





SONGSHUN



松崗模鋼有限公司
HONGKONG SONGSHUN MOULD STEEL CO., LTD.
東莞市松崗模鋼有限公司
DONGGUAN SONGSHUN MOULD STEEL CO., LTD.





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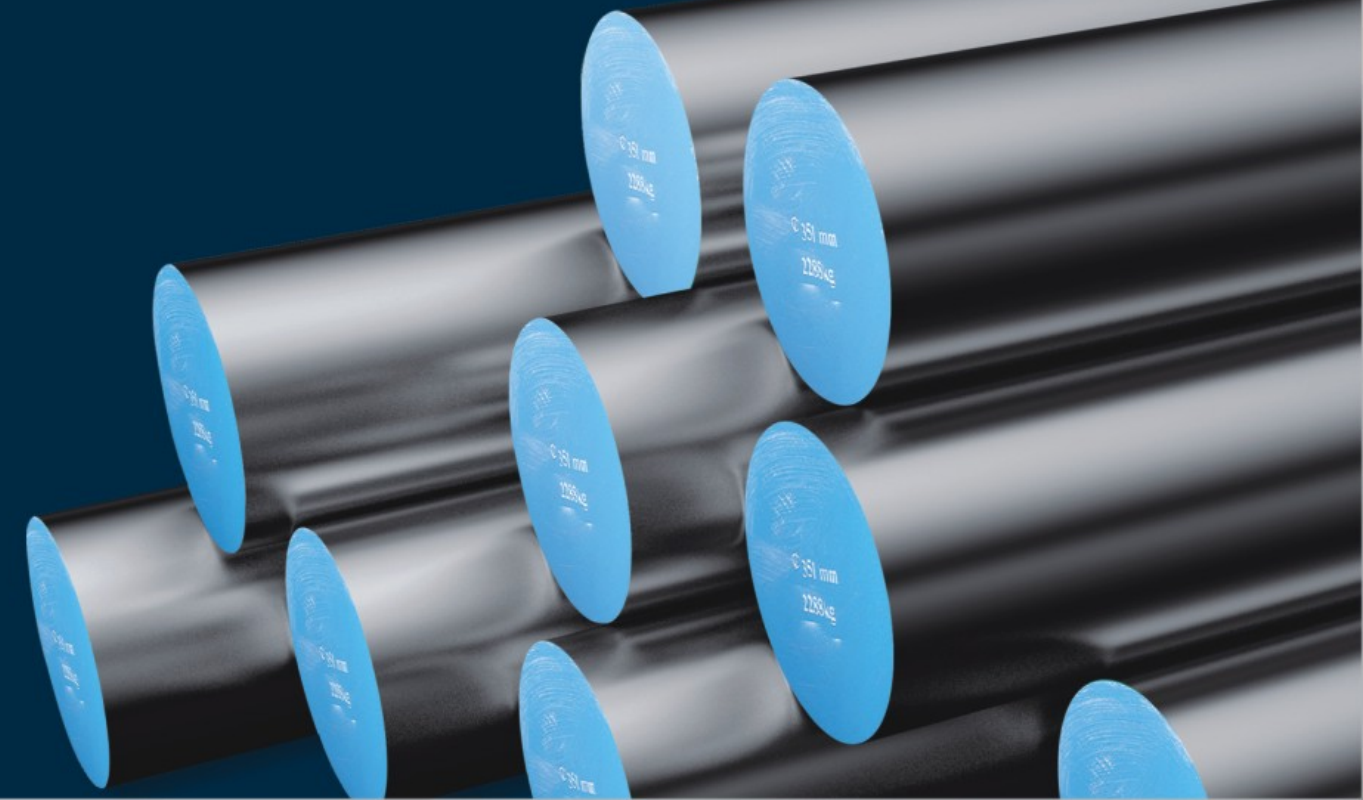
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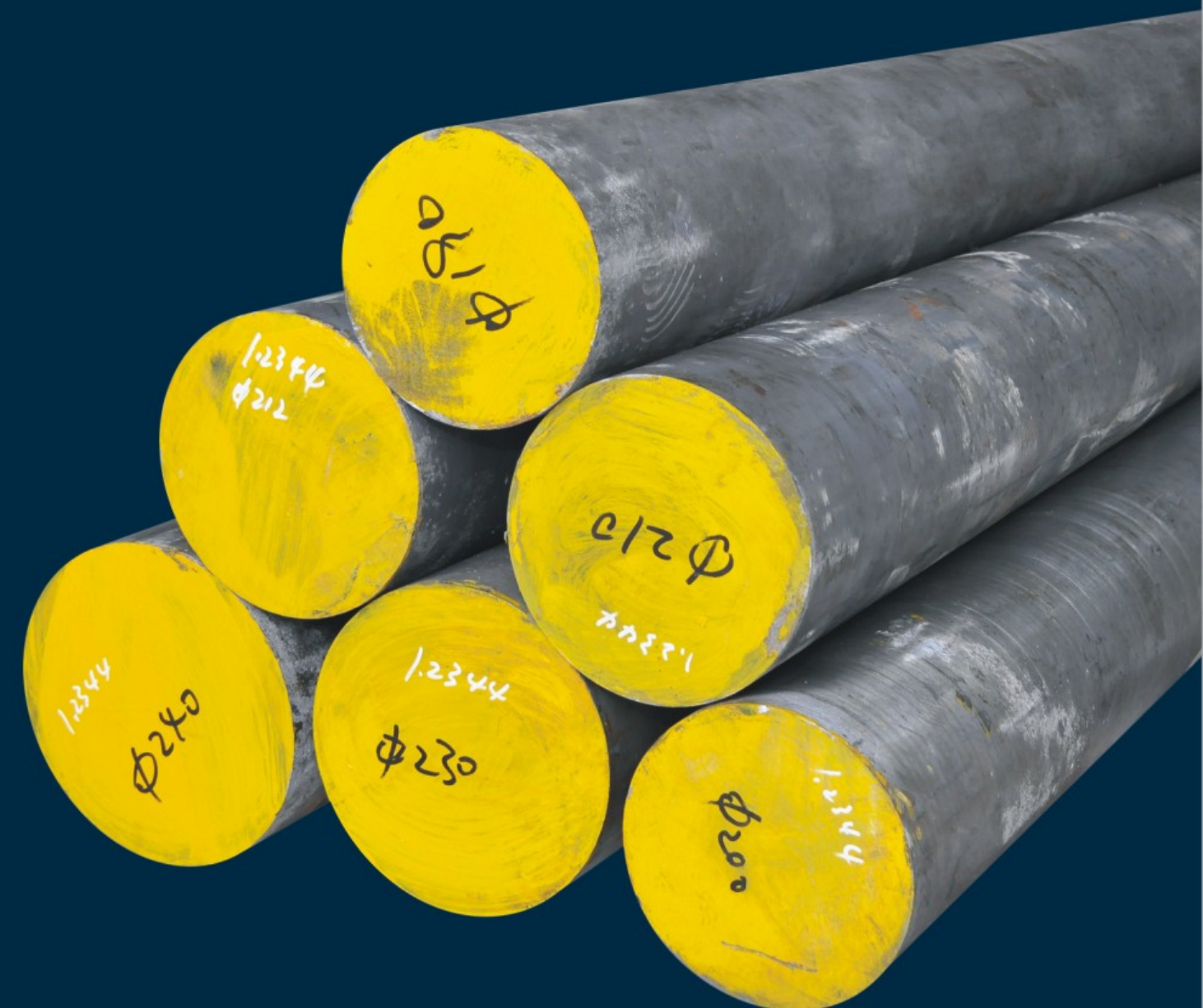


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公司简介

COMPANY PROFILE

松顺模具钢国际有限公司是集生产和直销各大钢厂材料为一体的工业实体，其锻造设备有3500-7000吨大型水压锻造机械。公司产品规格，品种齐全，品质优良，货源充足。常年库存量在20000吨以上。

公司主要生产销售合金结构钢，工具钢，不锈钢，弹簧钢，轴承钢等各种牌号系列的棒材，板材，模块。多年来为汽车制造，工程机械，模具制造，刀具制造等行业的各大，中型企业提供了大量的优质钢材，深受海内外用户的一致好评。

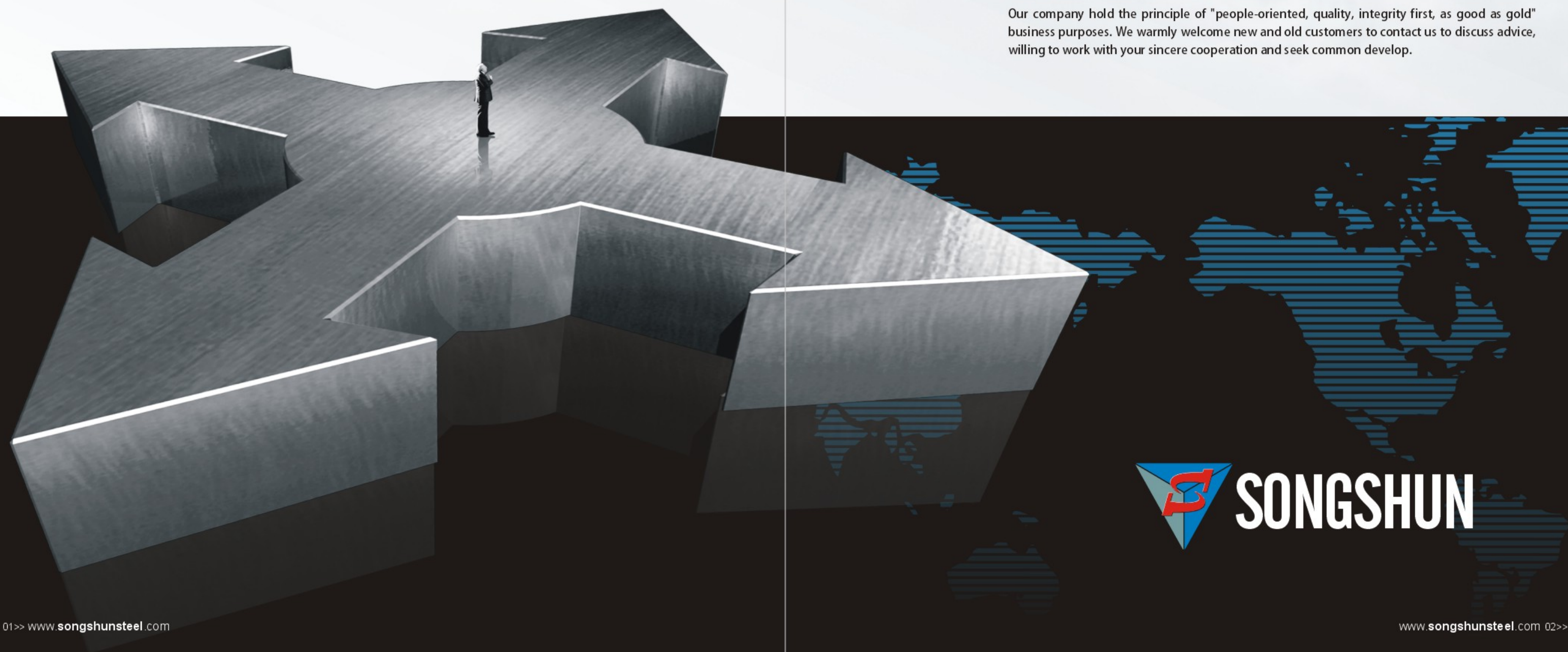
公司坚持“以人为本，诚信致业，品质保证，共谋发展”的经营理念，真诚于海内外各界朋友携手合作，共创未来。



Dongguan songshun mould steel co., LTD which is a Industrial and Trading Company with 3500 - 7000ts hydraulic forging machine. We provide a great variety of steels, competitive price with good quality and keep the mass stock are over 20000 tons.

Our main products are round and flat bars for alloy steel, tool steel, stainless steel, spring steel, bearing steel and etc. In those years we offers a wide range of high quality steel for automobile manufacturing, engineering machinery, mold tooling, cutting tools manufacturing industry and also get the high praise by at home and aboard clients.

Our company hold the principle of "people-oriented, quality, integrity first, as good as gold" business purposes. We warmly welcome new and old customers to contact us to discuss advice, willing to work with your sincere cooperation and seek common develop.





团队使命

Team Mission

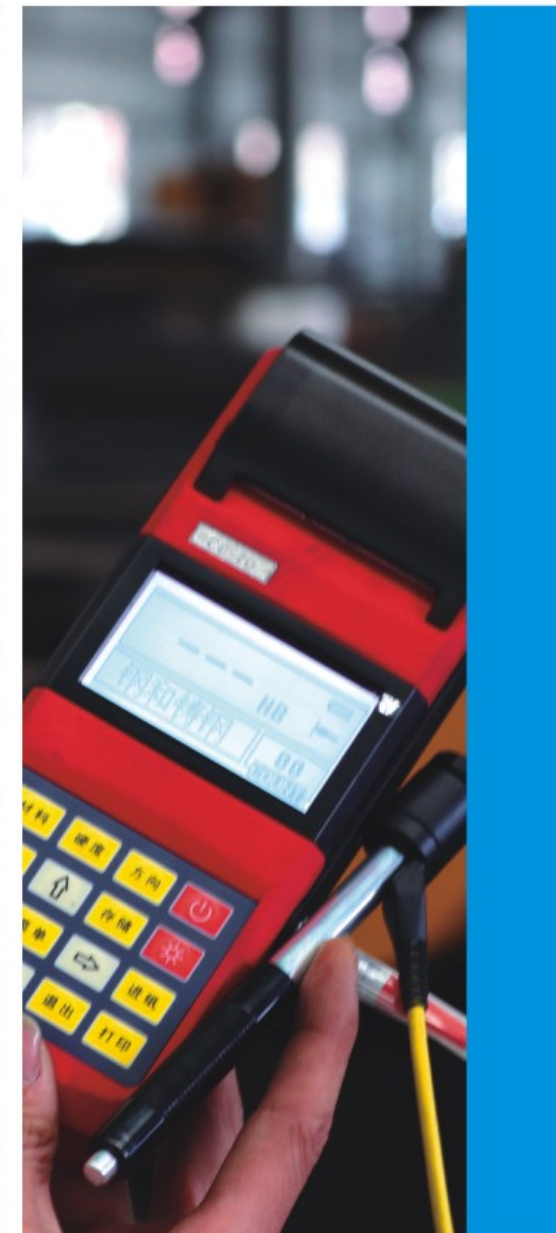
- 凝聚团结 +
- 科学分工 +
- 争创第一 +



We respect work — gain the trust
We attention to detail — gain the quality
We sincerity and innovate — gain the develop



执着的追求
品质零缺陷+



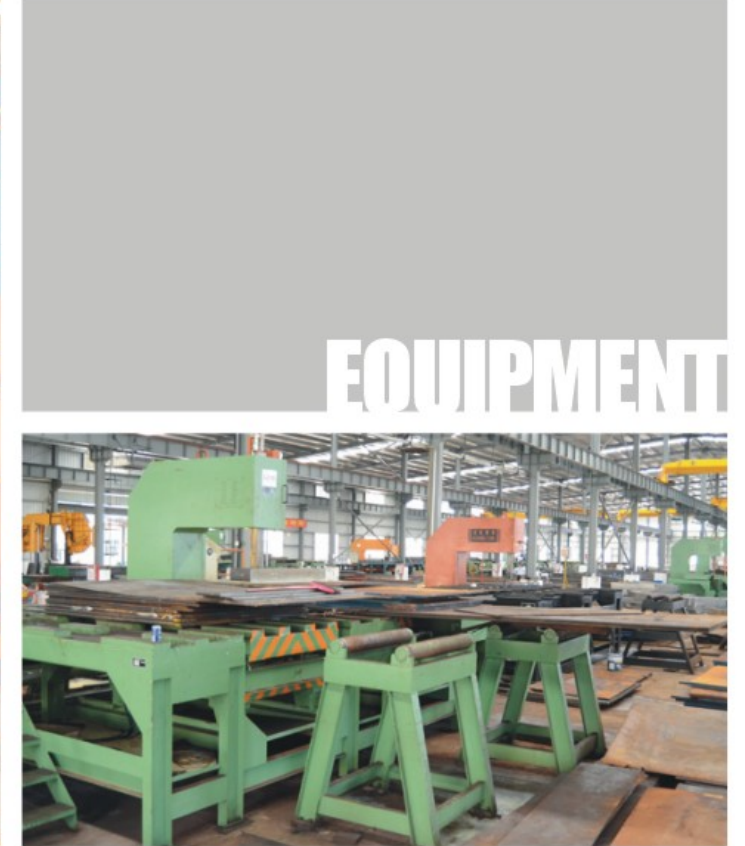
品质体系 — QUALITY GUARANTEE SYSTEM —

品质是企业立足之本，优质的产品是企业的核心竞争力，松顺为了制造高品质的产品，运用高精度的量具及先进的检测仪器，从进料检验到制程检验再到出货检验，严把加工过程中的每一道关口，确保每一个产品的高质量。

严格的品质检测是高性能的保证，品质管理贯穿整个制造流程，精密品检设备和高度责任心，以及按时交货和良好的售后服务，使我们拥有更强的责任和更好的服务。

Quality is the foundation of the company, high-quality products are the main competitiveness of the enterprise. In order to produce high-quality products, SONGSHUN utilizes high-precision measurement and advanced detected equipment, the quality control to for each processing steps, every procedure has been strictly undertaken to ensure high-quality products.

High-performance and strict quality detection, the quality management integrated into the whole production procedure, precision production-detected devices and high responsibility, delivery on time and the excellent after-sales service, make us stronger responsibility and better service.



EQUIPMENT



加工设备 Processing equipment

完整的配套设备和加工流程，经验丰富的管理技术团队，现有规模化成套先进的机械加工设备，从事生产、服务的专业队伍，满足多元化及持续改善的要求，为客户提供完善的技术和服务。

Complete equipment and machining processes, experienced management and technical team, advanced processing equipment, professional team engaged in the production and service, satisfy the requirements of diversity and advance market, provide the perfect technology and service to the client.



钢材仓库 Steel inventories



产品的种类丰富/ Various types of products

根据客户的需要可生产不同形状，材质，尺寸，公差的配件。
Produce fittings with different shapes, material quality, size and tolerances to meet customers requirements.

高质量可安心使用/ High-quality and safe product

松顺的高质量产品全世界超过600家制造行业的客户在使用，并受到大家好评。
SONGSHUN high-quality products all over the world more than 600 customers in the manufacturing industry use, and praised by everyone.

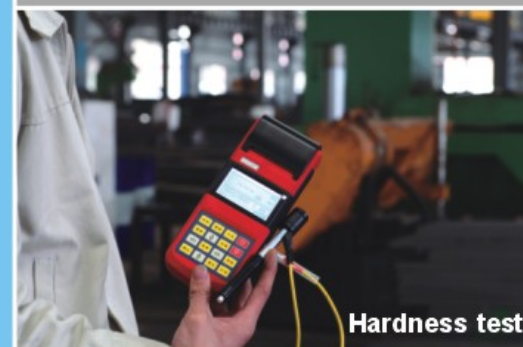
全球的销售体制/ Global sales system

松顺的产品销往全球，地域的持续拓展和业务量增长充分体现其行业地位。
SONGSHUN products sold to continued expansion and growth of the global business volume, fully reflects its geographical position in the industry.

TEST equipment



Ultrasonic flaw detection



Hardness test



Element test



No.	Similar grade					Application	化学成分Chemical composition(%)										硬度HBW
	GB	AISI/ASTM	DIN	JIS	EN		C	Si	Mn	P	S	Cr	Mo	W	V	NI	
1	Cr12	D3	1.2080	SKD1	X210Cr12	For press mold, knife mold, screw mold.	2.00-2.30	≤0.40	≤0.40	≤0.030	≤0.030	11.50-13.00	-	-	-	-	217-269
2	Cr12MoV	D3	1.2601	SKD11	X165CrMoV12	For all kinds of press mold and tool.	1.45-1.70	≤0.40	≤0.40	≤0.030	≤0.030	11.00-12.50	0.40-0.60	-	0.15-0.30	-	255-207
3	Cr12Mo1V1	D2	1.2379	SKD10	X153CrMoV12	For pounch mold, knife mold, screw mold, chinaware mold.	1.40-1.60	≤0.60	≤0.60	≤0.030	≤0.030	11.00-13.00	0.70-1.20	-	0.50-1.10	-	Co≤1.00 ≤255
4	Cr12W	D6	1.2436	SKD2	X210CrW12	For pounch mold, press mold, mech mold.	2.00-2.30	≤0.40	≤0.40	≤0.030	≤0.030	11.50-13.00	-	0.60-0.80	-	-	-
5	9CrWMn	O1	1.2510	SKS3		For thin pounch mold, headgear mold.	2.00-2.30	≤0.40	≤0.40	≤0.030	≤0.030	11.50-13.00	-	0.60-0.80	-	-	-
6	9Mn2V	O2	1.2842	SKS31	107WCr5	For precision mould, Gauge, precision ball screw, Grinding machine spindle.	0.85-0.95	≤0.40	1.70-2.00	≤0.030	≤0.030	-	-	-	0.10-0.25	-	≤229
7	CrWMn		1.2419	SKS31		For cold-punching mould, die, insert, cold mold.	0.90-1.05	≤0.40	0.80-1.10	≤0.030	≤0.030	0.90-1.20	-	1.20-1.60	-	-	255-207
8	Cr5Mo1V	A2	1.2363	SKD12		For pounch mold with heacy load and complicated shape, cutters, knife.	0.95-1.05	≤0.50	≤1.00	≤0.030	≤0.030	4.75-5.50	0.90-1.40	-	0.15-0.50	-	≤255

冷作模具钢

No.	Similar grade					Application	化学成分Chemical composition(%)										硬度HBW	
	GB	AISI/ASTM	DIN	JIS	EN		C	Si	Mn	P	S	Cr	Mo	W	V	NI		Other
1	4Cr5MoSiV1	H13	1.2344	SKD61		For aluminum,magnesium,zinc extrusion mold and casting mold.	0.32-0.42	0.80-1.20	0.20-0.50	≤0.030	≤0.030	4.75-5.50	1.10-1.75	-	0.80-1.20	-	≤235	
2	4Cr5MoSiV	H11	1.2343	SKD6		For aluminum,magnesium,zinc extrusion mold and casting mold.	0.33-0.43	0.80-1.20	0.20-0.50	≤0.030	≤0.030	4.75-5.50	1.10-1.60	-	0.30-0.60	-	≤235	
3	3Cr2W8V	H21	1.2581	SKD5		For die casting mold.	0.30-0.40	≤0.40	≤0.40	≤0.030	≤0.030	2.20-2.70	-	7.50-9.00	0.20-0.50	-	255-207	
4	4Cr3Mo3SiV	H10	1.2365	SKD7		For hot stamping mold, hot forging mold,hot rolling mold and plastic mold.	0.35-0.45	0.80-1.20	0.25-0.70	≤0.030	≤0.030	3.00-3.75	2.00-3.00	-	0.25-0.75	-	≤229	
5	4Cr5Mo2SiV		1.2367			For aluminum,magnesium,titanium extrusion mold.	0.35-0.45	0.80-1.20	0.25-0.70	≤0.030	≤0.030	3.00-3.75	2.00-3.00	-	0.25-0.75	-	≤229	
6	5CrNiMo	L6	1.2713			For large and medium sized hammer forging die.	0.50-0.60	≤0.40	0.50-0.80	≤0.030	≤0.030	0.50-0.80	0.15-0.30	-	-	1.40-1.80	-	197-241
7	5CrNiMoV		1.2714	SKT4		For large and medium sized hammer forging die.	0.50-0.60	≤0.40	0.50-0.80	≤0.030	≤0.030	1.00-1.20	0.45-0.55	-	0.07-0.12	1.40-1.80	-	197-241

热作模具钢

No.	Similar grade					Application	化学成分Chemical composition(%)										硬度HBW	
	GB	AISI	DIN	JIS	EN		C	Si	Mn	P	S	Cr	Mo	W	V	NI		Other
1	3Cr2Mo	P20	1.2311		SCM4	For pre-hardend pouring plastic mold, can polish currently.	0.28-0.40	0.20-0.80	0.60-1.00	≤0.030	≤0.030	1.40-2.00	0.30-0.55	-	-	-	-	330-280
2	3Cr2MnS	P20+S	1.2312			For pre-hardend pouring plastic mold, can polish currently.	0.35-0.45	0.30-0.850	1.40-1.60	≤0.030	≤0.030	1.80-2.00	0.15-0.25	-	-	-	-	≤230
3	3Cr2NiMo	P20+NI	1.2738			For pre-hardend big-size of pouring plastic mold, can polish currently.	0.32-0.40	0.20-0.40	1.10-1.50	≤0.030	≤0.015	1.70-2.00	0.25-0.40	-	-	0.85-1.15	-	330-280
4	15Ni3Mn	P21			18Ni	For pre-hardend big size of pouring plastic mold, can be polish	0.10-0.20	0.20-0.41	1.60-1.80	≤0.030	≤0.015	-	0.25-0.35	-	-	2.80-3.70	Cu:1.00	≤235
5	4Cr13	420	1.2083		SUS420J2	For mold of polishing galses and plastic	0.35-0.43	0.20-0.80	0.55-0.95	≤0.028	≤0.020	13.00-14.00	-	≤0.60	-	-	-	255
6	4Cr16	420	1.2316		SUS420	For mold of plastic with stronger coorrupt-resisting	0.35-0.44	≤0.10	0.55-0.95	≤0.028	≤0.020	15.50-16.50	0.80-1.60	≤1.00	-	-	-	255
7	2Cr13	420	1.4021		SUS420J1	For Vane steamer.	0.15-0.25	≤0.10	≤0.10	≤0.035	≤0.030	13.50-14.50	-	≤0.60	-	-	-	223

塑胶模具钢

No.	Similar grade					Application	化学成分Chemical composition(%)										硬度HBW	
	GB	AISI	DIN	JIS	EN		C	Si	Mn	P	S	Cr	Mo	NI	V	Other		
1	40Cr	5140	1.7035		SCr440	For shaft, screw bolt, joint shaft in widely use.	0.37-0.44	0.17-0.37	0.50-0.80	≤0.035	≤0.035	0.80-1.10	-	-	-	-	-	-
2	42CrMo	4140	1.7225		SCM440		0.38-0.45	0.17-0.37	0.50-0.80	≤0.035	≤0.035	0.90-1.20	0.15-0.25	-	-	-	-	-
3	38CrMoAl		1.8509				0.35-0.42	0.20-0.45	0.30-0.60	≤0.035	≤0.035	1.35-1.65	0.15-0.25	-	-	-	-	Al 0.70-1.10
4	40CrMnMo	4142	1.7225				0.37-0.45	0.17-0.35	0.90-1.20	≤0.035	≤0.035	0.90-1.20	0.20-0.30	-	-	-	-	-
5	40CrNiMoA	4340	1.6511		SCM439	For vane, shaft, bolt of large dia steamer.	0.37-0.44	0.17-0.37	0.50-0.80	≤0.035	≤0.035	0.60-0.90	0.15-0.25	-	1.25-1.65	-	-	-
6	40CrNiMoA	4340	1.6582			For vane, shaft, bolt of large dia steamer.	0.37-0.44	0.17-0.37	0.50-0.80	≤0.035	≤0.035	0.60-0.90	0.15-0.25	-	1.25-1.65	-	-	-
7	20CrNiMo	8620	1.6523				0.17-0.23	0.17-0.37	0.60-0.95	≤0.035	≤0.035	0.40-0.70	0.20-0.30	-	0.35-0.75	-	-	-
8	15CrMn	5115	1.7131				0.12-0.18	0.17-0.37	1.10-1.40	≤0.035	≤0.035	0.40-0.70	-	-	-	-	-	-
9	20CrMn	5120	1.7147				0.17-0.23	0.17-0.37	0.90-1.20	≤0.035	≤0.035	0.90-1.20	-	-	-	-	-	-
10	15CrMo		1.7262				0.12-0.18	0.17-0.37	0.40-0.70	0.035	0.035	0.80-1.10	0.40-0.55	-	-	-	-	-
11	20CrMo	4118	1.7264				0.17-0.24	0.17-0.37	0.40-0.70	≤0.035	≤0.035	0.80-1.10	0.15-0.25	-	-	-	-	-
12	25CrMo		1.7218				0.17-0.24	0.17-0.37	0.40-0.70	≤0.035	≤0.035	0.80-1.10	0.15-0.25	-	-	-	-	-
13	30CrMo				SCM430		0.26-0.34	0.17-0.37	0.40-0.70	≤0.035	≤0.035	0.80-1.10	0.15-0.25	-	-	-	-	-
14	35CrMo	4135	1.722			For main shaft of steamer, bilt for 400℃. Hummar shank.	0.32-0.40	0.17-0.37	0.40-0.70	≤0.035	≤0.035	0.80-1.10	0.15-0.25	-	-	-	-	-
15	GCr15		1.3505		E52100		0.95-1.05	0.15-0.35	0.25-0.45	≤0.025	≤0.025	1.40-1.65	≤0.10	-	≤0.30	-	-	Cu≤0.25
16	50CrV	6150	1.8159			Spring steel for gas engine, car within 200℃.	0.47-0.54	0.17-0.37	0.50-0.80	≤0.035	≤0.035	0.80-1.10	-	-	-	0.10-0.20	-	-
17		8640					0.38-0.43	0.15-0.35	0.75-1.00	≤0.035	≤0.040	0.40-0.60	0.15-0.25	-	0.40-0.70	-	-	-
18		9840					0.35-0.43	0.15-0.40	0.50-0.80			0.60-1.00	0.15-0.25	-	0.70-1.00	-	-	Al 0.020-0.050

合金结构钢

No.	Similar grade					Application	化学成分Chemical composition(%)										硬度HBW	
	GB	AISI	DIN	JIS	EN		C	Si	Mn	P	S	Cr	NI	Mo	Cu	Other		
1	45	1045	1.1191		S45C	For mold base and machine parts.	0.42-0.50	0.17-0.37	0.50-0.80	≤0.035	≤0.035	≤0.25	≤0.30	-	≤0.25	-	-	≤229
2	50	1050	1.1210		S50C	For mold base and machine parts.	0.47-0.55	0.17-0.37	0.50-0.80	≤0.035	≤0.035	≤0.25	≤0.30	-	≤0.25	-	-	≤241

碳素结构钢

No.	Similar grade					Application	化学成分Chemical composition(%)										硬度HRC	
	GB	AISI	DIN	JIS	EN		C	Si	Mn	P	S	Cr	NI	Mo	Cu	V		Nb
1	0Cr17Ni12Mo2	316	1.4401	1.1136	SUS 316	Stronger corrupt resisting for part of corrupting by sea water and screw bolt by hi-temperature	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	16.00-18.00	10.0-14.0	2.00-3.00	-	-	-	28
2	21Cr13	410				Blades, machine parts, bolts, nuts, pumps, oil refining device.	≤0.15	≤1.00	≤1.00	≤0.040	≤0.028	11.50-13.50	3.00	0.60	-	-	-	38-42
3	6Cr18Mo	440A	1.4109		SUS 440A	Bearings, measurement tools, high corrosion resistance of cutting tools.	0.60-0.75	≤1.00	≤1.00	≤0.040	≤0.028	16.0-18.0	-	≤0.75	-	-	-	56-58
4	0Cr17Ni4Cu4Nb	630			SUS630	Helicopter deck, turbine blades, nuclear waste drum	≤0.70	≤1.00	≤1.00	≤0.035	≤0.028	15.5-17.5	3.00-5.00	-	3.00-5.00	-	0.15-0.45	≤38

不锈钢



1.2311		执行标准 Products Standard					
化学成份 (%) Chemical composition (%)	C	Si	Mn	P	S	Cr	Mo
	0.35-0.45	0.20-0.40	1.30-1.60	≤0.035	≤0.035	1.80-2.10	0.15-0.25
炼钢工艺/Steelmaking processes	EAF+LF+VD		供货尺寸 Size	轧制/Hot rolled			
成型工艺/Formed technique	Hot rolled or hot forged			锻造/Hot forged			
交货状态 Delivery condition	预硬状态 (28-36HRC) , 光面或黑皮。 Pre-harden (28-36HRC) , Bright or black surface.						
热处理 Heat Treatment	退火/Annealed : 760-790℃ ; 淬火/Quenched : 850-880℃ , 油冷/Oil cooling ; 回火/Tempered : 580-640℃ , 空冷/Air cooling ;						

特性及适用范围 :

1.2311具有优良的抛光性及光蚀刻花性。经热处理后,加工及抛光性能良好,可进行氮化处理,材质硬度均匀,良好的韧性,良好的机械加工性能。

1.2311可用于制造大型塑胶模具,模座,热塑性塑胶注塑模具,挤压模。热塑性塑料吹塑模具重载模具主要部件,冷结构件。常用于制造电视机壳,洗衣机,冰箱内壳,水桶等,也可以用于锡,锌,铅等低熔点合金压铸模具。

Properties and applications :

1.2311 Plastic mold steel with excellent polishability and photo-etched flowers. After heat treatment, 1.2311 have good processing and polishing properties, suitable for nitriding and suitable for chrome plating surface treatment, good toughness and good machining performance.

1.2311 Plastic mold steel suitable for making medium and large plastic Injection dies and mold base. Thermoplastic plastic injection mold, extrusion die. Heavy mold main components of thermoplastic plastic blow molding mold, Cold structure parts. It usually use for making of TV cabinets, washing machine, refrigerator inner shell, buckets. It is also used in zinc, aluminum, magnesium and its alloy die-casting mold.

1.2312		执行标准 Products Standard					
化学成份 (%) Chemical composition (%)	C	Si	Mn	P	S	Cr	Mo
	0.35-0.45	0.30-0.50	1.40-1.60	≤0.030	0.05-0.10	1.80-2.00	0.15-0.25
炼钢工艺/Steelmaking processes	EAF+LF+VD		供货尺寸 Size	轧制/Hot rolled			
成型工艺/Formed technique	Hot rolled or hot forged			锻造/Hot forged			
交货状态 Delivery condition	预硬状态 (28-36HRC) , 光面或黑皮。 Pre-harden (28-34HRC) , Bright or black surface..						
热处理 Heat Treatment	退火/Annealed : 760-790℃ ; 淬火/Quenched : 850-880℃ , 油冷/Oil cooling ; 回火/Tempered : 580-640℃ , 空冷/Air cooling ;						

特性及适用范围 :

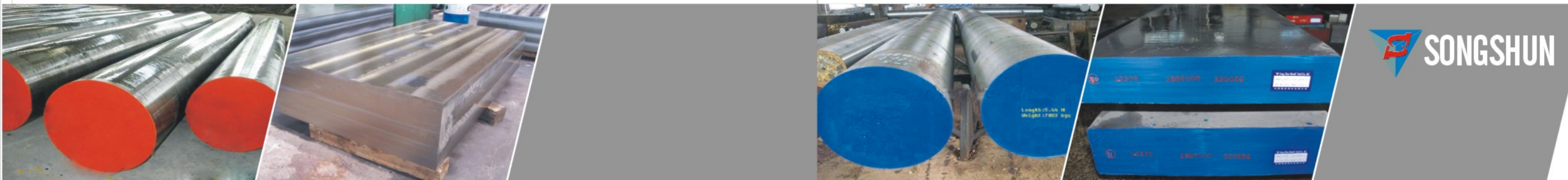
1.2312塑料模具钢因添加S而具有非常好的切削加工性能,具有良好的韧性和耐磨性,硬度均匀,良好的尺寸稳定性,预硬状态下不需要热处理就可以直接加工,适合氮化来提高耐磨性能。但是并不适合镀铬。

1.2312塑料模具钢适用于对表面无特殊要求及低应力的注塑模具,中等及大型的塑胶模具,低熔点的轻合金模具,也可以用于铸造和注射模具的模架或配件。

Properties and applications :

1.2312 plastic mould steels because of adding S element in it. It have very good machinability, good toughness and wear resistance, uniform hardness, good dimensional stability, pre-harden condition not requiring heat treatment can be directly processed, suitable for nitriding to increase wear resistance. But not for chrome.

1.2312 Plastic mold steel suitable for making Injection mold without special surface requirements and low mechanical stresses, medium and large size plastic mold, light alloy mold with low melting point. It also suitable for making mold base or mold parts of casting mold and injection mold.



1.2344		执行标准 Products Standard				DIN17350			
化学成份 (%) Chemical composition (%)	C	Si	Mn	P	S	Cr	Mo	V	
	0.37-0.43	0.9-1.2	0.3-0.5	≤0.030	≤0.030	4.8-5.5	1.2-1.5	0.9-1.1	
炼钢工艺/Steelmaking processes	EAF、EAF+ESR、EAF+LF+VD EAF+LF+VD+ESR			供货尺寸 Size	轧制/Hot rolled				
成型工艺/Formed technique	Hot rolled or hot forged				锻造/Hot forged				
交货状态 Delivery condition	球化退火，硬度≤220HB，光面或黑皮。								
	Spheroidizing annealing, Hardness ≤220HB, Bright or black surface.								
热处理 Heat Treatment	退火/Annealed：860-890℃；								
	淬火/Quenched：1020-1050℃，油冷或空冷/Oil cooling or air cooling, 53-58HRC；								
	回火/Tempered：560-580℃，熔融盐浴或空冷/Molten salt bath or air cooling, 47-49HRC；								

特性及适用范围：

1.2344热作模具钢具有良好的抗回火性，高温耐磨性，具有良好的淬火性和耐热冲击性，强度高，韧性优，抗热裂性好，可以渗氮来增加其耐磨性。

1.2344热作模具钢可以用于铝镁合金，锌合金，铜合金的挤压模，压铸模，也可以用作钢热压力机模等。

Properties and applications：

1.2344 hot work tool steels have good tempering resistance, high temperature wear resistance, good quenching and heat resistance impact resistance, high strength, high toughness, good Thermal cracking resistance. It can be nitrided to increase wear resistance.

It is used for making extrusion mold and casting mold of aluminum-magnesium alloy, zinc alloy and copper alloy. It is also can used for making hot pressing mold and so on.

1.2379		执行标准 Products Standard				DIN17350			
化学成份 (%) Chemical composition (%)	C	Si	Mn	P	S	Cr	Mo	V	
	1.5-1.6	0.1-0.4	0.15-0.45	≤0.030	≤0.030	11.0-12.0	0.6-0.8	0.9-1.1	
炼钢工艺/Steelmaking processes	EAF、EAF+ESR、EAF+LF+VD EAF+LF+VD+ESR			供货尺寸 Size	轧制/Hot rolled				
成型工艺/Formed technique	Hot rolled or hot forged				锻造/Hot forged				
交货状态 Delivery condition	球化退火，硬度≤255HB，光面或黑皮。								
	Spheroidizing annealing, Hardness ≤220HB, Bright or black surface.								
热处理 Heat Treatment	(1) 淬火/Quenched: 980℃-1040℃油冷或空冷/Oil cooling or air cooling, 60-65HRC；								
	回火/Tempered: 180-220℃ 1次60-64HRC；								
	(2) 淬火/Quenched: 1060-1100℃，油冷或空冷/Oil cooling or air cooling, 60-65HRC；								
	回火/Tempered: 510-540℃ 2次, 60-64HRC；								

特性及适用范围：

1.2379是一种高碳高铬合金工具钢，热处理后具有很高的硬度及耐磨性，高抗压强度，良好的加工性能，良好的韧性，淬透性强，尺寸稳定性好，优良的抗回火软化性等特点。

适用于制造各种高精度、长寿命的冷作模具。刃具和量具，如复杂的冲孔凹模、冷挤压膜、滚丝轮、螺纹搓丝板、冷剪刀等。

Properties and applications：

1.2379 is a high carbon and high chrome alloy steel. After heat treatment, it will have high hardness, good wear-resistance. High strength, good machinability, good toughness, strong hardenability, good size stability and excellent resistance to tempering softening etc.

It is used for make various high precision, long working life cold work mold, cutting tool and measuring tool, like: complicated piercing die, cold extrusion mold, cylindrical die roll, screw thread rolling plate, cold work scissor.



1.2738		执行标准 Products Standard						
化学成份 (%) Chemical composition (%)	C	Si	Mn	P	S	Cr	Mo	Ni
	0.35-0.45	0.20-0.40	1.30-1.60	≤0.035	≤0.035	1.80-2.10	0.15-0.25	0.9-1.2
炼钢工艺/Steelmaking processes	EAF+LF+VD			供货尺寸 Size	轧制/Hot rolled			
成型工艺/Formed technique	Hot rolled or hot forged				锻造/Hot forged			
交货状态 Delivery condition	预硬状态 (28-36HRC) , 光面或黑皮。 Pre-harden (28-36HRC) , Bright or black surface.							
热处理 Heat Treatment	退火/Annealed : 760-790°C ; 淬火/Quenched : 850-880°C , 油冷/Oil cooling ; 回火/Tempered : 580-640°C , 空冷/Air cooling ;							

特性及适用范围:

1.2738塑料模具钢具有优良的抛光性能, 高耐磨性, 高硬度, 良好的机械加工性, 适用于表面处理, 可施以氮化等特点。

1.2738塑料模具钢适用于大型的, 特别是厚度大于400mm的, 要求硬度均匀、高韧性和表面抛光性能好的塑料模具, 如电视机壳、复印机壳、保险杠、减震器、仪表盘等大型模具、以及垃圾桶模, 压铸模架等。

Properties and applications:

1.2738 plastic mould steel with excellent polishability properties, good wear resistance, high hardness, good machinability, suitable for surface treatment, can be process by nitride.

1.2738 plastic mould steel Suitable for large injection and compression moulds for plastic processing 400 mm thickness such as TV chassis, copiers, bumpers, shock absorbers, garbage and the dashboards, die casting.

1045		执行标准 Products Standard		ASTM A29/A29M	
化学成份 (%) Chemical composition (%)	C	Mn	P	S	
	0.43-0.50	0.60-0.90	≤0.040	≤0.05	
炼钢工艺/Steelmaking processes	EAF+LF+VD		供货尺寸 Size	轧制/Hot rolled	
成型工艺/Formed technique	Hot rolled or hot forged			锻造/Hot forged	
交货状态 Delivery condition	以不热处理或热处理 (退火、正火或调质) 状态交货。要求热处理状态交货的应在合同中注明, 未注明者按不热处理交货, 光面或黑皮。 Without heat treatment or heat treatment (anneal, normalizing, Q+T). All the condition should be mark in the contract or would be delivery with bright or black.				
热处理 Heat Treatment	退火/Annealed : 820-840°C , 空冷/Air cooling ; 正火/Normalizing : 850±10°C , 空冷/Air cooling ; 淬火/Quenched : 820-860°C , 油冷或水冷/Oil cooling or air cooling ; 回火/Tempered : 400-600°C (200-400HB)				
调质状态下力学性能 (直径为 d 的产品或厚度为 t 的扁平产品) The machinical property with Q+T.(Diameter d or flat thickness t)					
机械性能 Machine capability	d ≤16mm	16mm < d ≤40mm	40mm < d ≤100mm		
	t ≤8mm	8mm < t ≤20mm	20mm < t ≤60mm		
屈服点/Yield strength (Mpa)	≥490	≥430	≥370		
抗拉强度/Tensile strength (MPa)	700至850	650至800	630至780		
延伸率/Elongation (%)	≥14	≥16	≥17		
断面收缩率/Reduction of area (%)	≥35	≥40	≥45		
冲击功/KAV (J)	≥25	≥25	≥35		

特性及适用范围:

ASTM1045是强度较高的一种中碳优质钢, 因淬透性差, 一般以正火状态使用, 机械性能要求较高时采用调质处理。冷变形塑性中等, 退火或正火的切削加工性比调质的好。

ASTM1045用于制造强度要求较高的零件, 如齿轮、轴、活塞销等和受力不很大的机械加工件、锻件、冲压件和螺栓、螺母等。也可用于制造中小型的中低档的塑胶模具和模架。

Properties and applications:

1045 is a medium tensile low hardenability carbon steel generally supplied in the black hot rolled or occasionally in the normalised condition. Characterised by fairly good strength and impact properties, plus good machinability and reasonable weldability in the hot rolled or normalised condition.

Typical applications are: Axles Various, Bolts, Connecting Rods, Hydraulic Clamps and Rams, Pins Various, Rolls Various, Studs, Shafts, Spindles etc.



4130 75K		执行标准 Products Standard		API6A、NACE Mr0175				
化学成份 (%) Chemical composition (%)	C	Si	Mn	P ≤	S ≤	Cr	Mo	其它/Other
	0.28-0.33	0.15-0.35	0.4-0.6	0.025	0.025	0.80-1.10	0.15-0.25	Ni ≤ 0.25 Cu ≤ 0.35 H2 ≤ 2.0ppm
炼钢工艺 / Steelmaking processes	EAF+LF+VD		供货尺寸 Size		轧制 / Hot rolled			
成型工艺 / Formed technique	Tot forged		Size		锻造 / Hot forged			
交货状态 Delivery condition	调质或正火、退火、不热处理状态交货，光面或黑皮。 Q+T or normalizing, annealing, without heat treatment, bright or black.							
热处理规范及金相组织 Heat treatment and metallographic structure	(1) 正火温度：886-926℃，空冷。 (2) 淬火温度：858-885℃，水冷。 (3) 回火温度：649-704℃。 (1) Normalizing temperature：886-926℃，air cooling. (2) Annealing temperature：858-885℃，water cooling. (3) Tempering：649-704℃.							
机械性能 Machine capability	硬度 Hardeness	抗拉强度 Tensile strength	屈服强度 Wield strength	伸长率 Elongation	面缩率 Reduction of area	纵向冲击功 AKV		
	200-230HB	655MPA	517MPA	≥18%	≥35%	-60℃, >27J -29℃, >30J		
非金属夹杂物 Non-metallic inclusion (ASTM E45)	A		B		C		D	
	粗 Rough	细 Thin	粗 Rough	细 Thin	粗 Rough	细 Thin	粗 Rough	细 Thin
	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5
晶粒度(ASTM E112) Grain size	5-8							

特性及适用范围：

AISI4130 75K具有高的强度和韧性，主要用于石油开采的井口装置（套管头、采油树设备等）。

Properties and applications：

AISI 4130 is a chromium molybdenum alloy steel. It is very popular for welding applications and is often used in the normalized condition without further heat treatment. It can be nitrided to enhance its wear quality. Its popularity is primarily due to its weldability, hardenability, and machinability. Alloy 4130 contains similar properties as Alloy 8630. Alloy 4130 is stocked in normalized, quenched, and tempered condition.

Applications: Aircraft engine mounts, Welded tubing, Valve bodies, Pumps, Fittings.

4140		执行标准 Products Standard		A29/A29M			
化学成份 (%) Chemical composition (%)	C	Si	Mn	P ≤	S ≤	Cr	Mo
	0.38-0.43	0.15-0.35	0.75-1.0	0.035	0.04	0.80-1.10	0.15-0.25
炼钢工艺 / Steelmaking processes	EAF+LF+VD		供货尺寸 Size	轧制 / Hot rolled			
成型工艺 / Formed technique	Hot rolled or hot forged		Size	锻造 / Hot forged			
交货状态 Delivery condition	调质（一般供应28-34HRC）或正火、退火、不热处理状态交货，光面或黑皮。 Q+T(28-34 HRC) or normalizing, annealing, without heat treatment, bright or black.						
热处理 Heat Treatment	(1) 正火温度 / Normalizing temperature：860±10℃，出炉空冷 (air cooling)						
	(2) 淬火温度 / Annealing temperature：850±10℃，水或油淬 (water or oil)						
	(3) 回火温度 / Tempering：视硬度要求确定回火温度 (depending on the hardness)						
调质状态机械性能 (A370) Mechanical with Q+T							
机械性能 Machine capability	D ≤ 16mm	16mm < d ≤ 40mm	40mm < d ≤ 100mm	100mm < d ≤ 160mm	160mm < d ≤ 250mm		
	T ≤ 8mm	8mm < t ≤ 20mm	20mm < t ≤ 60mm	60mm < t ≤ 100mm	100mm < t ≤ 160mm		
屈服点 / Yield strength (Mpa)	≥ 900	≥ 750	≥ 650	≥ 550	≥ 500		
抗拉强度 / Tensile strength (MPa)	1100~1300	1000~1200	900~1100	800~950	750~900		
延伸率 / Elongation (%)	≥ 10	≥ 11	≥ 12	≥ 13	≥ 14		
断面收缩率 / Reduction of area (%)	≥ 40	≥ 45	≥ 50	≥ 50	≥ 55		
冲击功 / KAV (J)	≥ 30	≥ 35	≥ 35	≥ 35	≥ 35		
非金属夹杂物 Non-metallic inclusion (ASTM E45)	A		B		C		D
	粗 Rough	细 Thin	粗 Rough	细 Thin	粗 Rough	细 Thin	粗 Rough
	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5
晶粒度(ASTM E112) Grain size	5-8						

特性及适用范围：

4140 合金结构钢具有良好的加工性能，加工时变形微小，抗疲劳性能相当好，属于中等淬透性钢，4140 热处理后有较好的强度和良好的综合力学性能。

4140 合金结构钢用于制造强度高、的零件，如机车牵引用的大齿轮，增压器传动齿轮，后轴，受载荷极大的连杆及弹簧夹，也可用于2000米以下的石油深井钻杆接头与打捞工具，还可以用于折弯机的模具等。

Properties and applications：

4140 alloy structural steel is belong to medium hardenability steel with Excellent fatigue resistance, good processability and small deformation when processing. After heat treatment, 4140 steel have good intensity and Nice synthetic mechanical property.

4140 alloy structural steel used in the manufacture of high strength forgings, such as Locomotive traction with the big gear, supercharger Transmission gears, rear axle, huge load of connecting rod and spring clips, also available at 2000 meters deep of oil drill pipe joints and fishing tools, can also be used for bending machine mould, etc.

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LOFTY GOALS DREAMS...

回首过去，我们没有沉沦于昨日成功时鲜花与掌声的簇拥；立足今日，我们擦亮眼睛，点燃激情的烟火，放飞新的希望，看清前进的方向，选好目标，我们心怀梦想，引吭高歌……

Looking back to the past, we do not indulge in flowers and applause we've achieved in the past. Today, we will keep our eyes peeled, ignite our enthusiasm, let go our new hope, understand the true ourselves, see clearly our way ahead, select our voyage, sing joyfully in a loud voice for our new days and bear new dreams in our mind……

