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Kennametal Stellite (Shanghai) Co.,Ltd.

肯纳司太立金属（上海）有限公司





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Deloro®
Deloro Stellite®
Tribaloy®
Denertia®
Delcrome®

Jet Kote®
Nucalloy®
T-400®
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Vinertia®
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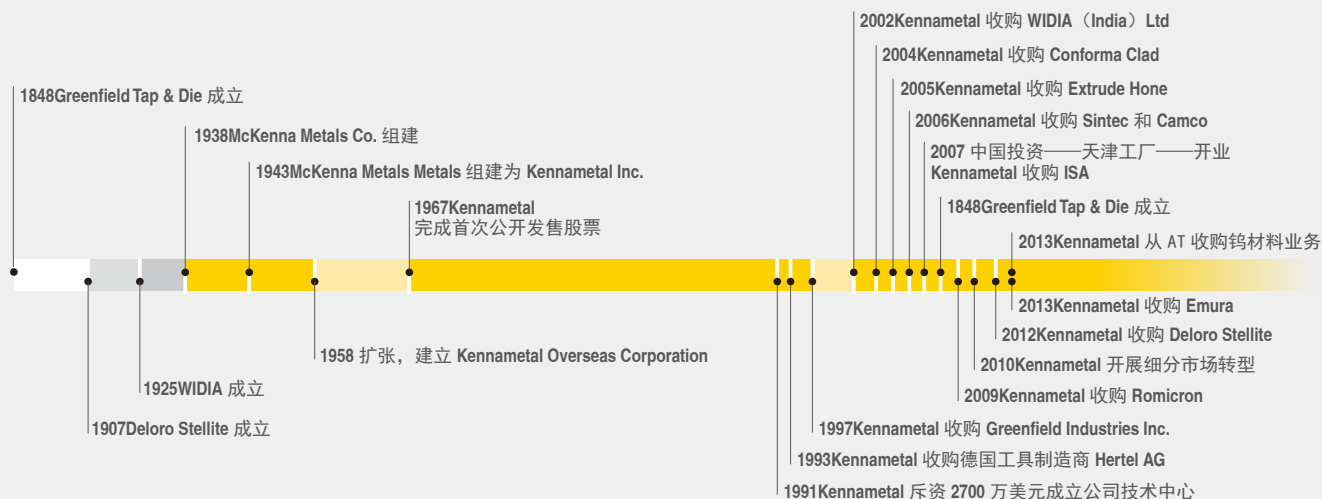
公司简介 COMPANY INTRODUCTION

肯纳司太立金属（上海）有限公司（Kennametal Stellite (Shanghai) Co., Ltd (原名上海司太立有限公司) 是一家成立于 1985 年 5 月的中外合资企业，于 2012 年由美国知名上市公司 Kennametal 控股。主要生产、销售耐磨、耐腐蚀、耐高温的硬面焊接材料、制品和硬面加工产品。产品广泛应用于航空、汽车、船舶、林业、采矿、核电、火电、石化、塑料等各种行业，主要产品国内市场占有率居全国第一，并远销欧美、日本、东南亚等地，产品质量与国际同类产品相当。

在竞争中求发展，在发展中求生存。肯纳司太立金属（上海）有限公司凭借自身的实力及对国外技术的消化吸收，在 30 年的经营中秉承“客户至上”的宗旨，致力于开拓市场、改进创新，产品始终走在同行的前列，在国内、国际市场上不断壮大自己的综合实力。

“优质、严谨、高效、创新”，这是公司倡导的企业精神，也是员工为之努力的目标。肯纳司太立金属（上海）有限公司正是凭借着先进的技术、稳定的产品、优质的服务及完善、严谨的管理模式，才得以在同行中保持竞争优势、持续高效的发展。

Kennametal Stellite(Shanghai)Co., Ltd., a Sino-Foreign joint venture with Kennametal as the majority shareholder, was established in May, 1985. Kennametal Stellite is a global provider of innovative solutions to challenging wear problems. Our specialist products and manufacturing services help extend the life of components in demanding environments where heat, corrosion and abrasion limit their life. Its products are widely applied in the aerospace / aviation, oil and gas, power generation, automobile, marine, mining, petrochemical, plastics and glass industries. Kennametal Stellite is the market leader in most of its product lines. A new chapter was started when the Kennametal Stellite increasde their investment in the joint venture. On the basis of experience and skills accumulated over the last 30 years, Kennametal Stellite improved its competitive strength in both domestic and overseas markets, and is moving towards a promising future.





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应用 Application Solutions

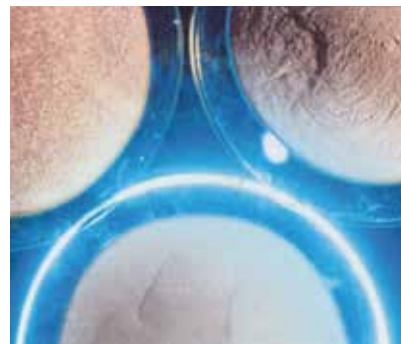
Industry 行业	Typical Application 典型应用	Abrasion 磨粒磨损	Corrosion 腐蚀	Erosion 侵蚀	Wear 磨损	Temperature 高温	Solution 解决方案
Aerospace 航空	Interlocking face 互联面	*			*	*	Co,T
	Suspension pin 悬吊销			*	*	*	WC,Co
Automotive 汽车	Exhaust valve 排气阀	*	*	*	*	*	Co
	Tappet 阀杆	*			*		Fe
Chemical 化工	Valve 阀门	*	*	*	*	*	Co,Ni,WC
	Pump rod 泵轴	*	*	*	*	*	Co,Ni
	Screw 叶片	*	*	*	*	*	Co,Ni,WC
Forging 锻造	Die 锻模	*			*	*	Co,Ni
	Punch 冲头	*			*	*	Co,Ni
Food Processing 食品	Screw 螺旋推进器	*	*	*			Co,Ni
	Mixer 混料机	*	*	*	*		Co,Ni
Forestry 林业	Chain saw guide 链齿导轨	*	*		*	*	Co
	Sawing tipping 齿尖	*	*		*	*	Co
Glass 玻璃	Mould 铸模	*	*		*	*	Ni
	Plunger 冲头	*	*		*	*	Co,Ni,WC
Marine 航海	Exhaust valve 排气阀	*	*	*	*	*	Co,Ni
	Bearing surfaces 轴承面	*	*		*		Co,Ni
Oil & Gas 石油天然气	Stabiliser 稳定器	*	*		*		Ni,WC
	Sucker rod 活塞	*	*		*	*	Ni,WC
Plastics & Rubber 塑料橡胶	Mixer rotor 混料轴	*	*		*	*	Co,Ni
Power Generation 电力	Extruder liner 挤压机	*	*		*	*	Co
	Exhauster fan 排气扇	*	*	*		*	WC
	Pump seat 泵座	*	*	*	*	*	Co,Ni
	Turbine blade 涡轮机叶片			*		*	Co
	Steam vavle 蒸汽阀		*	*	*	*	Co ,WC
Pulp & Paper 造纸	Debarker 送纸机	*	*			*	Co ,WC
	Knife 刀具	*	*				Co
Steel 钢铁	Mill roll 磨辊	*	*		*	*	Co,Ni,Fe,WC
	Bell&hopper 料钟料斗	*	*			*	Ni, Fe
Untilities 公用事业设备	Scraper 刮板	*	*		*	*	Co,Ni
	Rotor 转子	*	*	*	*	*	Ni

Key 注: Co=Cobalt Base 钴基 WC=Tungsten Carbide 碳化钨
 Ni=Nickel Base 镍基 T=Tribaloy 系列
 Fe=Iron Base 铁基 Wear=Metal to Metal Wear 金属与金属磨损

合金粉末 Alloy Powder

肯纳司太立金属（上海）有限公司目前拥有雾化、水雾化三套制粉系统。采用国际先进水平 Osprey 气雾化冷（高纯氮）技术生产的合金粉成分均匀、氧含量低、粉末球形性好。公司生产的粉末粒度规格齐全，产品质量达到国际先进水平，得到了国内外用户的一致认可。适用工艺包括等离子堆焊、等离子喷涂、氧-乙炔喷焊、高频重熔、超音速喷涂及粉末冶金等。

Currently Kennametal Stellite has three sets of powder manufacturing facilities: 2 Gas-atomization. and 1 Water-atomization. The alloy powders produced by state-of-the-art Osprey technique(gas-atomizing gas-cooling process) are characterized by homogenous chemical composition, lowder oxygen content and better sphericity. Kennametal Stellite has been internationally recognized for its high quality powders and has gained a good reputation at home and abroad. Powders for applications of Plasma Transferred Arc(PTA), High Velocity Oxygen Fuel(HVOF), Spray & Fuse and Powder Metallurge (PM) are available in Kennametal Stellite.



粉末 Powder	硬度 HRC	化学成分（重量 %）Nominal Chemical Composition(wt%)										典型用途 Application
		C	Cr	Si	W	Fe	Mo	Ni	Co	Mn	B	
Stellite 1	50	2.40	30.50	1.00	12.50	3.00	1.00	3.00	Bal	0.25		阀座、轴承、刀口等 valve seat inserts, bearing, cutter edge, etc.
Stellite 3	48	2.30	30.50	1.00	12.50	3.00		2.50	Bal			针阀座、阀座、轧钢导向辊 needle holdres, valve seat inserts, steel mill guide roll
Stellite 6	38	1.15	29.00	1.10	4.00	3.00	1.00	3.00	Bal	0.50		发动机气门、高温高压阀门、涡轮机叶片 engine valve, high temperature & pressure valve and turbine blade
Stellite 12	42	1.40	29.50	1.45	8.25	3.00	1.00	3.00	Bal	1.00		高温高压阀门、锯齿、螺旋推杆等 high temperature and pressure valves, sawteeth screw flights
Stellite 12B	43	1.30	31.00	1.00	5.00	3.00	4.00	11.00	Bal	1.00		锯链导板 guide plate
Stellite 12S	52	2.00	30.00	1.50	9.00	1.00	1.00	2.00	Bal	1.00		阀门、螺杆 valve, screw
Stellite 20	58	2.45	32.50	1.00	17.50	3.00	1.00	3.00	Bal	0.50		轴承套筒、耐磨板 bearing sleeve, wear plate
Stellite 21	28	0.25	27.50	2.00	0.15	2.00	5.50	2.50	Bal	1.00		涡轮机叶片、各种流体阀、阀座等 turbine blades, fluid valve, valve seat
Stellite 31	31	0.50	25.50	1.00	7.50	2.00		10.50	Bal	1.00		挤压模、燃气涡轮叶片 extrusion die, turbine impeller
Stellite 156	45	1.60	28.00	1.15	4.50	0.50	1.00	3.00	Bal	1.00		高温高压阀门、热锻模 high temperature and pressure valves, hot-forging die
Stellite 157	50	0.10	22.00	1.60	4.50	3.00	0.30	3.00	Bal	0.30	2.40	摩托车气门顶端 top of motor car valve
Stellite 158	40	0.75	26.00	1.90	5.50	3.00	0.50	3.00	Bal	0.10	0.70	高温高压阀门、锯齿、螺旋推杆等 high temperature and pressure valves, sawteeth screw flights
Stellite 158Q	43	1.00	30.0	1.20	4.00	3.00	3.00	6.00	Bal	0.50	0.30	锯链导板 guide plate
Stellite 158V	48	1.00	30.0	1.00	8.00	4.00	0.50	3.00	Bal	0.50	0.70	内燃机进气阀 engine inlet valve
Stellite 158W	41	0.8	24.00	2.50	5.50	4.50		9.00	Bal		0.70	阀座、高温高压阀门等 valve seat, high temperature & press valves, etc.
Stellite F	37	1.75	25.50	1.10	12.00	3.00	0.60	22.50	Bal	0.50		内燃机进排气阀 engine inlet and exhaust valve
Stellite FH	37	1.40	28.00	1.20	12.00	3.00	0.80	22.00	Bal	0.50		内燃机进排气阀 engine inlet and exhaust valve
Stellite X-40	34	0.85	25.00	0.30	7.50	1.00		10.00	Bal	0.30		冲压、挤压模具燃气涡轮叶片 extrusion die turbine impeller
Tribaloy 400	53	0.08	8.50	2.60		1.50	28.50	1.50	Bal			用于高温强腐蚀介质中的闸阀、挤塑器 wedge gate valves at elevated temperature & corrosive environments, plastic extrusion liners
Tribaloy 800	53	0.08	18.00	3.40		1.50	28.50	1.50	Bal			用于高温强腐蚀介质中的闸阀、挤塑器 wedge gate valves at elevated temperature & corrosive environments, plastic extrusion liners
Tribaloy 900		0.08	18.00	2.70		2.50	23.00	16.00	Bal			阀座、密封圈、钢导向辊 valve, seat, sealing rings, hot-roll
Stellite SF6	45	0.70	19.00	2.30	7.50	3.00		13.50	Bal	1.00	1.70	发动机气门、高温高压阀门 engine valve, high temperature & press valves
Stellite SF12	50	1.00	19.00	2.80	9.00	3.00		13.00	Bal	1.00	1.80	高温高压阀门、热剪切刀刃等 high temperature & pressure valves, hot shears, etc.
Stellite 706	40	1.10	29.00	2.00		2.00	5.00	2.00	Bal			发动机气门、高温高压阀门 engine valve, high temperature & press valves
Stellite 712	47	1.90	29.00	2.00		2.00	8.50	2.00	Bal			高温高压阀门、螺旋推杆 high temperature & press valves, screw flights

合金粉末 Alloy Powder

粉末 Powder	硬度 HRC	化学成分 (重量%) Nominal Chemical Composition (wt%)	典型用途 Application
Haystellite 1	60	50%Deloro 60+50% WC(铸造 cast)	混料机叶片、刮板、风机叶片 mixer blades, sweeps, fan blades
Haystellite 2	60	65%Deloro 60+35% WC(铸造 cast)	混料机叶片、刮板、风机叶片 mixer blades, sweeps, fan blades
Haystellite 3	60	85%Deloro 60+15% WC(铸造 cast)	混料机叶片、刮板、风机叶片 mixer blades, sweeps, fan blades
Haystellite 4	60	40%Deloro 60+60% WC(铸造 cast)	混料机叶片、刮板、风机叶片 mixer blades, sweeps, fan blades
Haystellite 7	60	70%Deloro 60+30% WC(铸造 cast)	混料机叶片、刮板、风机叶片 mixer blades, sweeps, fan blades
Haystellite 8	60	60%Deloro 60+40% WC(铸造 cast)	混料机叶片、刮板、风机叶片 mixer blades, sweeps, fan blades
Haystellite 10	60	50%Ni65+50%WC(铸造 cast)	螺旋输入器, 风机叶片等 screw conveyer, fan blades
Haystellite 12	60	70% 基体粉 +30% WC(铸造 cast)	扶正器等 drilling centralizer
Stelcar65	60	35%Deloro38+65%WC(铸造 cast)	石油钻头、耐磨带等 drill bit
NiWC 25	60	75%Ni60+25%WC	混料机叶片、刮板、风机叶片 mixer blades, sweeps, fan blades
NiWC 35	60	65%Ni60+35%WC	风机叶片、螺旋输入器等 fan blade, screw conveyer etc.
NiWC 35L	60	气雾化 75%Ni60+25%WC	拉丝辊筒、柱塞 drawing rollers, plunger
JK 112	1110(HV)	12%Co/88%WC	球阀、压缩机轴, 泵密封圈等 ball valve, compressor rods, pump seal ring, etc.
JK 117	1010(HV)	17%Co/83%WC	阀门、导向杆、压纸辊等 gate valve, directional drilling tools, paper rolls, etc.
JK 120	1000(HV)	10%Co/4%Cr/86%WC	球阀、吸纸辊等 ball valve, suction rolls, etc.
JK 135	850(HV)	25%(80%Ni/20%Cr)/ 75%Cr ₃ C ₂	密封环, 阀门, 汽轮机叶片 seal rings, valves, turbine blades, etc.
JK 576	550(HV)	同 Stellite 6	高温高压阀门 high temperature & pressure valve
JK 6153	800(HV)	50%WC+50%Deloro 60	拉丝塔轮、泵部件 wire drawing capstans, pump castings

粉末 Powder	硬度 HRC	化学成分 (重量%) Nominal Chemical Composition (wt%)										典型用途 Application
		C	Cr	Si	W	Fe	Mo	Ni	Co	Mn	B	
Ni25	25	0.20		3.50		8.00		Bal			1.50	玻璃模具、各类成型模 glass mold, various forming dies
Ni35	35	0.30	10.50	3.50		10.00		Bal			2.00	玻璃模具、各类成型模 glass mold, various forming dies
Ni45	45	0.45	12.00	4.00		10.00		Bal		0.10	2.40	排气阀密封面、柱塞 exhaust valve seat, plunger
Ni55	55	0.75	15.50	4.00	Cu: 3.0	14.00	3.00	Bal			3.00	模具、凸轮、柱塞及排气阀 molds, can, plunger and exhaust valve
Ni60	59	0.80	15.50	4.00		15.00		Bal			3.50	柱塞、拉丝辊筒、凸轮、机械易损件 plunger, drawing rollers, can, mechanical
Ni60 B	58	0.60	17.00	3.00		20.00		Bal			4.00	阀板等、机械易损件 valve plate, mechanical wear parts
Ni60 M	60	0.80	17.00	4.00		15.00		Bal			3.20	层流辊、拉丝辊筒、机械易损件 drawing rollers
Ni60JH3	60	0.80	16.00	4.00		10.00		Bal			3.50	阀板、柱塞、机械易损件 valve plate, plunger
Ni62	61	1.00	15.50	3.80	10.50	14.00		Bal			4.00	造纸机磨盘、铲车铲齿 paper break wheel, shovel teeth
Ni65	62	0.80	16.00	4.00	5.00	15.00		Bal			3.20	螺旋送料器、柱塞、机械易损件 screw, plunger
Deloro BNI5			19.00	10.00				Bal				高温钎焊粉 brazing
Ni220M1	26	0.05	4.00	3.00		3.00		0.05		0.50	1.00	玻璃模具、各类成型模等 glass mold, various forming dies
Nistelle B	冷硬	0.10	1.00	1.00	V: 0.30	5.00	28.00	Bal	2.50			高温耐蚀密封环 sealing ring for high temperature and corrosion resistance
Deloro 20	20	0.03	4.50	2.00				Bal			0.70	玻璃模具、各类成型模等 glass mold, various forming dies
Deloro 22	22	0.20	0.10	2.85		0.50		Bal		0.50	1.45	玻璃模具、各类成型模等 glass mold, various forming dies
Deloro 22M2	22	0.05	3.00	2.30				Bal			0.80	玻璃模具、各类成型模等 glass molds, various forming dies
Deloro 28	28	0.05	0.10	2.80				Bal			1.00	玻璃模具、各类成型模等 glass mold, various forming dies
Deloro 30	30	0.15	2.50	2.60		1.00		Bal		0.30	1.40	滑轨、齿轮齿 slide rail, gear teeth
Deloro31M	30	0.05	3.50	3.00		3.00		Bal		0.40	1.00	玻璃模具全喷焊 glass mold, various forming dies
Deloro 35	35	0.20	4.00	3.20		1.40	0.10	Bal		0.10	1.60	玻璃模具、阀座 glass molds, valve seat
Deloro 37	36	0.15	4.50	2.60				Bal			1.00	玻璃模具、各类成型模等 glass mold, various forming die
Deloro 40	40	0.30	7.50	3.50		2.30	0.10	Bal		0.10	1.70	螺旋送料器、模芯等 screw feeder, die inserts, etc.
Deloro43	40	0.20	5.00	3.00		0.50	3.00	Bal		0.50	1.00	玻璃模具冲头 plungers
Deloro 50	50	0.40	11.00	4.00		2.70	0.10	Bal		0.10	2.20	泵轴、纸浆刀、阀门、各类螺旋杆 pump shaft, pulp knives, valve, screw rod
Deloro55S	52	1.00	18.00	5.00	3.00	5.00		Bal			1.80	螺杆、阀座 screw, valve seat
Deloro 60	59	0.65	15.00	4.30		4.00	0.10	Bal		0.10	3.10	挤压模、螺旋筒体、泵叶、柱塞等 extrusion press, screw barrel, etc.
Deloro 6325	57	0.50	16.00	4.00	Cu: 3.00	4.50	3.00	Bal		0.10	3.50	耐蚀泵轴、轴套 corrosion resistance pump shaft, bearing sleeve
Deloro80	40	1.00	23.00	2.5	1.00	3.00	7.00	Bal		1.00	1.00	气阀 engine valve
Tribaloy 700	54	0.08	15.50	3.40		1.50	32.50	Bal	1.50			核工业应用抗蚀、抗氧化、抗辐射 used in nuclear industry
HK 1	58	2.50	10.00	2.00	5.00	Bal		10			2.50	离心浇铸用粉 for centrifugal casting
HK 3	58	1.00	10.00	4.00	4.00	6.00	3.00	Bal	10.00		3.50	离心浇铸用粉 for centrifugal casting
HK 5	63		8.50	5.00		2.00	2.50	Bal	11.00		2.50	离心浇铸用粉 for centrifugal casting
HK 7	61		22.00	2.50			5.50	Bal			3.00	离心浇铸用粉 for centrifugal casting
NiCo5	62	1.00	19.00	4.00	6.00	4.00	6.00	Bal	10.00		2.50	离心浇铸用粉 for centrifugal casting

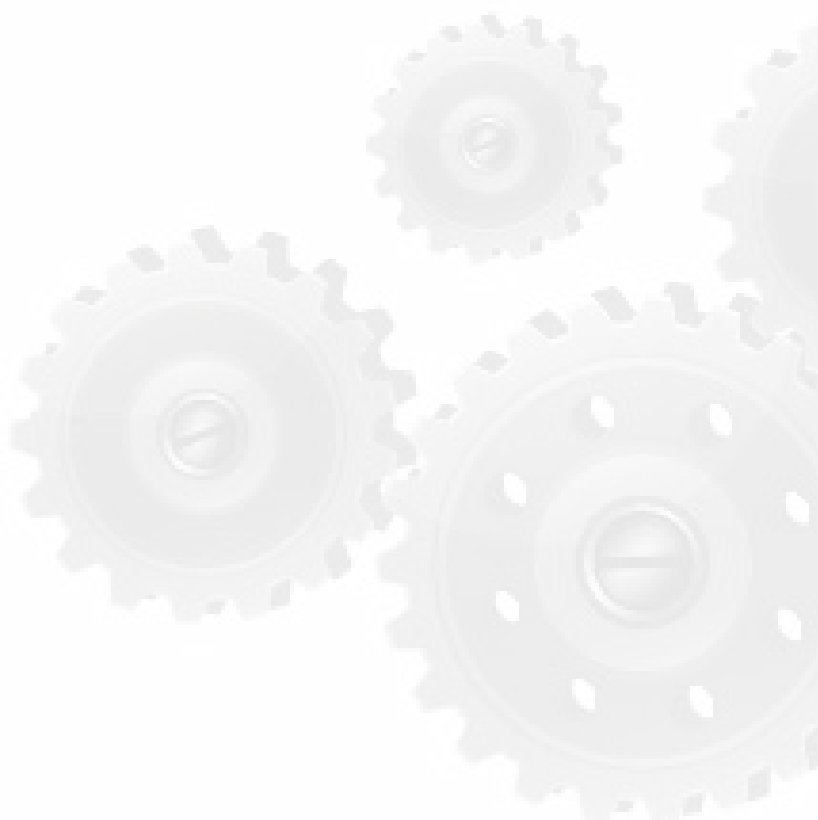
合金铸棒

Continuous Cast Rod



本公司现有三条水平连铸生产线，可生产直径为 2.5-8.0mm 的钴基、镍基系列合金。产品成分均匀，无偏析，杂质含量少，表面光洁，直径公差小，长度可自由选择，适合于氧乙炔焊和钨极氩弧焊工艺。

Kennametal Stellite has three horizontal continuous casters for bare rods, which are double strands for producing series of Co-based & Ni-based rods with homogenous chemical composition, no segregation, less impurity and smooth surface. The rod diameters range from 2.5mm to 8.00mm.



合金铸棒

Continuous Cast Rod

铸棒 Cast Rod	硬度 HRC	化学成分（重量 %）Nominal Chemical Composition (wt%)									典型用途 Application
		C	Cr	Si	W	Fe	Mo	Ni	Co	Mn	
Stellite 1	53	2.50	29.50	1.20	12.50	3.00	1.00	3.00	Bal	1.00	阀座、轴承、刀口等 valve seat inserts, bearing, cutter edge, etc.
Stellite 4	48	0.90	32.00	1.00	13.50	1.00	0.50	0.50	Bal	0.50	热压模、热挤压模、干电池工业 hot extrusion die, dry battery industry
Stellite 6	43	1.20	29.00	1.20	4.50	3.00	1.00	3.00	Bal	1.00	发动机气门、高温高压阀门、涡轮机叶片 engine valve, high temperature & pressure valve and turbine blade
Stellite 6Z	40	1.00	27.00	0.80	4.00	3.00	0.50	3.00	Bal	0.50	高速锻压机，热作模具 hot die forging
Stellite 12	47	1.45	29.00	2.00	8.50	3.00	1.00	3.00	Bal	1.00	高温高压阀门、锯齿、螺旋推杆等 high temperature and pressure valves, sawteeth, screw flights, etc
Stellite 20	54	2.45	32.50	1.00	17.00	3.00	1.00	3.00	Bal	0.50	轴承套筒、耐磨板 bearing sleeve, wear plate
Stellite 21	20	0.25	27.00	1.00	0.15	2.00	5.50	2.50	Bal	1.00	涡轮机叶片、各种液体阀、阀座、热冲模等 turbine blades, fluid valve seat, brass casting die
Stellite 31	33	0.50	25.50	1.00	7.50	2.00	1.00	10.50	Bal	1.00	燃气涡轮叶片 turbine impeller
Stellite 190	58	3.20	26.00	1.00	14.00	5.00	1.00	3.00	Bal	1.00	石油钻具 petroleum drill bit
Stellite 706	42	1.20	30.00	1.20		2.00	5.00	2.00	Bal	1.00	发动机气门、高温高压阀门 engine valve, high temperature & press valves
Stellite 712	50	1.70	29.00	2.00		2.00	8.50	2.00	Bal	2.00	高温高压阀门、螺旋推杆 high temperature & press valves, screw flights
Tribaloy 400	53	0.08	8.50	2.60		1.50	28.50	1.50	Bal		用于高温强腐蚀介质中的闸阀、挤塑器 wedge gate valves at elevated temperature & corrosive environment, plastic extrusion liners
Tribaloy 800	55	0.08	18.00	3.40		1.50	28.50	1.50	Bal		用于高温强腐蚀介质中的闸阀、挤塑器 wedge gate valves at elevated temperature & corrosive environment, plastic extrusion liners
Stellite F	40	1.75	25.50	1.10	12.00	1.15	0.60	22.50	Bal	0.30	内燃机进排气阀 inlet and exhaust valve

铸棒 Cast Rod	硬度 HRC	化学成分（重量 %）Nominal Chemical Composition (wt%)										典型用途 Application
		C	Cr	Si	w	Fe	Mo	Ni	Co	Mn	B	
Deloro 40	40	0.30	7.50	3.50		2.20	0.10	Bal		0.10	1.70	螺旋送料器、模芯、核工业中阀门的密封面 screw feeder, die inserts, sealing faces in valve of nuclear industry
Deloro 45	45	0.37	8.75	3.80		3.00	0.10	Bal		0.10	2.00	排气阀密封面、柱塞 sealing ring for exhaust valve, plunger
Deloro 50	50	0.45	11.25	4.00		2.80	0.10	Bal		0.10	2.20	泵轴、纸浆刀、阀门、密封环、轴套 pump shaft, pulp knives valve, sealing rings, sleeves
Deloro 50MH	52	0.50	12.00	4.00		3.00		Bal			2.30	阀门、轴套、柱塞等 valve, sleeve, plunger
Deloro 55SW	55	0.50	11.00	3.60		4.50	0.10	Bal		0.50	2.10	阀门、密封环、轴套 valve, sealing rings, sleeves
Deloro 60	59	0.65	15.00	4.30		4.00	0.10	Bal		0.10	2.50	挤压模、螺旋筒体、泵叶、柱塞 extrusion die, screw barrel, pump impeller, plunger
Deloro 60R	55	0.30	10.00	4.00		4.00		Bal			3.00	柱塞、泵叶、螺旋等易损件 plunger, screw
Nistelle B	冷硬	0.10	1.00	1.00		5.00	28.00	Bal	2.50	1.00		高温耐蚀密封环 sealing ring for high temperature and corrosion resistance

粉末冶金件、铸件及锻件

Powder Metallurgy , Casting and Forging

司太立合金铸件适用于核电、石化、电力、电池、玻璃、轻工、食品等诸多领域。具有耐磨、耐蚀、抗氧化和耐高温特性。常用的产品有阀芯、阀座、轴类、轴套、泵类部件，玻璃、电池磨具、喷嘴及切割刀具等。合金类别有：Co 基合金铸件、Ni 基合金铸件、Fe 基合金铸件。司太立粉末冶金制品采用钴基、镍基或铁基合金雾化粉末，经压制、烧结、精加工制成。主要产品有阀杆、阀芯（球）、阀座、阀圈、密封环、木材锯齿、轴承泵、轴承球等。

PM produces and castings of Co-based, Ni-based are applied in the industries as nuclear, petrochemistry, battery, food, etc. Regular products include valve balls, seat, bearings sleeves pump parts pears, gears, batteries dies, nozzles and cutters.



油气
Oil and Gas



汽车
Automotive



玻璃模具
Glass Mould

6 大行业
部件

粉末冶金件、铸件及锻件 Powder Metallurgy , Casting and Forging

粉末冶金件 Powder Metallurgy	硬度 HRC	密度 g/cm ³	化学成分 Nominal Chemical Composition(wt%)										典型用途 Application
			C	Cr	Si	Mn	Mo	Fe	W	Ni	Co	其他	
Stellite 3PM	54	8.40	2.30	31.00	1.00	1.00	0.50	1.00	14.00	3.00	Bal	1.00	泵的轴套、旋转密封环、阀座 pump sleeve, rotary ring, valve seats
Stellite 6PM	40	8.20	1.20	29.00	1.50	1.00	0.50	3.00	4.50	3.00	Bal	2.00	蒸汽、化工阀座 steam & chemical valve seat
Stellite 12PM	44	8.28	1.50	30.00	1.00	0.50	0.50	3.00	8.50	3.00	Bal	3.00	挤压模、热冲压模、锯齿 extrusion die, hot-impact die, saw teeth
Stellite 100PM	58	8.35	2.10	36.00	1.00	1.00	0.50	1.00	20.00	3.00	Bal	1.00	挤压模、热冲压模、锯齿 extrusion die, hot-impact die, saw teeth
Stellite 20PM	57	8.65	2.50	33.00	1.00	0.50	0.50	3.00	18.00	3.00	Bal	1.00	泵的轴套、旋转密封环、轴承套、阀芯球 pump sleeves, rotary rings, bearing sleeves, valve balls
Stellite 20PMH	60	8.45	2.90	36.00	1.00	0.50	0.50	3.00	18.00	3.00	Bal	2.00	阀芯球 valve balls

钢铁
Steel



电力
Power Generation



化工
Petrochemical



粉末冶金件、铸件及锻件

Powder Metallurgy , Casting and Forging

钴基 Casting	硬度 HRC	化学成分（重量 %） Nominal Chemical Composition (Wt%)									典型用途 Application
		C	Cr	Si	Mo	Mn	Fe	W	Ni	Co	
Stellite7	30	0.40	26.00				3.00	6.00		Bal.	具有良好的耐塑性变形、热冲击和氧化的高温合金。用于气、涡轮机叶片、铸铜模和挤压模。 It is a high-temperature alloy with good resistance to plastic deformation, thermal impact and oxidation and it is suitable for steam turbine blades, cast copper moulds and extrusion moulds
Stellite21	30	0.20	27.00		6.00				2.00	Bal.	
Stellite31	30	0.50	26.00					7.00	10.00	Bal.	
Stellite6	40	1.00	28.00					5.00		Bal.	延展性比 Stellite7/Stellite21 和 Stellite31 较差，但较耐磨，并具有良好的耐冲击性。用于蒸汽和化工阀座。 Its ductility is not as good as Stellite7, Stellite21 and Stellite31 but it offers good resistance to abrasion and impact. It is suitable for valve seats under high-temperature and corrosion conditions
Stellite4	45	1.00	33.00				3.00	14.00	3.00	Bal.	比 Stellite6 耐磨性更佳，用于承受较小的机械冲击的工作，如热挤压模、铜基和铝合金热冲压模、镀锌板轴承模。 Its abrasion resistance is better than Stellite6. It is suitable for work pieces which are subjected to small mechanical impact, such as thermal extrusion moulds, thermal punching moulds for Aluminum alloy and Cu-base material, bushes for zinc galvanized rollers.
Stellite12	47	1.80	29.00				3.00	8.00	3.00	Bal.	用于耐强摩擦、强烈热震和机械冲击的工作，如泵的轴套、旋转密封环、耐磨法兰、轴承轴套、挤塑器套筒、均质机部件、易拉罐成型辊等。 It is suitable for work pieces which are subjected to high friction, severe thermal shock and mechanical impact, such as pump bushings, rotary seal rings, abrasion-resistant flanges, bearing bushes, sleeves for plastic extruders , parts for homogenizers and forming rolls for pop cans.
Stellite1	51	2.40	31.00				3.00	11.00	3.00	Bal.	
Stellite20	56	2.50	33.00				3.00	18.00	3.00	Bal.	
Stellite1040	53	2.00	33.00					18.00		Bal.	具有极好的抗机械磨损及抗腐蚀双重性，用于抗高温腐蚀气氛的闸阀及挤塑器。 It offers excellent resistance to mechanical wear & corrosion. It is suitable for gate valves and plastic extruders under the corrosion condition at elevated temperature
Tribaloy400	52	0.10	8.50	2.60	28.00		3.00		2.00	Bal.	
Tribaloy800	55	0.10	17.50	3.40	28.00		3.00		1.00	Bal.	

钴基 Casting	硬度 HRC	化学成分（重量 %） Nominal Chemical Composition (Wt%)									行业 Industry
		C	Cr	Si	Mo	Mn	Fe	W	Ni	Co	
Stellite 6B	40	1.00	28.00					5.00		Bal.	
Stellite 6K	40	1.00	28.00					5.00		Bal.	

粉末冶金件、铸件及锻件

Powder Metallurgy , Casting and Forging

镍基 Casting	硬度 HRC	化学成分 (重量 %) Nominal Chemical Composition (wt%)											典型用途 Application
		C	Cr	Mn	Si	Cu	Mo	Fe	Al	Ti	Ni	其它	
Ni-M400		0.30		2.00	0.50	30.00		2.50			Bal		该合金在氟气、盐酸、硫酸、氢氟酸以及它们的派生物中有极优秀的耐蚀性。用于在海水、核工业、盐酸生产设备的泵和阀等部件。 It offers excellent corrosion resistance under the environments of fluorine gas, hydrochloric acid, sulfuric acid, hydrofluoric acid and their derivatives. It is suitable for pumps and valves in the marine environment, nuclear industry and hydrochloric acid production equipment.
Ni-MK500		0.25		1.50	0.50	30.00		2.00	3.00	0.80	Bal		该合金具有高的强度，高的耐蚀性，低的磁导率和在低达 100% (150F) 下都无磁性，在海水显示出的疲劳强度，用作阀门和泵。 It offers high strength & high corrosion resistance and low permeability and it has no magnetism even at temperatures as low as minus 100 degree Celsius (minus 150 degree Fahrenheit). It exhibits high fatigue strength under seawater. It is suitable for valves and pumps.
Ni-600		0.15	15.50	1.00	0.50			8.00			Bal		有良好的耐高温腐蚀和抗氧化性能、优良的冷热加工和焊接工艺性能。 It offers good resistance to high-temperature corrosion and oxidation with good cold & hot processing properties and welding properties.
Ni-625		0.10	21.50	0.50	0.50	0.50	9.00	5.00	0.40	0.40	Bal	Nb:4.00	具有优良的耐蚀性和抗氧化性能，从低温到 980 °C 均具有良好的拉伸性能和疲劳性能，并且耐盐雾气氛下的应力腐蚀。可广泛用于制造航空发动机零部件、宇航结构部件、化工设备和接触海水并承受高机械应力的场合。 It offers good resistance to corrosion and oxidation. It exhibits good tensile property and fatigue-endurance property from low temperatures to 980 degree Celsius and it is resistant to stress corrosion under the salt fog environment. It is widely used in manufacturing aero-engine parts, aerospace structure parts, chemical equipment and occasions which are subjected to seawater corrosion and high mechanical stress.
Ni-718		0.08	19.0	0.35	0.35	0.30	3.00	20.00	0.60	1.00	Bal	Nb:5.00 Co:1.00	在 650 °C 下该合金具有很高的强韧性、疲劳性能及良好的综合性能，在航空航天发动机中得到广泛应用。 It offers high toughness & fatigue-endurance property and has good comprehensive properties at temperatures less than 650 degree Celsius. It is widely used in aerospace engines.

镍基 Casting	硬度 HRC	化学成分（重量 %） Nominal Chemical Composition（Wt%）								典型用途 Application
		C	Cr	Si	Mo	B	Fe	W	Ni	
Nistelle C		0.080	16.00	1.00	17.00		7.00	4.50	Bal.	专为耐强腐蚀设计，通常用于化工的泵和阀等部件上（其他国际参考牌号 Hastelloy C、Hastelloy C4、Hastelloy B） It is designed especially for parts under the sever corrosion condition and it is suited for pump & valve parts of chemical factories (other equivalent internatonal designations are Hastelloy C、Hastelloy C4 and Hastelloy B).
Nistelle C4		0.015	18.00		17.00		3.00		Bal.	
Nistelle C22		0.015	22.00		14.50		6.00	3.50	Bal.	
Nistelle C276		0.020	16.00		17.00		7.00	4.50	Bal.	
Nistelle B		0.050	1.00	1.00	30.00		6.00		Bal.	
Deloro 50	50	0.40	10.00	4.00		1.80	4.00		Bal.	用于阀类、泵类等耐蚀部件。 Suitable for corrosin resistant parts, such as valves and pumps, etc.
Deloro 60	60	0.50	16.00	4.50		3.50	4.00		Bal.	
Deloro M1	30	0.20		2.80		1.80			Bal.	广泛用于玻璃模具冲头、阀头、芯子、导环等部件。 Widely used in plungers, baffles, B&B plungers and guide rings etc.
Deloro M2	32	0.20		3.00		2.00			Bal.	
Deloro M3	40	0.20		3.20		2.20			Bal.	
Deloro M4	42	0.20		3.40		2.40			Bal.	
Tribaloy 700	44	0.10	15.00	3.40	32.00			Co:3.00	Bal.	铸件耐腐蚀、抗氧化性超过 Tribaloy 400，对辐射不敏感，推荐在核工业上应用。 Its resistance to corrosion and oxidation is better than Tribaloy 400 and it is not sensitive to radiation. It is suitable for applications in nuclear industry

管状焊丝 Tubular Wire

公司目前拥有六条管丝生产流水线，可向用户提供直径 1.2mm-5.0mm、合金含量可 ≥ 50% 的铁基、镍基、钴基、碳化钨、不锈钢等材料，用于埋弧焊、明弧焊、气体保护焊、线材电弧喷涂、氧 - 乙炔焊等的管状焊丝、焊棒。可用于冶金、矿山、电力、机械等耐磨、耐蚀、耐高温场合。

There are six tubular wire production lines, capable of manufacturing wires or rods with various kinds of alloy, such as stainless steel, tungsten carbide, high-Cr cast iron and nickel, with diameters ranging from 1.2mm to 5.0mm. The products are widely applied in the metallurgical, mining and power generation industries. The products are characterized by wear-resistance, corrosion-resistance and high-temperature resistance.



管状焊丝 Tubular Wire	焊剂 Flux	硬度 HRC	化学成分（重量 %）Nominal Chemical Composition (wt%)												典型用途 Application
			C	Cr	Si	Mo	Mn	Fe	W	Ni	V	B	Co	其它	
Multipass 104	431	28	0.25	1.20	1.50		3.00	Bal							轧辊等堆焊过渡层及轴的修复 build up prior to hardfacing of rolls and shaft rebuilding
Multipass 105	431	45	0.50	4.00	1.10	0.50	2.75	Bal							拖拉机惰轮、矿车轮、导辊 tractor idlers, mine car wheel, roller
Multipass 107	431	37	0.35	2.70	1.20	0.25	2.70	Bal							卷筒、拖拉机惰轮、矿车轮 rolls, tractor idlers, mine car wheels
Multipass 108	260	28	0.10	1.00	0.80	0.60	1.90	Bal		0.90					轧辊等堆焊过渡层及轴的修复 build up prior to hardfacing of rolls and shaft rebuilding
Multipass 109	260	40	0.45	3.10	0.60	0.50	0.60	Bal		0.50					管模、各类辊、轴等 pipe dies, rolls
Multipass 224	107	46	0.45	5.50	0.65	1.10	1.80	Bal	1.50						热轧工作辊、支撑辊、开坯辊 hot-rolling support roll, primary roughing roll
Multipass 224H	107	53	0.55	6.50	0.65	1.10	1.80	Bal	1.50					1.00	热轧工作辊、支撑辊、开坯辊 hot-rolling support roll, primary roughing roll
Multipass 224HC	107	58	0.75	7.70	0.75	1.80	1.70	Bal	2.60					1.00	支撑辊、校直辊、助卷辊 support roll, straightener roll, coiler roll
Multipass 225	107	59	0.90	6.00	0.50	1.20	0.80	Bal	8.60						热轧支撑辊 hot-rolling support rolls
Multipass 225B	107	55	0.75	4.80	0.40	1.10	0.80	Bal	8.60		0.60				热轧支撑辊、助卷辊 hot-rolling support rolls, coiler roll
Multipass 301	107	34	0.06	4.80	0.20	1.20	2.00	Bal	0.25	0.70	0.60				热轧支撑辊过渡层 buildup of hot-rolling support rolls
Multipass 302	107	48	0.42	6.00	0.40	1.20	2.00	Bal	1.80	1.00	0.60				热轧支撑辊 hot-rolling support rolls
Delstain 442	107	50	0.40	4.00	0.50	2.50	4.50	Bal		3.50	0.50				夹送辊 pinch rolls
Delstain 414-s	260	46	0.15	13.00	0.50	1.00	1.40	Bal		4.20					连铸辊等耐磨高温场合 continuous casting roll
Delstain 414N-s	260	44	0.08	13.00	0.60	0.70	1.10	Bal							连铸辊等耐磨高温场合 continuous casting roll
Delstain 420	260	46	0.40	13.00	0.50		1.40	Bal							一般轧钢辊、刹车鼓、卷辊 pinch roll, brake drum, coiler roll
Delstain 420H	260	54	0.60	13.00	0.40		1.40	Bal							一般轧钢辊、刹车鼓、卷辊 pinch roll, brake drum, coiler roll
Delstain 423	107	45	0.33	13.50	0.50	1.20	1.50	Bal		2.50	0.20				连铸机辊、热轧辊堆焊 continuous casting roll, hot-roll
Delstain 424H	260	49	0.40	12.00	0.50	0.90	2.20	Bal		1.40					有色工作辊的堆焊 non-ferrous roll
Delstain 430	260		0.10	19.00	0.50		0.70	Bal		0.60					连铸辊等耐磨耐高温场合 continuous casting roll
Delstain 414N-o		44	0.20	13.00	0.50	0.80	1.30	Bal		3.50				N:0.1	连铸辊等耐磨耐高温场合 continuous casting roll
Delstain 430-o			0.10	17.00	0.50		0.70	Bal		0.20					连铸辊等耐磨耐高温场合 continuous casting roll
Delcrome 103	107	57	5.15	27.50	1.50		2.50	Bal							磨煤辊 coal pulverizing rolls
Delcrome 911	107	60	6.60	36.50	0.40		0.40	Bal							磨煤辊堆焊 coal pulverizing roll
Delcrome 943-s	107	60	6.00	23.00	0.25		0.60	Bal						Nb:6.00	立磨、破碎辊、耐磨板等 vertical mills, crusher rolls, wear-resistant plates

管状焊丝 Tubular Wire

管状焊丝 Tubular Wire	硬度 HRC	化学成分（重量 %）Nominal Chemical Composition (wt%)									典型用途 Application
		C	Cr	Si	Mo	Mn	Fe	Ni	Al	其他	
Delcrome 103-o	58	5.60	27.0	0.90		1.80	Bal				立磨、破碎辊、耐磨板等 vertical mills, crusher rolls, wear-resistant plates
Delcrome 100HC-o	60	5.50	27.0	1.00	1.30	1.90	Bal				立磨、破碎辊、耐磨板等 vertical mills, crusher rolls, wear-resistant plates
Delcrome 101W-o	58	5.00	28.00	0.60		2.40	Bal				立磨、破碎辊、耐磨板等 vertical mills, crusher rolls, wear-resistant plates
Delcrome 103MH-o	61	5.8	28.00	1.50		1.80	Bal				立磨、破碎辊、耐磨板等 vertical mills, crusher rolls, wear-resistant plates
Delcrome 150-o	58	2.00	7.00		2.00	1.00	Bal	V:0.20		T:7.00	水泥挤压辊、锤头、农具 high pressure cement roll, hammer, agricultural implement
Delcrome 943-o	60	6.10	23.0	0.50		1.00	Bal			Nb:6.00	立磨、破碎辊、耐磨板等 vertical mills, crusher rolls, wear-resistant plates
Delcrome 943M-o	60	6.20	25.00	0.70		1.20	Bal			Nb:4.00	立磨、破碎辊、耐磨板等 vertical mills, crusher rolls, wear-resistant plates
Delcrome 945-o	60	5.00	21.50	0.70	4.50	0.70	Bal	W:2.00		Nb:7.00	立磨、破碎辊、耐磨板、高炉耐磨部件 vertical mills, crusher rolls, wear-resistant plates
Ni-Mang-o	冷硬	0.85	3.00	0.50		14.00	Bal	3.00			破碎机辊、颚板 crusher rolls, jaws
Sta-Mang-o	冷硬	0.10	10.00	0.50	0.80	15.50	Bal	0.85			破碎机、铁铲、铁路道岔 crusher, shovel, rail frog

管状焊丝 Tubular Wire	焊 剂 Flux	硬 度 HRC	化学成分（重量 %）Nominal Chemical Composition (wt%)									典型用途 Application
			C	Cr	Si	Mo	Mn	Fe	W	Ni	Co	
Stellite 6		38	1.20	29.00	1.20		1.00		4.50		Bal	发动机气门、高温高压阀门、涡轮机叶片 engine valve, high temperature & pressure valve and turbine blade
Stellite 21		46	0.25	27.00	1.00	5.50	1.00			2.50	Bal	涡轮机叶片、各种流体阀、阀座等 turbine blades, fluid valve, valve seat

电焊条

Coated Electrode

公司从瑞士引进了 OERLIKON 涂层电焊条生产线，采用先进的技术，可以生产各种堆焊电焊条。产品质量稳定可靠，主要有钴基焊条、高温合金焊条、高铬铸铁焊条、碳化钨焊条。

Based on the advanced OERLIKON coated electrodes, including high temperature resistant electrodes and those made from Co-based materials, high-Cr cast iron and Tungsten Carbide materials.



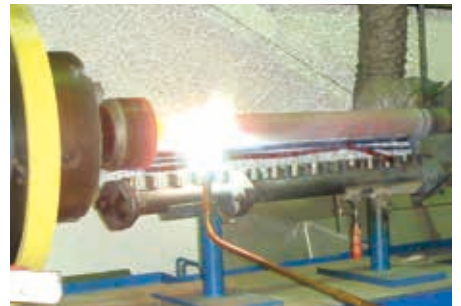
电焊条 Electrode	硬度 HRC	化学成分（重量 %）Nominal Chemical Composition (wt%)												典型用途 Application
		C	Cr	Si	W	Fe	Mo	Ni	Co	Mn	B	Cu	其他	
Stellite 1	48	2.20	29.00	2.00	14.00	3.00	0.50	3.00	Bal	1.00				阀座、轴承、刀口等 valve seat inserts, bearing, cutter edge, ect.
Stellite 6	40	1.00	29.00	1.00	4.50	3.00	0.50	3.00	Bal	1.00				发动机气门、高温高压阀门、涡轮机叶片 engine valve, high temperature & pressure valves and turbine blade
Stellite 12	44	1.30	29.00	1.00	9.00	3.00	0.50	3.00	Bal	1.00				高温高压阀门、锯齿、螺旋推杆等 high temperature and pressure valves, sawteeth, screw flights, ect.
Stellite 21	23	0.20	28.00	1.00		2.50	5.50	2.50	Bal	2.00				涡轮机叶片、阀座、热冲模 turbine blades, valve seat, brass casting die
Ni-Mang	冷硬	0.60	2.70	0.20		Bal		3.70		13.50				锤式破碎机、高锰钢部件焊接 hammer crusher, fusion welding of manganese steel parts
D 287	40	0.10	14.00	0.50		Bal	1.00	5.00		0.50				水泵、水轮机部件 water pump, water turbines
D 907	冷硬	0.20	21.00	1.00	2.50	Bal	3.00		20.00	1.50				热剪刀片 hot shears
Delcrome 90sc	52	2.10	26.00	1.10		Bal				0.90				挖掘设备、破碎辊、锤 excavating equipment, crusher roll, hammer
Delcrome 91	55	3.00	31.00	0.60		Bal	1.30			0.90				破碎机辊、锤头、泥浆泵部件 crusher roll, hammer, dredge pump parts
Delcrome 94	53	3.00	31.00	0.40		Bal	1.30			0.90				铲斗齿、搅拌机、挖掘采矿设备 Shovel teeth, mixer, excavating and mining equipment
Delcrome 945	58	5.40	26.00	1.20		Bal				1.00			Nb:5.00	耐侵蚀、抗高温腐蚀及磨损场合 conditions for combination of erosion, high temperature corrosion and wear
Multipass 23	44	0.20	5.50	1.00		Bal	2.50	V:7.00		1.20				低氢型焊条、用于锻模、冲模 low hydrogen type electrode for gorging dies and plunger dies
Sta-mang	冷硬	0.50	15.0	0.40		Bal	0.20	1.00		14.00				高锰钢部件焊接 fusion welding of manganese steel parts

电焊条 Electrode	硬度 HRC	化学成分（重量 %） Nominal Chemical Composition (wt%)	典型用途 Application
Tungsmooth 60cc	A-91	60% 碳化钨、其余为钢管、A-91 中的 91 为碳化钨颗粒硬度 WC-60%, Steel tube-balance, 91-Hardness of WC Particle	风机搅拌机叶片、采矿、建筑易损件 fan blade, string vane, mine and constructing components

硬面工艺 Hardfacing Technology

作为公司的对外窗口硬面加工车间，借助先进的设备和扎实的工艺技术，完成各种耐磨、耐高温、耐腐蚀工件的修复和预保护。

Thanks to many years of hardfacing experience and advanced equipment, Kennametal Stellite can provide hardfacing services for various wear, heat & corrosion resistant components using well established processes, such as PTA, Jet Kote® /HVOF Thermal Spray, TIG, Submerged Arc Welding, Wire Spray, etc.



硬面工艺

Hardfacing Technology



现车间有如下几种堆焊方式以适应不同用户的工艺需要

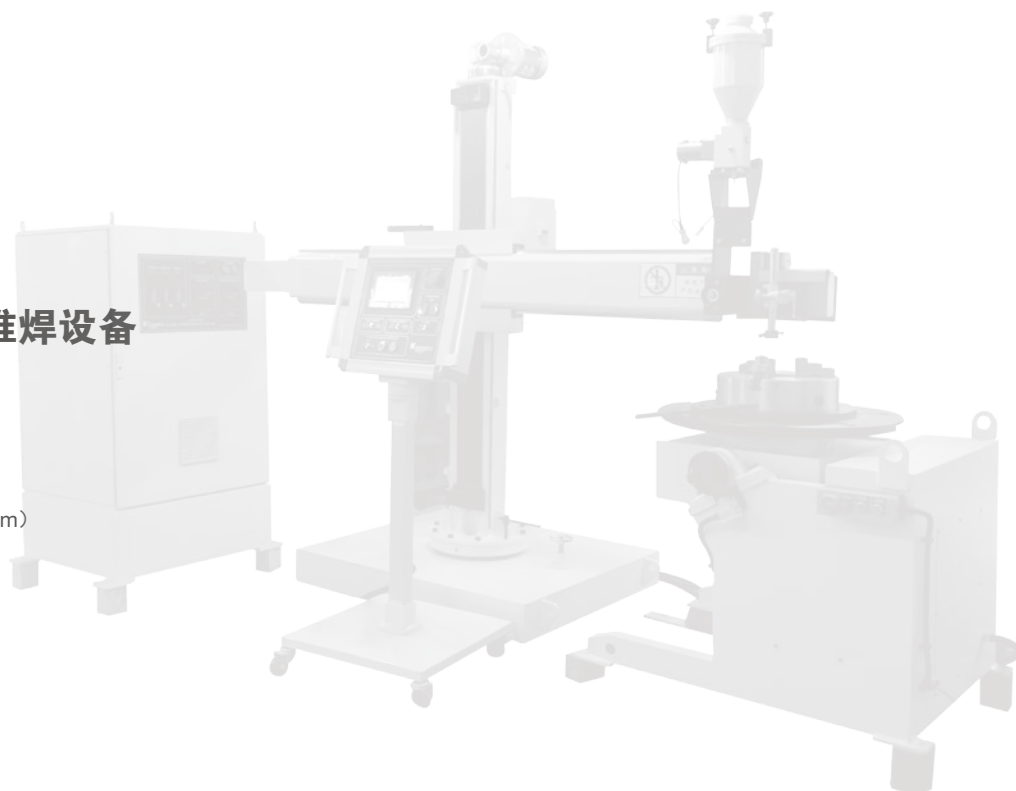
Welding Technology

- 等离子粉末堆焊 (PTA)
- Jet Kote® 超音速喷涂 (HVOF)
- 埋弧焊 (SAW)
- 明弧焊 (OAW)
- 氩弧焊 (TIG)
- 氧 - 乙炔喷涂 (OXY)
- 手工电弧焊 (SMAW)

公司可以提供以下堆焊设备

Welding Equipment

- 等离子堆焊机组 (PTA System)
- 自动氩弧焊机组 (TIG System)
- 超音速喷涂机组 (Jet Kote® System)



质量控制 Quality Control



质量是企业立足的根本，肯纳司太立金属（上海）有限公司拥有先进完善的检测设备，可对原材料及产品进行快速、精确的分析，从而确保产品的长期稳定。公司领导大力加强在技术发展和管理方面的投入，在保证产品质量的前提下，狠抓成本控制、鼓励创新改进。全体员工遵循“优质、严谨、高效、创新”的方针，共同奋斗，努力使公司向一个现代化管理型企业的发展方向。

With advanced inspection equipment, Kennametal Stellite is capable of analyzing the raw materials and finished products rapidly and accurately, ensuring the stability of the manufacturing process.

