u>670</u>	2960	<u>800</u>	3534
Elongation at fracture A/%			≥10				≥5			
Total Elongation at max force Agt/%			≥3.5							
Relaxation at 1000h			≤4							
Modulus of elasticity/Mpa			2x10 ⁵							

Yidao Thread Bar System

精轧螺纹钢



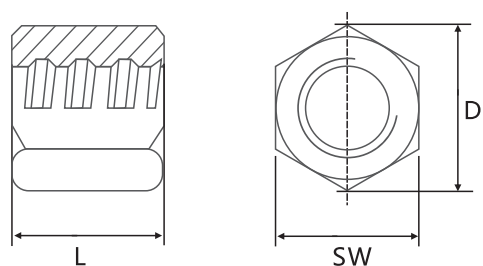
Mechanical Properties of High Strength Thread Bar

精轧螺纹钢的机械性能

Mechanical Properties														
Diameter /mm	Cross-sectional area/mm²	Weight (kg/m)	PSB830				PSB930				PSB1080			
			Min Yield Stress/Load		Min Ultimate Stress/Load		Min Yield Stress/Load		Min Ultimate Stress/Load		Min Yield Stress/Load		Min Ultimate Stress/Load	
			Mpa	KN	Mpa	KN	Mpa	KN	Mpa	KN	Mpa	KN	Mpa	KN
15	177	1.4	<u>830</u>	147	<u>1030</u>	182	<u>930</u>	165	<u>1080</u>	191	<u>1080</u>	191	<u>1230</u>	218
20	314	2.47	<u>830</u>	261	<u>1030</u>	323	<u>930</u>	292	<u>1080</u>	339	<u>1080</u>	339	<u>1230</u>	386
25	491	4.1	<u>830</u>	408	<u>1030</u>	506	<u>930</u>	457	<u>1080</u>	530	<u>1080</u>	530	<u>1230</u>	604
28	616	5.1	<u>830</u>	511	<u>1030</u>	643	<u>930</u>	573	<u>1080</u>	665	<u>1080</u>	665	<u>1230</u>	758
32	804	6.65	<u>830</u>	667	<u>1030</u>	828	<u>930</u>	748	<u>1080</u>	868	<u>1080</u>	868	<u>1230</u>	989
36	1018	8.41	<u>830</u>	845	<u>1030</u>	1049	<u>930</u>	947	<u>1080</u>	1099	<u>1080</u>	1099	<u>1230</u>	1252
40	1257	10.34	<u>830</u>	1043	<u>1030</u>	1295	<u>930</u>	1169	<u>1080</u>	1358	<u>1080</u>	1358	<u>1230</u>	1546
50	1963	16.28	<u>830</u>	1629	<u>1030</u>	2022	<u>930</u>	1826	<u>1080</u>	2120	<u>1080</u>	2120	<u>1230</u>	2414
63.5	3167	26.5	<u>830</u>	2629	<u>1030</u>	3262	<u>930</u>	2945	<u>1080</u>	3420	<u>1080</u>	3420	<u>1230</u>	3895
75	4418	36.9	<u>830</u>	3667	<u>1030</u>	4551	<u>930</u>	4109	<u>1080</u>	4771	<u>1080</u>	4471	<u>1230</u>	5434
Elongation at fracture A/%			≥7				≥7				≥6			
Total Elongation at max force Agt/%			≥3.5											
Relaxation at 1000h			≤4											
Modulus of elasticity/Mpa			2×10 ⁵											

Flat Hex Nut

平螺母

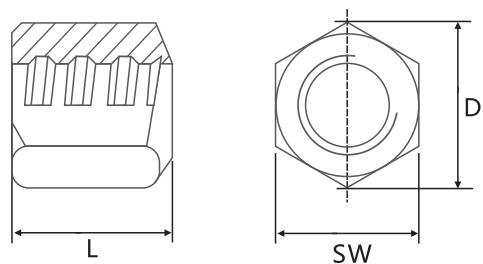


材料/Material 45#,40Cr

Dia [mm]	SW [mm]	L [mm]	D [mm]	Weight [kg]
15	30	50	34.5	0.22
15	30	100	34.5	0.45
20	32	45	37	0.17
20	36	60	69	0.36
25	50	60	55	0.70
28	50	60	55	0.65
32	60	72	69	1.2
32	65	72	75	1.40
36	65	80	75	1.45
40	70	100	81	2.12
50	80	110	92	3.10
63.5	100	115	115	4.72
75	114	145	131	7.50

Spherical Hex Nut

锥螺母

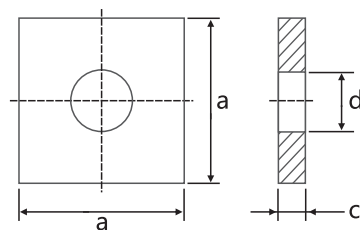


材料/Material 45#,40Cr

Dia [mm]	SW [mm]	L [mm]	D [mm]	Weight [kg]
25	50	60	55	0.70
28	50	60	55	0.65
32	60	72	69	1.2
32	65	72	75	1.40
36	65	80	75	1.45
40	70	100	81	2.12
50	80	110	92	3.10
63.5	100	115	115	4.72
75	114	145	131	7.50

Surface: Zinc, HDG, Epoxy

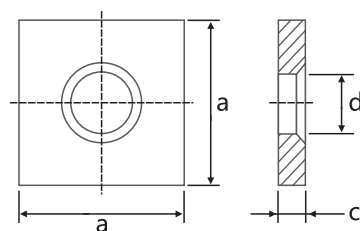
Anchor Plate 平垫板



材料/Material Q235B,Q345B

Dia [mm]	a [mm]	c [mm]	Material	Weight [kg]
15	100	10	Q235	0.75
20	120	16	Q235	1.8
25	150	20	Q235	3.5
28	180	20	Q235	5
32	200	25	Q235	7.8
36	200	30	Q235	9.42
40	220	40	Q235	15
50	240	50	Q235	22.5
63.5	300	55	Q235	38.5

Spherical Anchor Plate 锥垫板

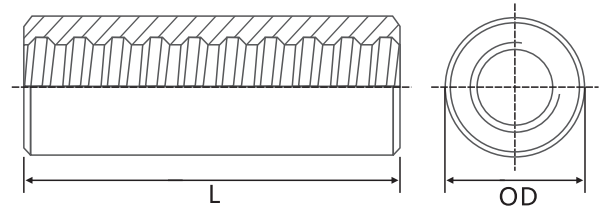


材料/Material Q235B,Q345B

Dia [mm]	a [mm]	c [mm]	Material	Weight [kg]
15	100	8	Q235	0.6
20	100	30	Q235	2.2
25	150	35	Q235	5.9
32	180	40	Q235	9.6
36	200	45	Q235	13.4
40	220	50	Q235	18.0
50	240	55	Q235	33.6
63.5	325	70	Q235	56.3

Surface: Zinc, HDG, Epoxy

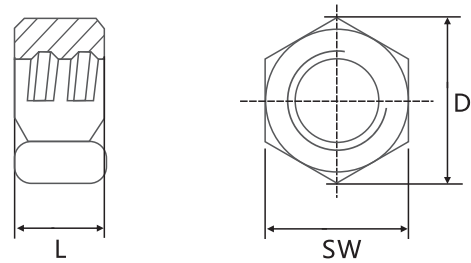
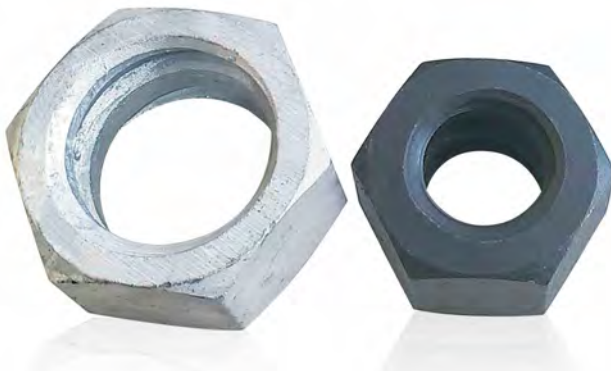
Coupler 连接器



材料/Material 45#,40Cr,35CrMo,42CrMo

D [mm]	D [mm]	L [mm]	Weight [kg]
15	38	110	0.8
20	38	110	0.7
25	50	132	1.35
28	55	150	2
32	60	168	2.4
36	65	200	3.5
40	75	220	5.2
50	90	270	9.8
63.5	102	260	10.22
75	114	290	12.1

Lock Nut 锁母



材料/Material 45#,40Cr

Dia [mm]	SW [mm]	L [mm]	D [mm]	Weight [kg]
15	30	30	34.5	0.13
25	50	30	58	0.35
28	50	30	58	0.35
32	60	34	70	0.70
36	65	36	75	0.75
40	70	46	80	0.92
50	80	50	92	1.27

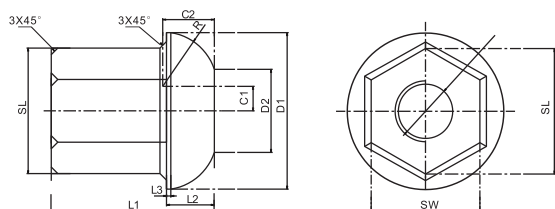
Surface: Zinc, HDG, Epoxy



Domed Nut (Heavy Duty)

蘑菇头螺母

材料/Material 45#,40Cr

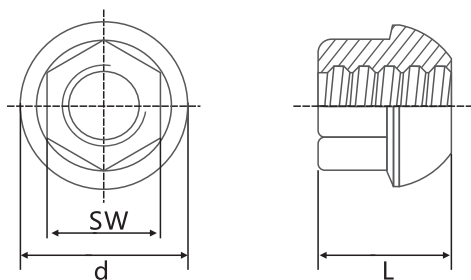


Dia [mm]	Dimension [mm]				Weight [kg]
	SW	D1	L1	L2	
25	50	72	75	22	1.14
32	60	80	90	28	1.79
36	65	90	100	30	2.34
40	70	100	115	32	3.08
50	85	120	145	36	5.38

Domed Nut (Light Duty)

蘑菇头螺母

材料/Material 45#

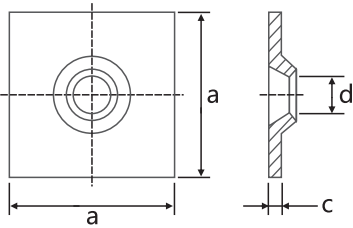
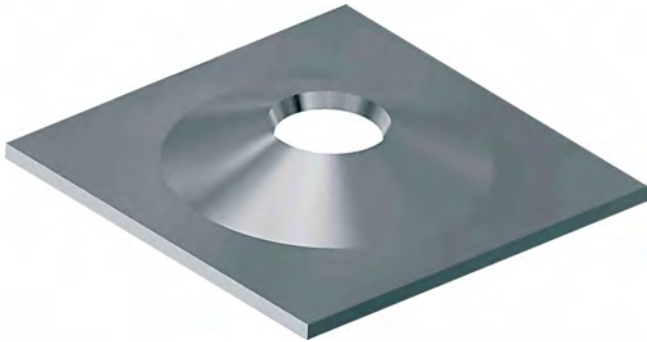


Dia [mm]	Material	SW [mm]	L [mm]	d [mm]	Weight [kg]
20	45#	36	41	49	0.32
25	45#	41	45	55	0.37
28	45#	41	54	62	0.40
32	45#	50	60	65	0.68
40	45#	50	70	88	1.30

Surface: Zinc, HDG, Epoxy

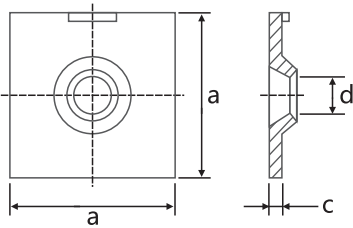
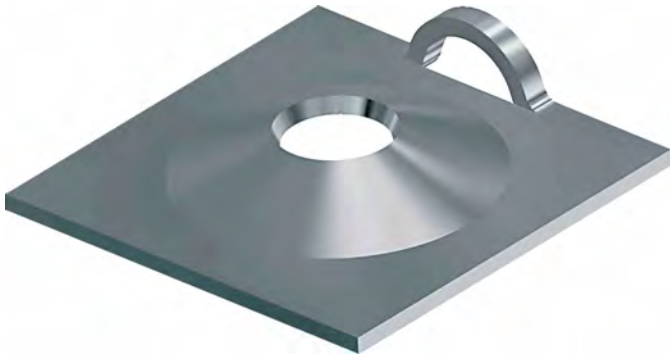
Domed Plate 托盘

Material: Q235 Q355 Q420
Surface: Plain Hdg, Zinc
Platedsize: All The Size And Shape Can Customized



材料/Material Q235B,Q345B

Dia [mm]	a [mm]	c [mm]	Material	Weight [kg]
15	100	8	Q235	0.6
20	100	10	Q235	0.75
25	150	12	Q235	2.0
32	180	15	Q235	3.5

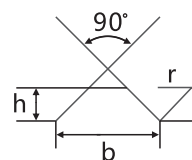
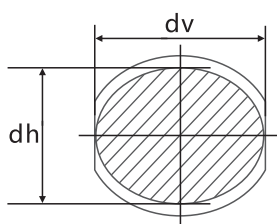
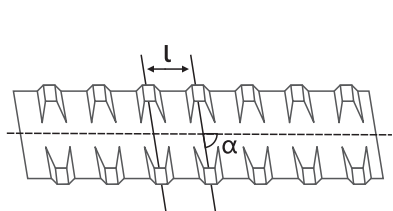


材料/Material Q235B,Q345B

Dia [mm]	a [mm]	c [mm]	Material	Weight [kg]
15	150	5	Q235	0.8
20	200	5	Q235	1.5
25	200	6	Q235	1.8
32	200	8	Q235	2.5

Hot Rolled Formwork Tie Rod 15/17mm 20/22mm

热轧模板拉杆15/17mm 20/22mm



Dia	dh/mm	dv/mm	h/mm	b/mm	l/mm	r	a
15	14.70 ±0.2	14.40 ±0.5	1.00 ±0.2	4.20 ±0.3	10.00 ±0.2	0.5	78.5°
20	19.50 ±0.5	19.10 ±0.5	1.30 ±0.3	4.50 ±0.5	10.00 ±0.3	—	—

Diameter [mm]	15	20	20
Yield/Tensile [Mpa]	830/1030	830/1030	930/1080
Yield Tensile [KN]	147/182	261/323	292/339
Elongation [%]	7	7	7
Weight [kg/m]	1.4	2.47	2.47
Thread Direction	Right Hand Thread	Right Hand Thread	Right Hand Thread

Application

Tie Rod
Formwork
Scaffolding
Hook Anchor

Surface Treatment

Zinc Plated
Hot Dipped
Galvanized
Epoxy coating

Form work Accessory

模板拉杆配件



Hex Nut
YD-FA1104-1106



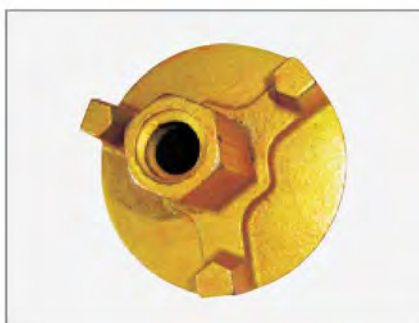
Wing Nut
YD-FA1107



Round Nut
YD-FA1108



half Nut
YD-FA1109



Round Nut
YD-FA1110



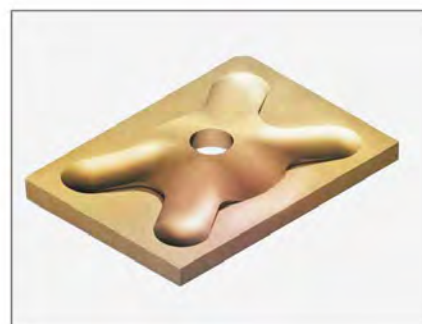
Water Stopper
YD-FA1111



Combine Nut Plate
YD-FA1112



Steel Cone
YD-FA1113



Steel Plate
YD-FA1114

We can also produce as your drawing.

Form work Accessory

模板拉杆配件



Wobble Anchor/Wave Anchor

Dia [mm]	Length [mm]	Material	Grade
15	550	Yidao Thread Bar	PSB830
20	700	Yidao Thread Bar	PSB500/PSB830
25	800	Yidao Thread Bar	PSB500/PSB830



Hook Anchor

Dia [mm]	Length [mm]	Hook	Material	Grade
15	450	450	Yidao Thread Bar	PSB830
20	600	600	Yidao Thread Bar	PSB500/PSB830
25	800	800	Yidao Thread Bar	PSB500/PSB830



Loop Anchor

Dia [mm]	Length [mm]	Hook	Material	Grade
15	550	450	Yidao Thread Bar	PSB830
20	600	600	Yidao Thread Bar	PSB500/PSB830
25	800	800	Yidao Thread Bar	PSB500/PSB830

Latin America Products

拉丁美洲产品

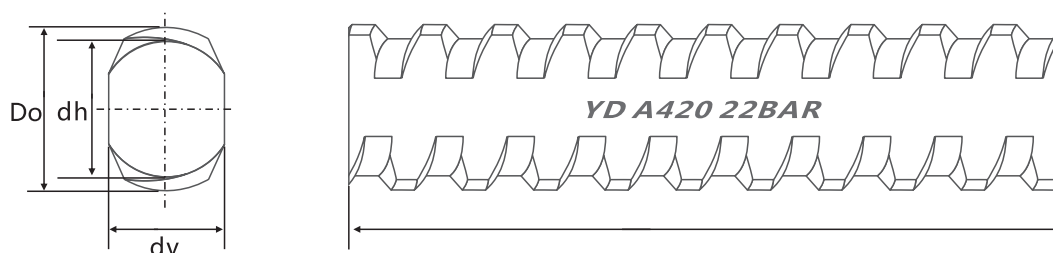
Those bars are customized for Latin Americal market, the szie and grade can meet standard :ASTM A615, ASTM A722 and Astm A706.

The main diameter is 19mm 22mm 25mm 32mm and in length 12m,we also can cut as your requirement. Most application is for rock bolt system, the whole system contents Thread bar, hot forged dome nut and dome plate.

Rock bolt system are used for reinforcement the cross section, like rocks, soils and slopes, main project like Mountain ,Mining and Tunnel.

Esas barras están personalizadas para el mercado de América Latina; su tamaño y calidad cumplen con las normas ASTM A615, ASTM A722 y ASTM A706.

El diámetro principal es de 19mm, 22mm, 25mm y 32mm, y la longitud es de 12m; también podemos cortarlas según sus requisitos.Su principal aplicación es para sistemas de pernos de roca, y el sistema completo incluye barras roscadas, tuercas de domo forjadas a calor y platos de domo.

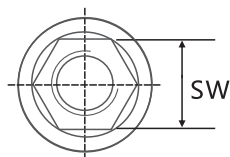
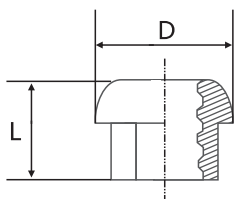


Dimensions

Diameter	Do (mm)	dh/mm	dv/mm	Pitch/mm	Weight (kg/m)
16	18	14.5	14.9	9	1.52
19	21.2	17.2	17.6	9.9	2
22	24.6	20	20.4	11.1	2.8
25	28	22.6	23	12.6	3.6
28	31.4	25.4	25.8	14	4.6
32	36.2	29.2	29.6	16	6

Mechanical Properties / Propiedades mecánicas

Grade	Min Yield Strength MPA	Min Ultimate Strength MPA	Elongation At Fracture in 200mm %
A280	280	440	16
A420	420	630	8
A520	520	700	8



Dome nut / Tuerca

Dia (mm)	SW (mm)	L (mm)	D (mm)	Weight (kg)	Materia
16	23	36	34	0.11	45#
19	31	40	44	0.21	45#
22	38	45	50	0.27	45#
25	38	51	50	0.33	45#
28	44	58	60	0.55	45#
32	50	65	60	0.67	45#

Yidao Stress Bar Hot Rolled Left-Hand Thread

倚道左旋精轧螺纹钢



Hot Rolled Left-Hand Thread

Description

Hot rolled bars with projections in the form of a helical thread with a wide pitch.

Technical rules

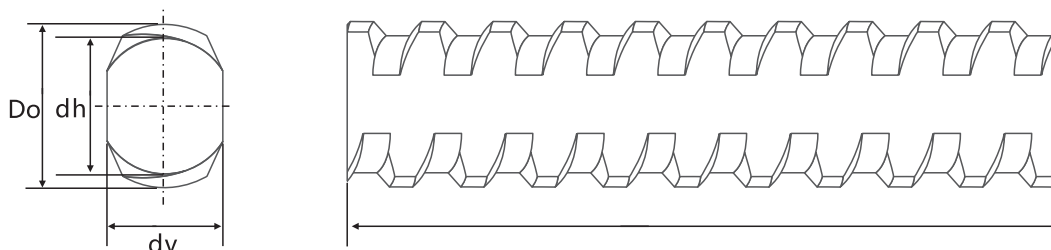
The Chemical Composition and Mechanical Properties, according to ASTM A615 Grade 75.

Presentation

They are produced in the nominal diameters of 19 mm, 22 mm, 25 mm and 32 mm; and in lengths of 9 and 12 meters. They are also delivered to order in other lengths.

Use

They allow the control of underground and surface instabilities, as a reinforcement element. They are applied in mining and civil projects, due to their design and functionality advantages in controlling instabilities of the rock mass.



Dimensiones

500/360								
Diameter	Do (mm)	dh/mm		dv/mm		Yield Stress [KN]	Ultimate Stress [KN]	Weight (kg/m)
		Size	Tolerance	Size	Tolerance			
20	22.1	19.5	±0.4	19.1	±0.4	[157]	[198]	2.47
25	28.2	24.2	±0.4	23.9	±0.4	[246]	[309]	3.85
28	30.9	27.3	±0.4	26.8	±0.4	[308]	[388]	5.10
32	36.0	31.2	±0.4	30.7	±0.4	[402]	[507]	6.31
36	40.4	36.0	±0.5	36.0	+0.4-1.2	[509]	[641]	8.41
40	45.0	40.0	±0.5	40.0	+0.4-1.2	[629]	[792]	10.34
50	56.0	50.0	±0.5	50.0	+0.4-1.2	[982]	[1237]	16.28
63.5	69.5	63.5	±0.5	63.5	+0.4-1.2	[1584]	[1995]	26.5

Domed Nut / Plate 左旋钢筋锚具



Description

It is a nut made of steel or nodular cast iron with spheroidal graphite, which complements the Helical Bar.

Presentation

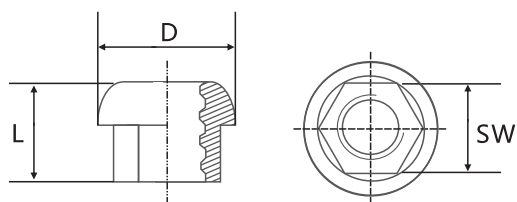
It is commercialized in the nominal diameters of 19mm, 22mm, 25mm and 32mm.

Use

Attachment of the Helicoidal Bar Anchor bolt, allows the positioning of the Clamping Plate on the rock mass

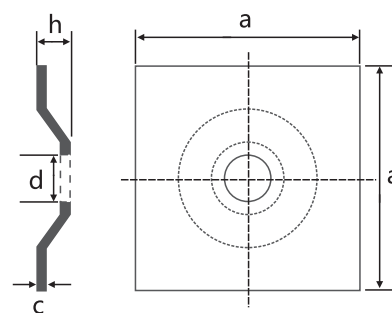
Diameter

19, 22, 25, 32mm or as customer' s drawing



左旋钢筋配套螺母

Dia (mm)	SW (mm)	L (mm)	D (mm)	Weight (kg)	Materia
19	31	40	44	0.29	45#
20	32	45	50	0.32	45#
25	38	51	50	0.37	45#
28	44	58	60	0.40	45#
32	50	65	60	0.68	45#



左旋钢筋配套垫板

Dia (mm)	a (mm)	c (mm)	d (mm)	h (mm)	Weight (kg)	Materia
19	120	5	37	25	0.56	Q235
20	120	8	38	28	0.90	Q235
25	150	10	38	31	1.76	Q235
28	150	10	45	33	1.76	Q235
32	200	12	45	35	3.76	Q235

Expansion Shell-I

涨壳

样式 Style	适配尺寸 Proper Size	螺母外径 Outer DiameterOf Nut	初始拉拔力 Capacity	外形尺寸 BoundaryDimension
	$\phi 36$	3/4" M20.16	14 Ton	$\phi 34 \times 122$
	$\phi 45$	M24、3/4" 20/25mm	20 Ton	$\phi 34 \times 135$
	$\phi 57$	M24、3/4" 20/25/32mm	20 Ton	$\phi 54 \times 112$
	$\phi 57$	M24、3/4" 20/25/32mm	20 Ton	$\phi 54 \times 182$

Expansion Shell- II

涨壳

样式 Style	适配尺寸 Proper Size	螺母外径 Outer DiameterOf Nut	初始拉拔力 Capacity	外形尺寸 BoundaryDimension
	$\phi 45$	M24、3/4" 20/25/32mm	14 Ton	$\phi 41 \times 122$
	$\phi 38$	3/4" M20 16mm	14 Ton	$\phi 36 \times 148$
	$\phi 45$	M24、3/4" 20/25mm	20 Ton	$\phi 43 \times 135$
	$\phi 57$	32mm	20 Ton	$\phi 47 \times 135$

Yidao Accessories
精轧螺纹钢锚具



For details information on accessories,
 refer to individual data sheet.

Surface: Zinc, HDG, Epoxy

Value Added Services-Systems & Solution- I

精轧螺纹钢附加服务及应用



- Cutting of thread bars to required length
切割服务



- Anti-Corrosion protection
防锈处理



- Bending of bars
钢筋折弯

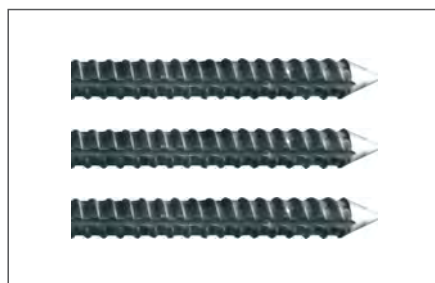
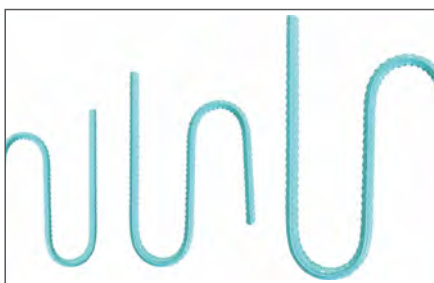


- Customization for Special Diameter
特殊尺寸定轧

Cutting of thread bars to required length



Bending of bars



Customization for Special Diameter



Value Added Services-Systems & Solution- II

精轧螺纹钢附加服务及应用

Anti-Corrosion Protection System

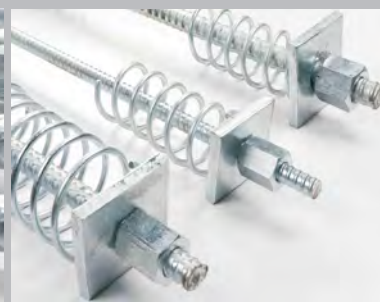
- Hot Dip Galvanized
Thickness around $\geq 85\mu\text{m}$



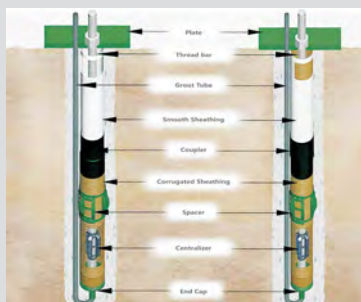
- Epoxy Coated
Thickness around
220-400 μm



- Zinc Plated
Thickness around 5 μm



- Double Corrosion
Protection



Thread Bar Production 精轧螺纹钢生产



Hot Rolling 热轧

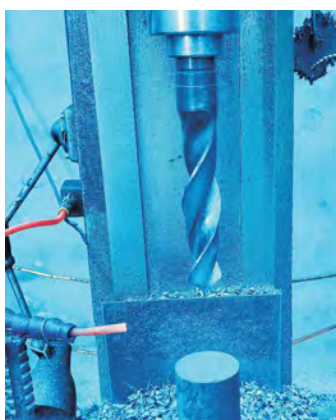


Automatic processing line 全自动钢筋升级线

Accessory Production 锚具生产



Peeling 车外皮



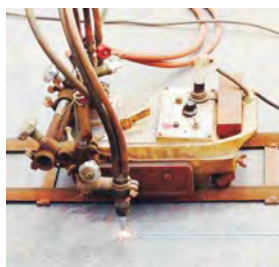
Drilling 钻孔



Sawing 锯料



Punching 磕料



Gas Cutting 气割

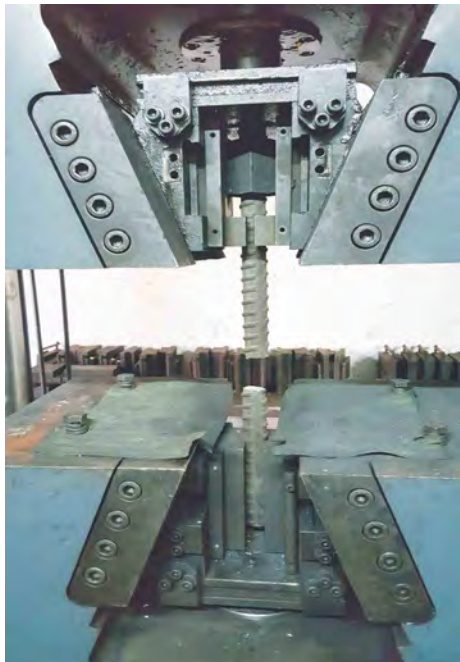


Hot Forging 热锻

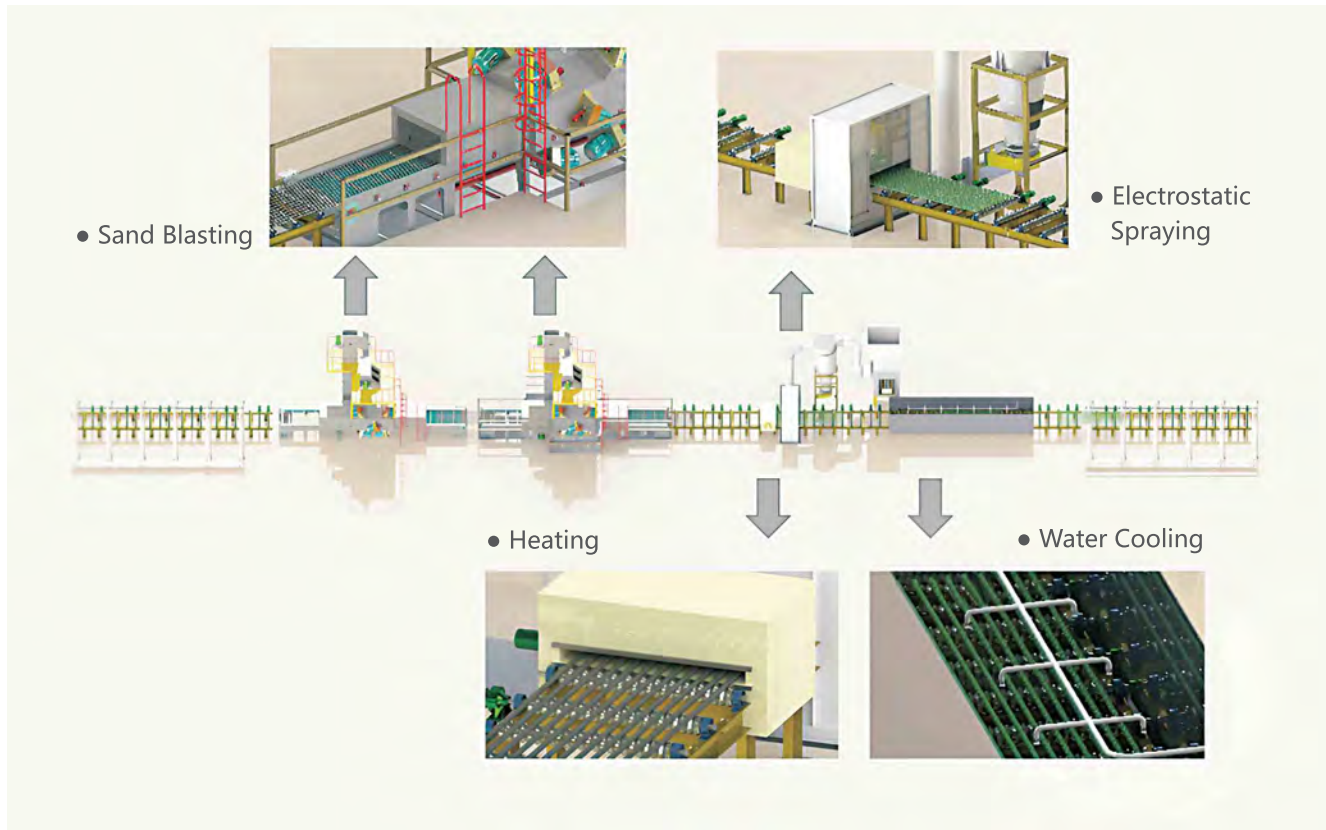
Quenched & Tempered 淬火回火



Tensile Test 拉力测试



Production Process of Epoxy Coated Bar 环氧树脂图层钢筋生产流程



Sand Blasting→Thread bar heated to 230°C→Electrostatic Spraying→Heat Curing→ Water Cooling

Normally the bar should be fully cleaned, such as sand-blasting, to keep a rough surface which is helpful to enhance bond between the epoxy resin and steel. Then the bar is heated to approximately 230°C (450°F) and passed through a powder spray booth where electrically charged epoxy particles are attracted to the steel. The coating then undergoes a cross-linking process to form a uniform barrier over the steel.

Reference Standards :

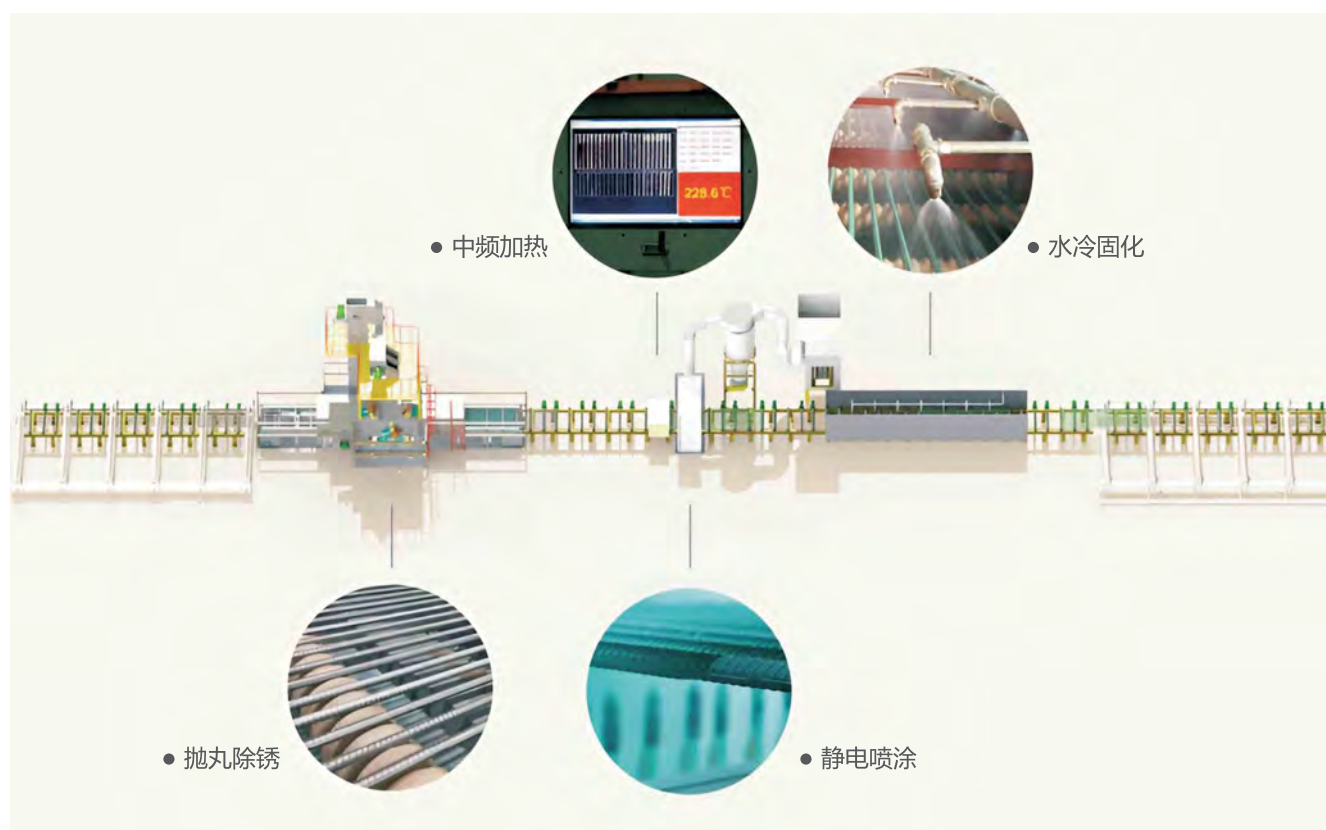
GB/T 25826-2010

A775/A775M – 19

IS 13620 -1993

Production Process of Epoxy Coated Bar

环氧树脂涂层钢筋生产流程



生产流程：钢筋表面除锈、打毛做净化处理→钢筋加热到 230°C→静电喷涂→高温涂层固化
→净水冷却→质检合格出厂

涂层一般采用环氧树脂粉末以静电喷涂方法制做。

将普通钢筋表面进行除锈、打毛等处理后加热到 230°C 左右。再将带电的环氧树脂粉末喷射到钢筋表面。由于粉末颗粒带有电荷，便吸附在钢筋表面，并与其熔融结合，经过一定养护、固化后便形成一层完整、连续、包裹住整个钢筋表面的环氧树脂薄膜保护层。

参考标准：

GB/T 25826-2010

A775/A775M - 19

IS 13620 -1993

Technical Advantages

技术优势

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.

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。

Core Equipment

核心设备

Intelligent rust removal system : Efficiently removes the oxide layer on the surface of steel bars and improves coating adhesion

智能除锈系统：高效清除钢筋表面氧化层，提升涂层附着力。



Electrostatic spraying equipment : Precise control of powder spraying volume to ensure coating uniformity.

静电喷涂设备：精准控制粉末喷涂量，确保涂层均匀性。



Intermediate frequency heating furnace : Stable temperature control to ensure consistent coating performance.

中频加热炉：稳定温度控制，保障涂层性能一致性。



Rebar in Epoxy surface
环氧表面钢筋



Thread bar in Epoxy surface
环氧表面螺纹棒



Bending test
弯曲测试



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: 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

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

精轧螺纹钢: 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



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.

Application Fields Of Epoxy Coated Bar

环氧涂层钢筋应用领域



Marine engineering

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

海洋工程>>

码头、防波堤等高盐雾环境，防止氯离子侵蚀。



Transportation infrastructure

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

交通基建>>

桥梁、隧道、地铁等地下工程，延长结构寿命。



Industrial buildings

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

工业建筑>>

化工厂房、污水处理设施等腐蚀性环境。



Water conservancy and hydropower

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

水利水电>>

水坝、抗浮锚杆，抵御地下水及土壤腐蚀。

Classic Case 典型案例



Hong Kong-Zhuhai-Macao Bridge

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

港珠澳大桥>>

采用环氧涂层钢筋提升耐久性，设计寿命120年。

High speed railway project

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

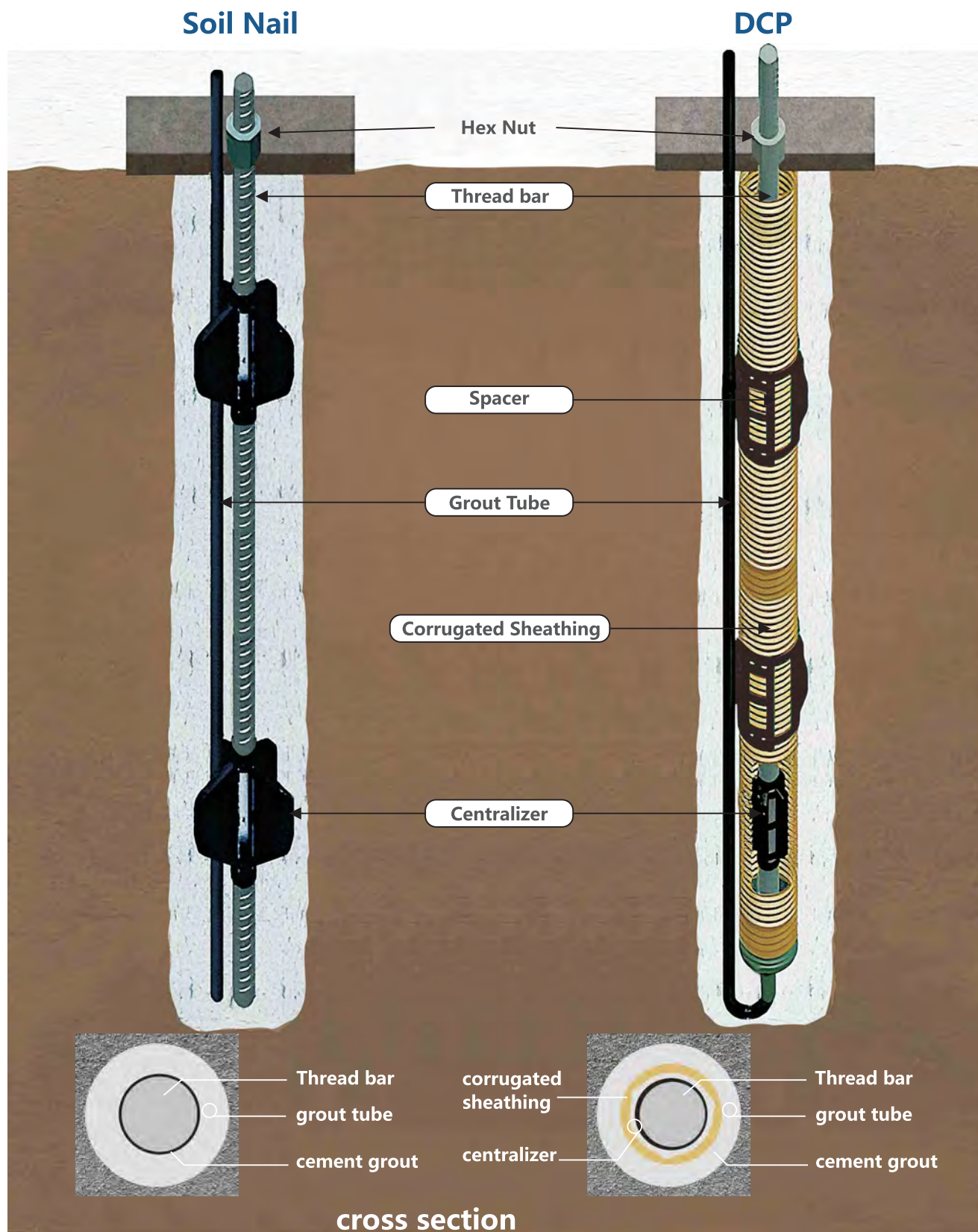
高铁项目>>

京沪高铁、沪昆高铁等关键工程，保障结构安全。

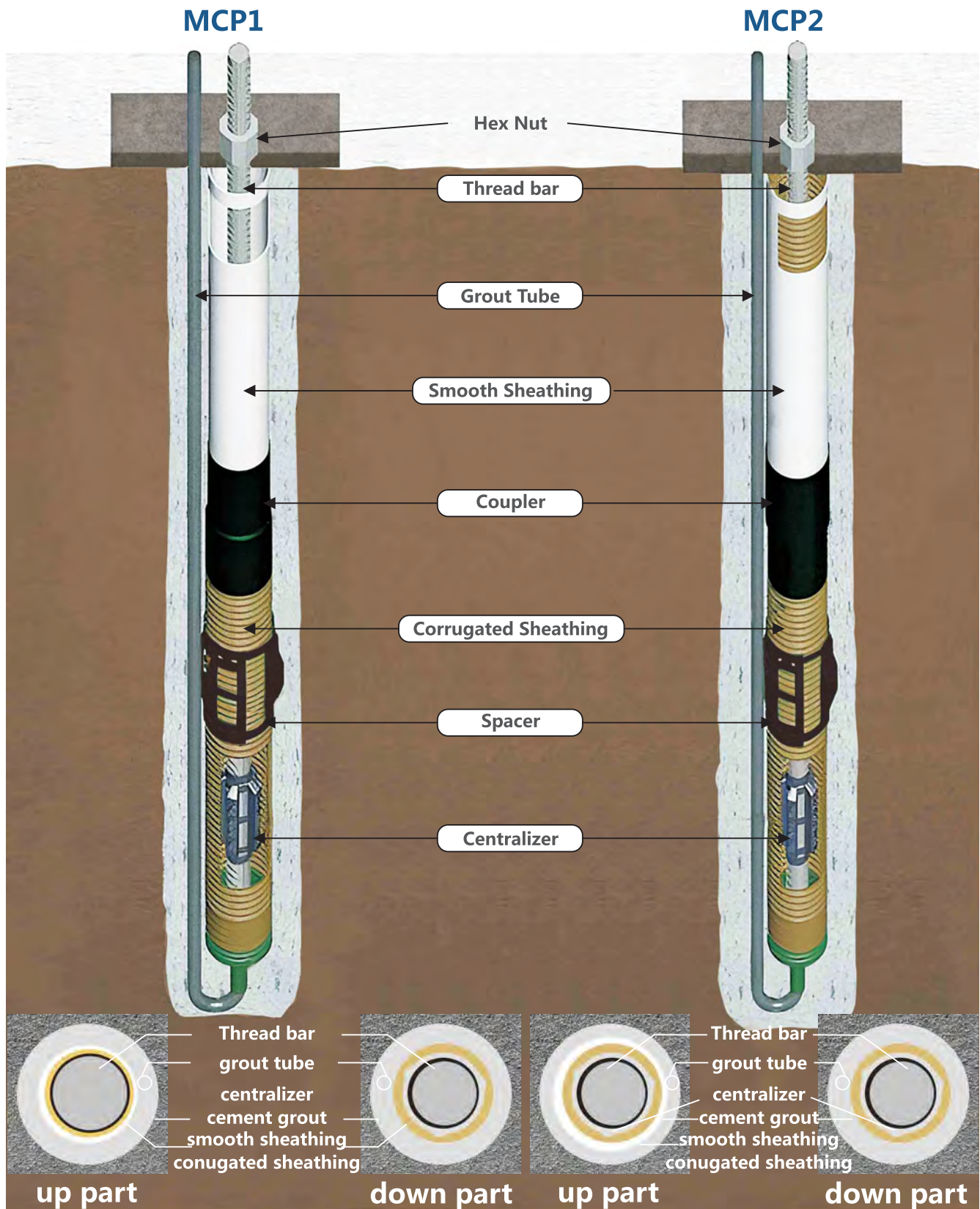


Soil Nail & DCP

土钉与双层防腐



DCP-Double Corrosion Protection DCP双重防腐



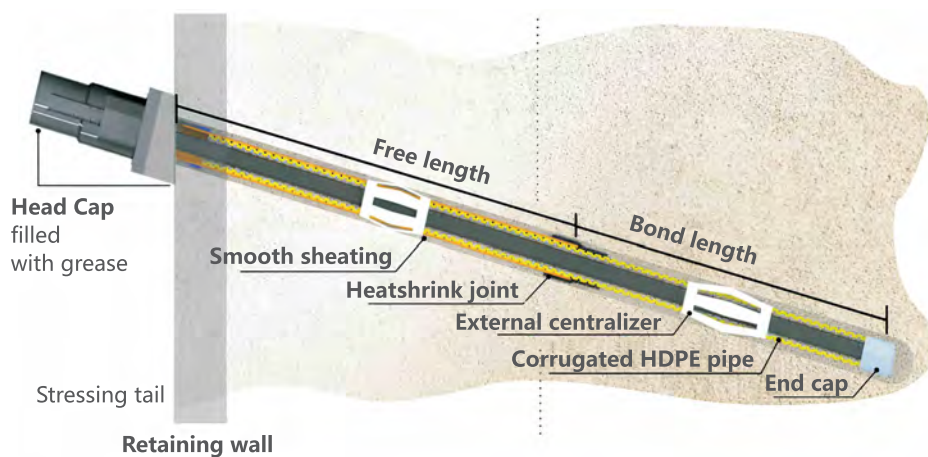
Steel Active Anchor Application

主动锚应用

Double Corrosion Protection (DCP)

DCP is achieved by 2 layers of grout all along the whole length of the system.

- **Bonded length** protection is achieved thanks to the dual grout layers separated by a corrugated HDPE sheathing.
- **Unbonded length** protection is guaranteed by the use of smooth HDPE pipe above the corrugated HDPE sheathing.
- **Protective head cap** and **end cap** complement the corrosion protection system.



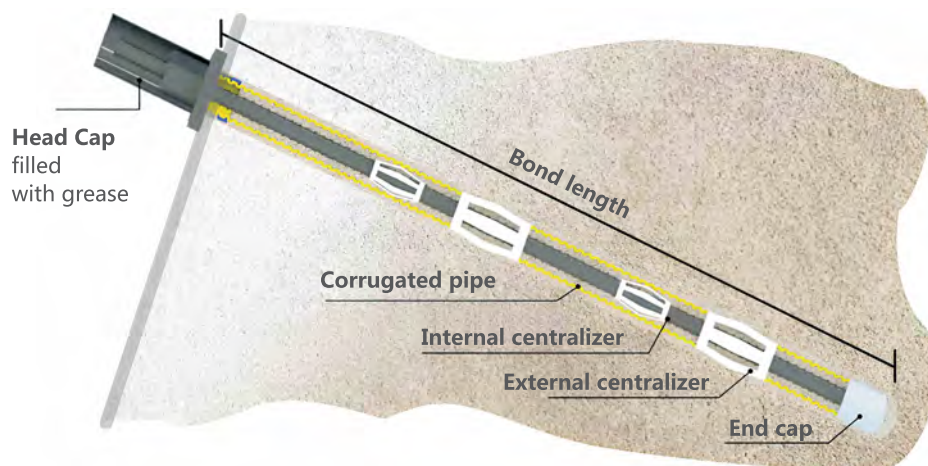
Steel Passive Anchor Application

被动锚应用

Double Corrosion Protection (DCP)

DCP is achieved by 2 layers of grout all along the whole length of the system.

- **Bonded length** protection is achieved with dual grout layers separated by a corrugated HDPE pipe
- **Protective head cap** and **end cap** complement the corrosion protection system.



Strap Internal Centralizer(PE)

索带置中器



Strap Internal Centralizer(PE) normal applied to the outside of big diameter bar or the corrugated pipe

All the size can customized

Item No.	ID (mm)	Rebar
YD2040	23	Y20
YD2250	25	Y22
YD2565	28	Y25
YDW25/100	28	Y25
YD2880	32	Y28
YDW28/100	32	Y28
YD3250	35	Y32
YDW32/100	35	Y32
YD4060	45	Y40
YDW50/110	45	Y40
YD5065	56	Y50
YD3250-1+YD4060	80	Y80

Lantern Internal Centralizer (U-PVC)

灯笼置中器



All the size can customized

No.	Item No.	ID (mm)	Bar diameter	Thickness(mm)
1	YD4020	φ25	Y20	~2.8
2	YD4022	φ28	Y22	~2.8
3	YD4025	φ30	Y25	~2.8
4	YD6032	φ38	Y32	~2.8
5	YD6040	φ48	Y40	~2.8
6	YD10050	φ57	Y50	~3
7	YD12570-8	φ70	Y63.5	~3.5
8	YD10080-8	φ83	Big ID spacer was designed onto outside of the pipe	~3.5
9	YD16080-8	φ83		~3.5
10	YD17580-8	φ83		~3.5
11	YD20080-8	φ83		~3.5
12	YD200150	φ150		~5
13	YD250150	φ150		~5

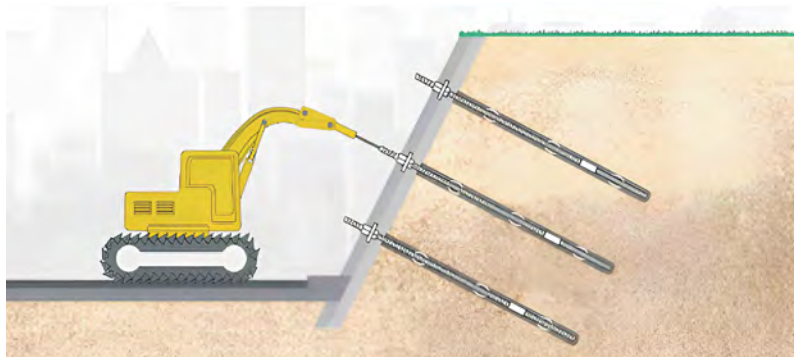
DCP Related Accessories

DCP相关配件



Rock Bolt System 锚杆支护系统

Rock bolt are the preferred solution for slope stabilization, the system is bonded all along the whole tendon length, the head of the system will usually be covered by a wire mesh, then fixed by plate and nut

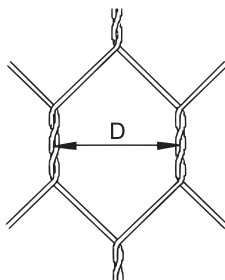


Wire Mesh 金属丝网

Rockfall protection netting

Standard mesh size

Standard Type	D(mm)	Tolerance
60x80	60	+16%/-4%
80x100	80	+16%/-4%



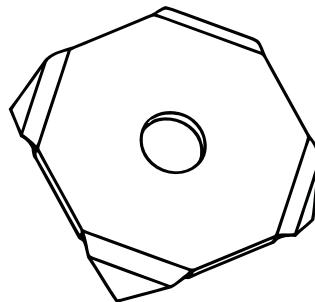
ROCKFALL PROTECTION NETTING- Elongation and Tensile strength

The wire used for the manufacture of rockfall protection netting shall have a tensile strength between 350-550MPa and elongation shall not less than 8% as per EN10223-3

Wire elongation and tensile strength

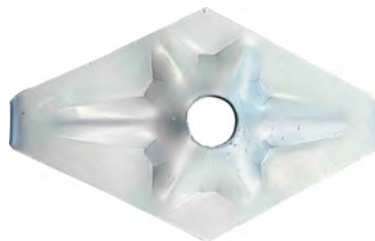
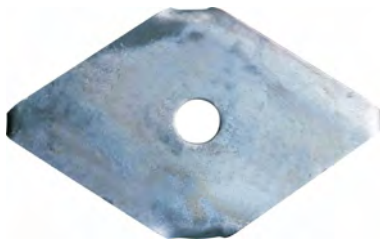
Standard wire	Elongation	Tensile strength
2.2mm	≥8%	350-550MPa
2.7mm	≥8%	350-550MPa
3.0mm	≥8%	350-550MPa
3.4mm	≥8%	350-550MPa
3.9mm	≥8%	350-550MPa

Four Claps Plate 四爪垫板



Dia [mm]	a [mm]	Thickness [mm]
20	200	8
25	200	10
32	200	12

Spike Plate 钉板



HOLE DIAMETER [mm]	a [mm]	c [mm]	Thickness [mm]
34	250	150	5
40	330	205	8
50	330	205	10
50	667	300	12

Material: Q235 Q345 Q420
The size and shape can customized.

T Thread Rod

T 型扣丝杆

Diameter : 15-150mm

Grade : 8.8 , 10.9, 12.9

Material : 40Cr , 35CrMoA , 42CrMoA



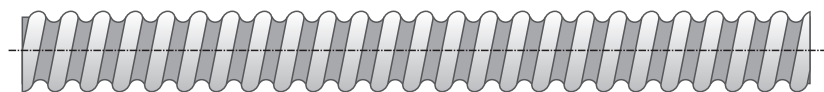
High Strength Thread Bar

高强度圆弧丝杆

Diameter: 15 , 20 , 25 , 32 , 36 , 40mm

Grade: Grade75 , 80 , 150

Material: 45# , 40Cr , 42Cr Mo



Anchor Bolt/Smooth Thread Bar/High Strength Thread rod 风电锚栓/高强度双头

Diameter: ϕ M20-150

Grade: 8.8 , 10.9 , 12.9

Material: 40CR , 35CrMoA , 42CrMoA , A193-B7



Anchor Bolt 地脚螺栓

Diameter : ϕ 15-150mm

Grade : 8.8 , 10.9 , 12.9

Material : 40Cr,35CrMoA,42CrMoA, A193-B7



type-L



type-J



type-JA



Welding type



Welding type

Application- I

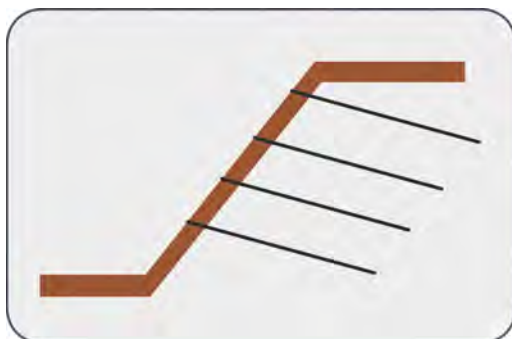
应用介绍

		Diameter [mm]	Yield Load [kN]	Ultimate Load [kN]	Weight [kg]	Cross-sectional area [mm²]	A[%]	Agt[%]				
YD PSB500/630												
	Geotechnical system	20	157	198	2.47	314	≥10	≥3.5				
		25	246	309	4.1	491						
		28	308	388	5.1	616						
	Tunneling	32	402	507	6.65	804						
		36	509	641	8.41	1018						
		40	629	792	10.34	1257						
	Mining	50	982	1237	16.28	1963						
		63.5	1584	1995	26.5	3167						
		YD PSB670/800										
	Geotechnical systems	20	210	251	2.47	314	≥10	≥3.5				
		25	329	393	4.1	491						
		28	413	493	5.1	616						
	Tunneling & Mining	32	539	643	6.65	804						
		36	682	814	8.41	1018						
		40	842	1006	10.34	1257						
YD PSB830/1030												
	Formwork Tie	15	147	182	1.4	177	≥7	≥3.5				
		20	261	323	2.47	314						
		25	408	506	4.1	491						
	Geotechnical systems	28	511	643	5.1	616						
		32	667	828	6.65	804						
		36	845	1049	8.41	1018						
	Tunneling & Mining											
YD PSB930/1080												
	Geotechnical systems	25	457	530	4.1	491	≥7	≥3.5				
		28	573	665	5.1	616						
		32	748	868	6.65	804						
		36	947	1099	8.41	1018						
		40	1169	1358	10.34	1257						
	Post-tensioning systems	50	1826	2120	16.28	1963						
		63.5	2945	3420	26.5	3167						
		75	4109	4771	36.9	4418						
		YD PSB1080/1230										
			Geotechnical systems	25	530	604			4.1	491	≥6	≥3.5
28	665			758	5.1	616						
32	868			989	6.65	804						
36	1099			1252	8.41	1018						
40	1358			1546	10.34	1257						
	Post-tensioning systems	50	2120	2414	16.28	1963						
		63.5	3420	3895	26.5	3167						
		75	4771	5434	36.9	4418						

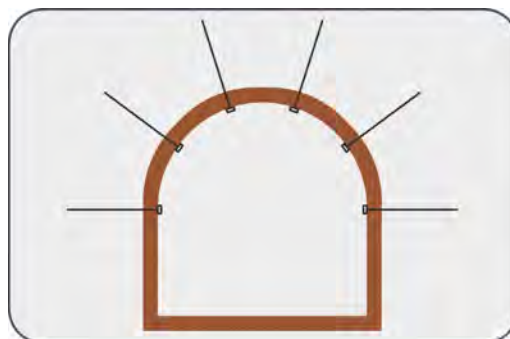
Accessories for all dimensions and applications available.

Application- II

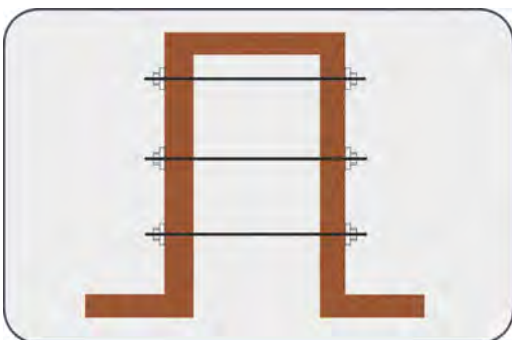
应用介绍



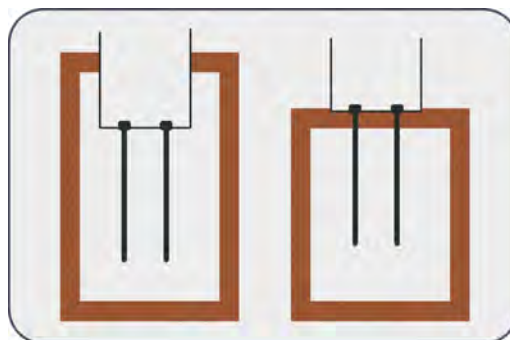
① **Soil nailing :**
securing slopes、harbor、
excavation、embankments



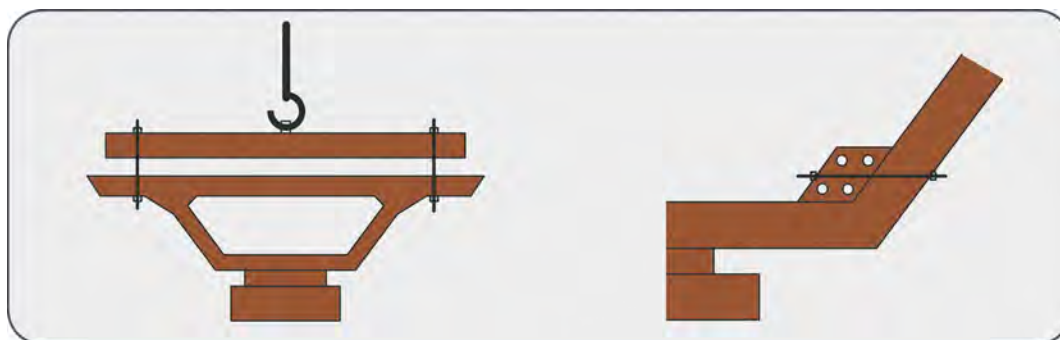
② **Rock bolts :**
Mining & Tunneling
retaining walls



③ **Formwork :**
Tie rod、Tie back



④ **Micropiles, ground anchors :**
Uplift force and tension loads,
compression piles



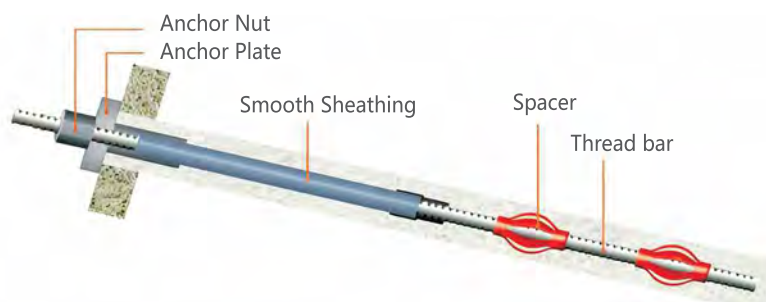
⑤ **Bridge :**
Post-tensioning、Form traveler、Lifting、Temporary and permanent works

⑥ **Other applications :**
Highway、railway、commercial buildings、tanks、car parks、wind energy structures

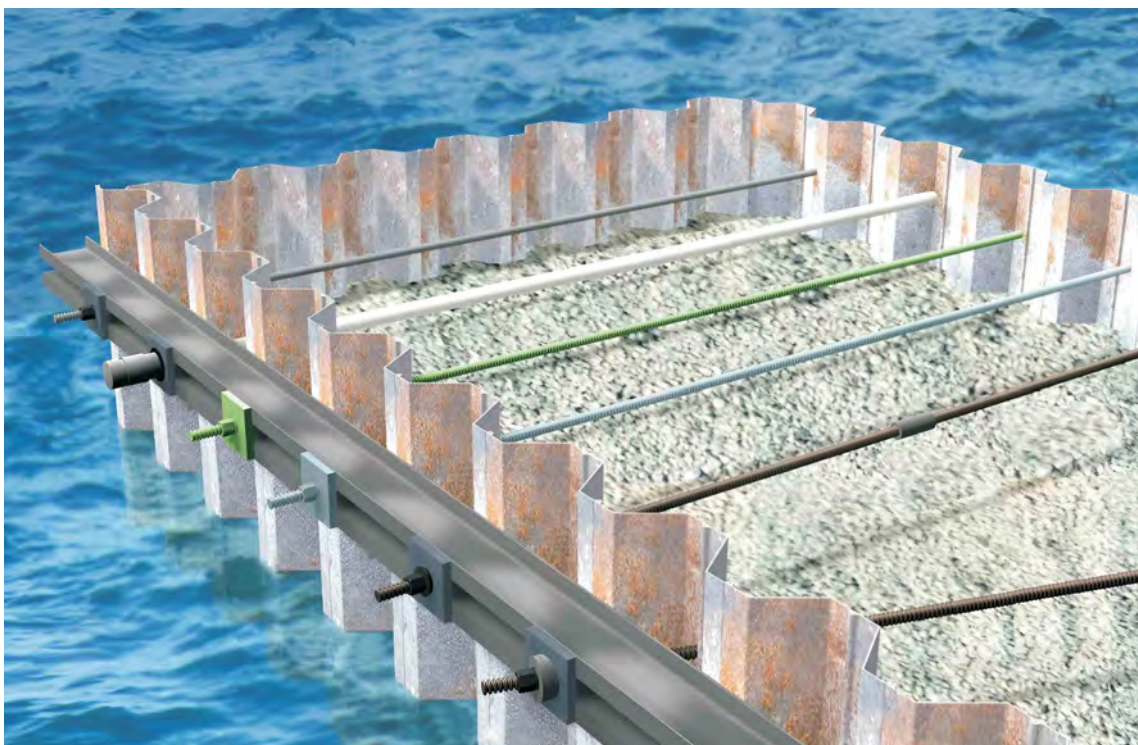
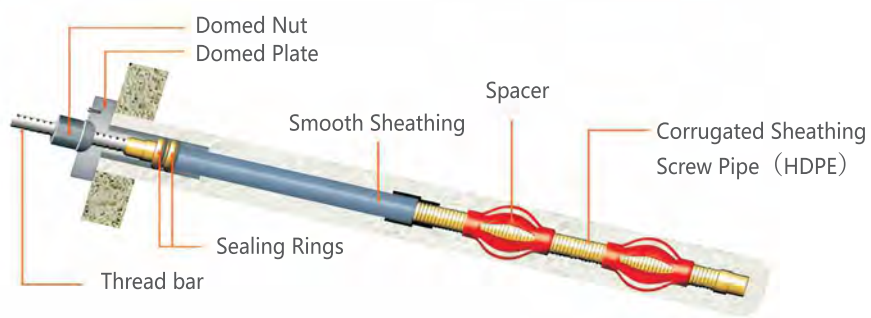
Application-III

应用介绍

Temporary Rock Bolts



Permanent Rock Bolts



Job Reference- I 工程案例

- Post Tensioning
- Form Works
- Geotechnical
- Ground Anchor
- Soil Nailing
- Tunneling
- Civil& structural engineering



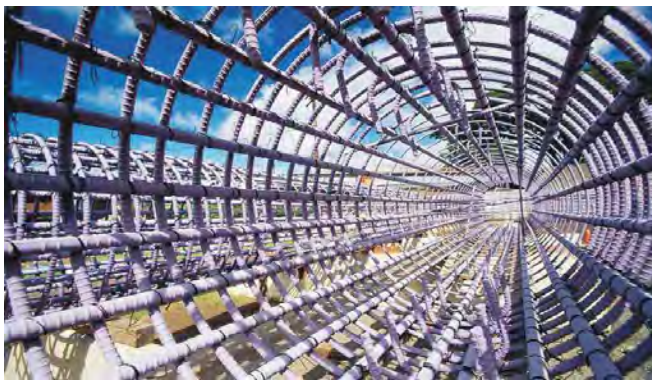
Grade: PSB500/630, PSB830/1030, PSB930/1080, PSB1080/1230 Mpa

Diameter: $\phi 15$, $\phi 20$, $\phi 25$, $\phi 28$, $\phi 32$, $\phi 36$, $\phi 40$, $\phi 50$, $\phi 63.5$, $\phi 75$

Application:

- ◆ Geotechnical system ◆ Rock bolt ◆ Ground anchor ◆ Bridge
- ◆ Form work ◆ Precast construction ◆ Civil and structural engineering

主要用于高速铁路、公路、隧道、边坡材料、抗浮基坑、桥梁建设等



Job Reference- II

工程案例

Saudi Arabia : Integrated Solar Combined Cycle Power Plant

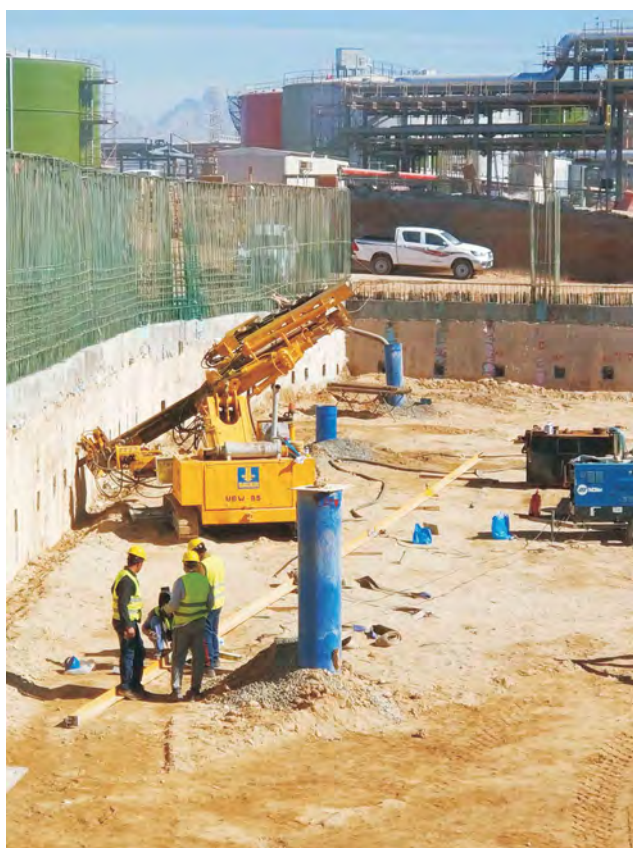
Application : Excavation support

Products : Grade 1080/1230, 32mm and 40mm thread bar and accessories

沙特阿拉伯：一体化太阳能联合循环电站

应用领域：基坑支护

产品：1080/1230级别，32和40精轧钢筋和配件



Job Reference-III

工程案例

Shanxi Bode Railway : Post tensioning.

PT bar 32mm-PSB930Mpa 200tons , accessories 26000sets.

山西保德铁路：张拉

32mm-PSB930Mpa 钢筋200吨，配套锚具26000套



Shijiazhuang City Highway :

Form traveler, Post tensioning.

PT bar 32mm-PSB930Mpa 90tons,
accessories over 8000sets.

石家庄市内高速：挂篮，张拉

32mm-PSB930Mp 钢筋90吨
配套锚具8000多套



Job Reference-IV

工程案例

Vietnam:

Rock bolt/Anchor bar for slope
stabilization HDG finish 32mm-PSB500
rock bolt and accessories 400tons

越南：边坡锚固

32mm-PSB500Mpa/热镀锌钢筋和配件合计
400吨。



Job Reference- V

工程案例

Shanxi Tai-hang Mountains Highway:

Form traveler, Post tensioning.
PT bar 32mm-PSB930Mpa 60tons,
accessories over 2310sets.

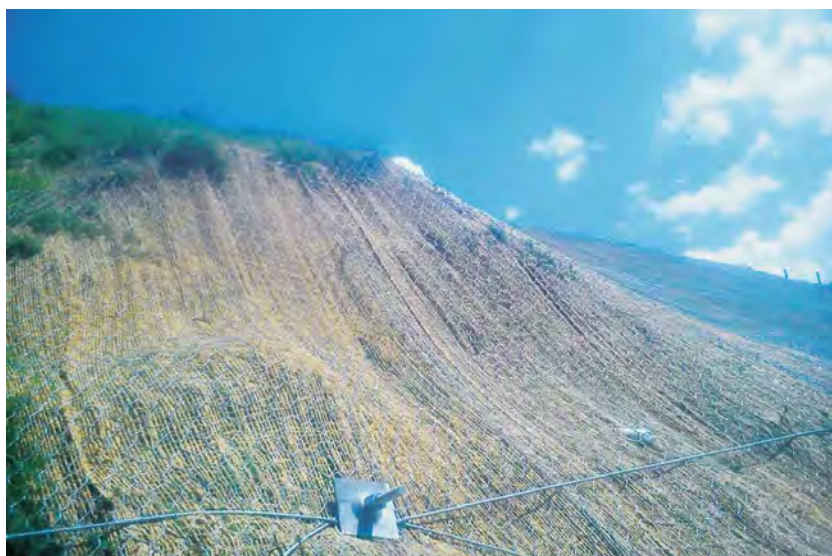
山西太行山高速：挂篮，张拉
32mm-PSB930Mpa钢筋60吨，
配套锚具2310套



Greece :

Soil nailing/slope stability.
HDG finish 25mm-PSB830Mpa full
thread bar and accessory 100 tons.

希腊：边坡支护
25mm-PSB830Mpa
热镀锌钢筋配套锚具合计100吨



Job Reference-VI

工程案例

Yanziying Bridge:

This project in Chengde Hebei built by China Mcc22 Group Corp.,Ltd used 150tons of 32mm-930 high strength thread bar and 10000sets of accessories

中国二十二冶集团有限公司河北承德门营子大桥

使用32mm-PSB930精轧螺纹钢150吨和锚具10000套。



Binjiang Xincheng Mountain Bridge:

This project in Jiangsu Free Zone(Jingangtown) used 50tons of high strength thread bar and 1500sets of accessories

斌江新城镇山路大桥

该项目位于江苏保税区金港镇共使用钢筋50吨，锚具1500套。

Job Reference-VII

工程案例

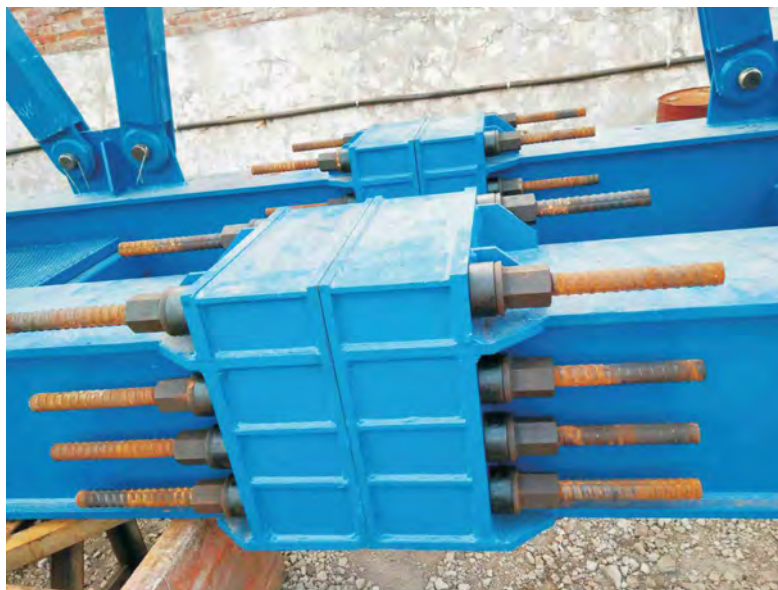
Malaysia:

Post tension bar for Bridge Girder
erection machine

Plain finished 40mm-PSB1080 with heavy
dome nut and round spherical plate total
1000sets

马来西亚

架桥机用40mm-PSB1080精轧螺纹钢配套重
型蘑菇头螺母和圆形锥垫板合计1000套。



Fuzhou Pingtan Strait Highway and railway Bridge

Which built by Fujian Branch of China
Railway Bridge Bureau, used 100tons
of 32mm-PSB830 high strength thread
bars and 500sets accessories

福州平潭海峡公铁大桥

由中铁建大桥局(福建)承建共使用精轧螺纹钢
32mm-PSB830100吨，配件500套。

Job Reference-VIII

工程案例

Macau light rail C370 project contracted by China Railway 15th Bureau

A total of 220 tons 25mm-PSB830 high strength thread bar were used in 3073-meter construction area of Macau light rail C370 project

中铁十五局集团澳门轻轨：

C370项目3073m施工区高架桥节段箱梁拼装共92跨共使用25mm-PSB830精轧螺纹钢220吨。



Binzhou Le'an Yellow River Bridge
滨州乐安黄河大桥



Changtai Yangtze River Bridge
常泰长江大桥



Shanghai Nantong Yangtze River Bridge
沪通长江大桥

Packing & Shipping 包装发货

Bars: In bundles , 1.5-2ton

Accessory: 25KG/CTN , 36CTNS/Pallet , Wooden box



Enterprise Qualification- I

企业资质



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.



TEST REPORT

No. : NJIN2506001547ML01_EN

Date : 2025-06-19

Page: 1 of 3

Scan to see the report



NJIN2506001547ML01
Verification:
check.sgschina.com.cn

CUSTOMER NAME: HANDAN YIDAO METAL PRODUCTS CO., LTD
ADDRESS: NO.183 LIANFANG EAST ROAD, HANDAN, HEBEI CHINA

Sample Name : Dia.15/17mm hot rolled tie rod
Product or Lot No. : B22507904

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required : Tensile Test
Date of Receipt : 2025-06-12
Testing Period : 2025-06-12 ~ 2025-06-19
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services Co.,Ltd. Nanjing Branch.

Steven Zhu
朱宇

Steven Zhu
Authorized signatory



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TEST REPORT

No. : NJIN2506001547ML01_EN

Date : 2025-06-19

Page: 2 of 3

Tensile Test

Test Method: GB/T 28900-2022

Test item	Specimen type	Maximum Force (kN)	Tensile strength (MPa)	Yield strength (0.2% offset) (MPa)	Elongation after fracture $L_0=5d$ (%)
Result	Unmachined specimen	192.58	1090	913	9.5



During test



Before test



After test



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TEST REPORT

No. : NJIN2505001178ML02_EN

Date : 2025-05-20

Page: 1 of 4

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Verification:
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CUSTOMER NAME: HANDAN YIDAO METAL PRODUCTS CO., LTD
ADDRESS: NO.183 LIANFANG EAST ROAD, HANDAN, HEBEI CHINA

Sample Name : hot rolled tie rod
Product Specification : Dia.20mm right hand thread, Grade930
Product or Lot No. : B22502044

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required : Tensile Test
Date of Receipt : 2025-05-09
Testing Period : 2025-05-09 ~ 2025-05-20
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services Co.,Ltd. Nanjing Branch.

Steven Zhu
朱宇

Steven Zhu
Authorized signatory



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TEST REPORT

No. : NJIN2505001178ML02_EN

Date : 2025-05-20

Page: 2 of 4

Tensile Test

Test Method: GB/T 28900-2022

Test item	Specimen type	Tensile strength (R_m) (MPa)	Maximum force (F_{max}) (kN)	Proof strength ($R_{p0.2}$) (MPa)	Elongation after fracture(A) $L_e=5d$ (%)	Percentage total elongation at maximum force (A_{gt}) $L_e=100$ (%)
Result-002	Unmachined specimen	1206	379.07	1143	9.5	3.5



During test



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TEST REPORT

No. : NJIN2503000519ML01_EN

Date : 2025-03-14

Page: 1 of 3



CUSTOMER NAME: HANDAN YIDAO METAL PRODUCTS CO., LTD
ADDRESS: O.183 LIANFANG EAST ROAD, HANDAN, HEBEI CHINA 056004

Sample Name : left hand thread bar
Product Specification : Dia.25mm
Product or Lot No. : B22503456
Manufacturer : Handan Yidao Metal Products Co., Ltd
Material and Mark : Grade500

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required : Tensile Test
Date of Receipt : 2025-03-10
Testing Period : 2025-03-10 ~ 2025-03-14
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

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Steven Zhu
朱宇

Steven Zhu
Authorized signatory



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Page: 3 of 3



Sample Photo

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TEST REPORT

No. : TJIN2308003300ML01_EN

Date : 2023-08-18

Page: 1 of 2

scan to see the report



TJIN2308003300ML01

CUSTOMER NAME: HANDAN YIDAO METAL PRODUCTS CO.,LTD
ADDRESS: DEYUAN BUILDING,NO.183 LIANFANG EAST ROAD,
HANDAN,HEBEI CHINA 056004

Sample Name : Hot Rolled Post Tensioning Bar Dia.28mm

Product Specification : D28* 0.8m

Material and Mark : PSB930

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Date of Receipt : 2023-08-14

Testing Period : 2023-08-14 ~ 2023-08-18

Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services (Tianjin) Co., Ltd..

Kevin Zhou
Authorized signatory



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TEST REPORT

No. : TJIN2308003300ML01_EN

Date : 2023-08-18

Page: 2 of 2

Tensile Test

Test Method: GB/T 28900-2022

Test item	Nominal diameter (mm)	Maximum force (kN)	Tensile strength R_m /MPa	Yield strength R_{eL} /MPa	Elongation after Fracture, A/% $L_0=5d$	Total elongation at maximum force, $A_{gt}/\%$
1	φ28	668.4	1085	944	10.5	6.5

Note: The above test project was carried out by subcontractors.

The test report shall only be used for clients' scientific research, teaching, internal quality control, product research and development, etc... and just for internal reference.



Sample Photo

*****End of report*****



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TEST REPORT

No. : NJIN2505001178ML03_EN

Date : 2025-05-20

Page: 1 of 4



CUSTOMER NAME: HANDAN YIDAO METAL PRODUCTS CO., LTD
ADDRESS: NO.183 LIANFANG EAST ROAD, HANDAN, HEBEI CHINA

Sample Name : left hand thread bar
Product Specification : Dia.32mm, Grade500
Product or Lot No. : B22506655

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required : Tensile Test
Date of Receipt : 2025-05-09
Testing Period : 2025-05-09 ~ 2025-05-20
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services Co.,Ltd. Nanjing Branch.

Steven Zhu
朱宇

Steven Zhu
Authorized signatory



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TEST REPORT

No. : NJIN2505001178ML03_EN

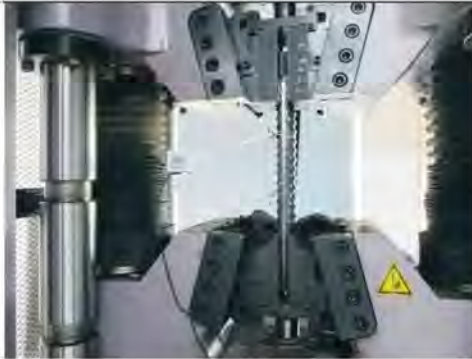
Date : 2025-05-20

Page: 2 of 4

Tensile Test

Test Method: GB/T 28900-2022

Test item	Specimen type	Tensile strength (R_m) (MPa)	Maximum force (F_{max}) (kN)	Proof strength ($R_{p0.2}$) (MPa)	Elongation after fracture(A) $L_0=5d$ (%)	Elongation after fracture(A) $L_0=200mm$ (%)	Percentage total elongation at maximum force (Agt) $L_e=100$ (%)
Result-003	Unmachined specimen	697	560.27	533	24.0	21.5	11.5



During test



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TEST REPORT

No. : TJIN2202001903ML

Date : Feb 22, 2022

Page: 1 of 2



TJIN2202001903ML

CUSTOMER NAME: HANDAN YIDAO METAL PRODUCTS CO.,LTD
ADDRESS: NO.183 LIANFANG EAST ROAD, HANDAN,HEBEI,CHINA

Sample Name : THREAD BAR
Product Specification : PSB930 D40X800MM
Manufacturer : HANDAN YIDAO METAL PRODUCTS CO.,LTD
Material and Mark : PSB930

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Date of Receipt : Feb 17, 2022
Testing Start Date : Feb 17, 2022
Testing End Date : Feb 22, 2022
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services(Tianjin) Co., Ltd

Jalor Zhang
Authorized signatory



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TEST REPORT

No. : TJIN2202001903ML

Date : Feb 22, 2022

Page: 2 of 2

Test item: Tensile Test

Test Method: GB/T 28900-2012

Test item	Nominal diameter (mm)	Tensile strength R_m /MPa	Proof strength $R_{p0.2}$ /MPa	Con.
Req.	-----	≥ 1080	≥ 930	-----
1	$\phi 40$	1291	1105	Pass

Note: The tensile strength and proof strength comply with the requirement of client's information.

The above test project was carried out by subcontractors.

The test report shall only be used for clients' scientific research, teaching, internal quality control, product research and development, etc... and just for internal reference.



Sample photo

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