



SPECIALIZED IN POWDER MATERIALS
专业生产金属粉末

铁基不锈钢粉 AM Stainless Steel Powder

CNPC-SS316L

铁基合金是工程技术中最重要、用量最大的金属材料，多用于复杂结构的成型，比如3D打印用不锈钢粉，相比于传统铸造锻造技术，其具有高强度、优异的耐高温、耐磨性和耐蚀性等物理、化学和力学性能，且具有很高的尺寸精度和材料利用率，在航空航天、汽车、船舶、机械制造等行业得到广泛的应用。

Iron base alloy is the most important and widely used metal materials in engineering , for more complex structure of the forming, such as 3D printing stainless steel powders, compared with the traditional casting forging technology, it has high strength, excellent high temperature resistance, wear resistance and corrosion resistance and other physical, chemical and mechanical properties, and has high dimensional precision and material utilization, which perform well in the aerospace, automobile, shipbuilding, machinery manufacturing and other industries.

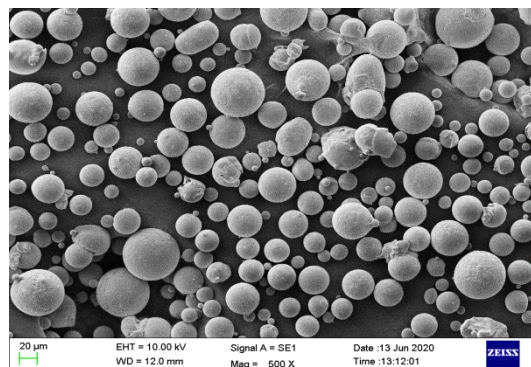
材料描述 MATERIAL DESCRIPTION

材料 (Material) : 不锈钢 Stainless Steel 316L
 粒径 (Particle Size) : 0-15um;15-53um;45-120um;75-150um
 形貌 (Particle Shape) : 球形 (Spherical)

化学成分 CHEMICAL COMPOSITION

化学元素 Element	最小含量 Min [%]	最大含量 Max [%]
C	-	0.030
Cr	16.00	18.00
Fe	Balance	Balance
Mn	-	2.00
Mo	2.00	3.00
Ni	10.00	14.00
P	-	0.045
S	-	0.030
Si	-	1.00

电镜图 SEM PICTURE





SPECIALIZED IN POWDER MATERIALS

专业生产金属粉末

铁基不锈钢粉 AM Stainless Steel Powder

CNPC-SS304L

铁基合金是工程技术中最重要、用量最大的金属材料，多用于复杂结构的成型，比如3D打印用不锈钢粉，相比于传统铸造锻造技术，其具有高强度、优异的耐高温、耐磨性和耐蚀性等物理、化学和力学性能，且具有很高的尺寸精度和材料利用率，在航空航天、汽车、船舶、机械制造等行业得到广泛的应用。

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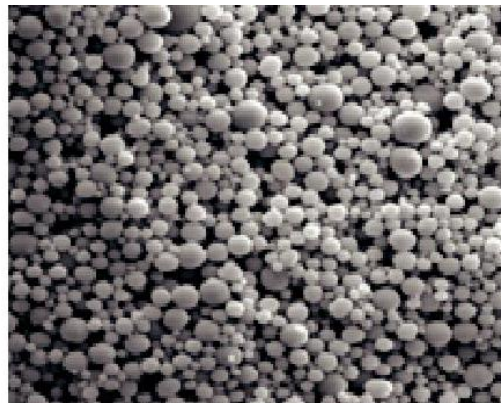
材料描述 MATERIAL DESCRIPTION

材料 (Material) : 不锈钢 Stainless Steel 304L
粒径 (Particle Size) : 0-15um;15-53um;45-120um;75-150um
形貌 (Particle Shape) : 球形 (Spherical)

化学成分 CHEMICAL COMPOSITION

化学元素 Element	最小含量 Min [%]	最大含量 Max [%]
C	-	0.030
Cr	17.5	19.5
Fe	Balance	Balance
Mn	-	2.00
Ni	10.00	14.00
O	-	0.05
P	-	0.045
S	-	0.015
Si	-	1.00

电镜图 SEM PICTURE





SPECIALIZED IN POWDER MATERIALS
专业生产金属粉末

铁基不锈钢粉 AM Stainless Steel Powder

CNPC-SS17-4PH

17-4Ph 因其可靠的产能和低成本而受到设计者和制造商的青睐。因其独特性能，如耐腐蚀性、良好的机械性能以及高韧性和强度，能提供超过 300℃的操作环境，17-4PH 在航空航天结构部件，石油和天然气在深井和钻井中良好应用。

17-4Ph is prized by designers and manufacturers because of its properties, which allow for the production of reliable, cost effective fabrication. 17-4Ph's unique properties like corrosion resistance, good mechanical properties and high toughness and strength. All while providing an operating window over 300 °C. 17-4PH take on job in aerospace structural parts, Oil and Gas use 17-4 in their deep wells and drills because of its corrosion resistance.

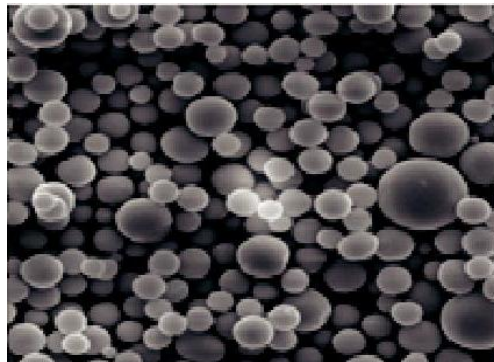
材料描述 MATERIAL DESCRIPTION

材料 (Material) : 不锈钢 Stainless Steel 17-4PH
 粒径 (Particle Size) : 0-15um;15-53um;45-120um;75-150um
 形貌 (Particle Shape) : 球形 (Spherical)

化学成分 CHEMICAL COMPOSITION

化学元素 Element	最小含量 Min [%]	最大含量 Max [%]
C	-	0.07
Cr	15.00	17.00
Cu	3.00	5.00
Fe	Balance	Balance
Mn	-	1.00
Mo	-	0.60
N	-	0.10
Nb+Ta	0.15	0.45
Ni	3.00	5.00
O	-	0.04
P	-	0.040
S	-	0.015
Si	-	0.70

电镜图 SEM PICTURES





SPECIALIZED IN POWDER MATERIALS
专业生产金属粉末

铁基模具钢粉 AM Maraging Steel Powder

CNPC-18NI300

18Ni300 是一种低碳马氏体时效钢。它具有高抗拉强度和硬度，具有优异的可焊性和热塑性，专用于注塑模具、压铸、功能部件和批量模具等。

18Ni300 is a kind of maraging steel with low carbon content. It has high tensile strength and hardness with excellent weld-ability and thermoplasticity, specific used in injection mold, die-casting, functional components and batch mold tools etc.

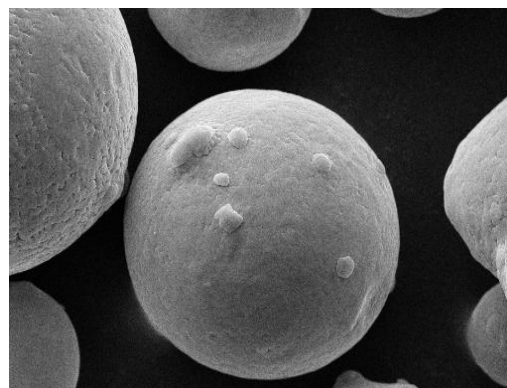
材料描述 MATERIAL DESCRIPTION

材料 (Material) : 模具钢 Maraging Steel Powder 18NI300
 粒径 (Particle Size) : 0-15um;15-53um;45-120um;75-150um
 形貌 (Particle Shape) : 球形 (Spherical)

化学成分 CHEMICAL COMPOSITION

化学元素 Element	最小含量 Min [%]	最大含量 Max [%]
Fe	Balance	Balance
Mo	4.50	5.20
Ni	17.00	19.00
Co	8.50	9.50
Al	-	0.10
C	-	0.03
Cr	-	0.25
N	-	0.03
O	-	0.04
Si	-	0.10
Ti	0.60	0.80
目标值 Target Values		
霍尔流速 Flow test by Hall		<20 S/50G
振实密度 Tapping Density		>4.50G/CM ³
松装密度 Apparent Density(g/cm ³)		>4.00G/CM ³

电镜图 SEM PICTURE





铁基模具钢粉 AM Mold Steel Powder

SPECIALIZED IN POWDER MATERIALS
专业生产金属粉末

CNPC-H13

模具钢大致可分为：冷轧模具钢、热轧模具钢和塑料模具钢三类，用于锻造、冲压、切型、压铸等。由于各种模具用途不同，工作条件复杂，因此对模具用钢，按其所制造模具的工作条件，应具有高的硬度、强度、耐磨性，足够的韧性，以及高的淬透性、淬硬性和其他工艺性能。

Mold Steel Powder can be divided into: cold rolled die steel, hot rolled die steel and plastic die steel three types, that is used for forging, stamping, cutting, die casting and so on. As a result of a variety of mold different uses and complex working conditions, so for the mold steel, it should have high hardness, strength, wear resistance, enough toughness, and high hardenability, hardening and other process performance.

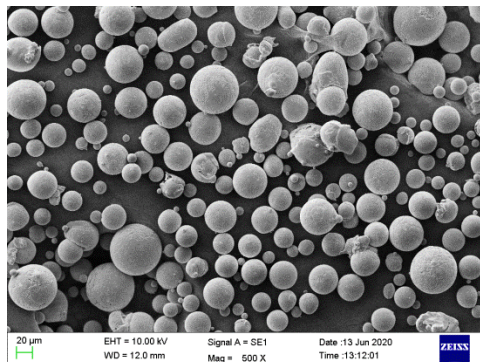
材料描述 MATERIAL DESCRIPTION

材料 (Material) : 模具钢粉 Mold Steel Powder H13
粒径 (Particle Size) : 0-15um;15-53um;45-120um;75-150um
形貌 (Particle Shape) : 球形 (Spherical)

化学成分 CHEMICAL COMPOSITION

化学元素 Element	最小含量 Min [%]	最大含量 Max [%]
Fe	Balance	Balance
Mo	1.10	1.75
Mn	0.20	0.50
Si	0.80	1.20
Cr	4.75	5.50
V	0.80	1.20
C	0.32	0.45
P	-	0.03
目标值 Target Values		
霍尔流速 Flow test by Hall	<20 S/50G	
振实密度 Tapping Density	>4.50G/CM ³	
松装密度 Apparent Density(g/cm ³)	>4.00G/CM ³	

电镜图 SEM PICTURE





CNPC POWDER

SPECIALIZED IN POWDER MATERIALS
专业生产金属粉末

铁基工具钢粉 AM Tool Steel Powder

CNPC-M2

M2(高耐磨高韧性高速钢)为钨钼系通用高速钢的代表材料,具有碳化物细小均匀、韧性高、热塑性好等优点。其突出特点是具有很高的硬度、耐磨性及热硬性(也称红硬性),硬度在温度高达500~600摄氏度时仍无明显下降,能以比低合金刀具钢更高的速度进行切削,主要用于制造切削速度高、负荷重、工作温度高的各种切削刀具。

M2(high resistance and high toughness HSS) is the representative steel number of general tungsten and molybdenum HSS. The steel has high toughness ,good thermoplastic ,high hardness, wear resistance and thermal hardness,and the hardness does not decrease significantly when the temperature reaches 500~600 °C. It can cut at a higher speed than low alloy cutting tool steel and mainly used to manufacture various cutting tools with high cutting speed,heavy load and high working temperature.

材料描述 MATERIAL DESCRIPTION

材料 (Material) : 工具钢 M2 (Tool Steel M2)
粒径 (Particle Size) : 0-15um;15-53um;45-120um;75-150um
形貌 (Particle Shape) : 球形 (Spherical)

化学成分 CHEMICAL COMPOSITION

化学元素 Element	最小含量 Min [%]	最大含量 Max [%]
Fe	Balance	Balance
Mo	4.50	5.50
Co	0.80	1.20
Mn	0.15	0.40
Si	0.20	0.60
Cr	3.80	4.40
V	1.75	2.20
W	5.50	6.75
C	1.05	1.20
目标值 Target Values		
霍尔流速 Flow test by Hall	<20 S/50G	
振实密度 Tapping Density	>4.50G/CM ³	
松装密度 Apparent Density(g/cm ³)	>4.00G/CM ³	

电镜图 SEM PICTURE

