Stainless Steel 17-4PH

Material Introduction

Introduction

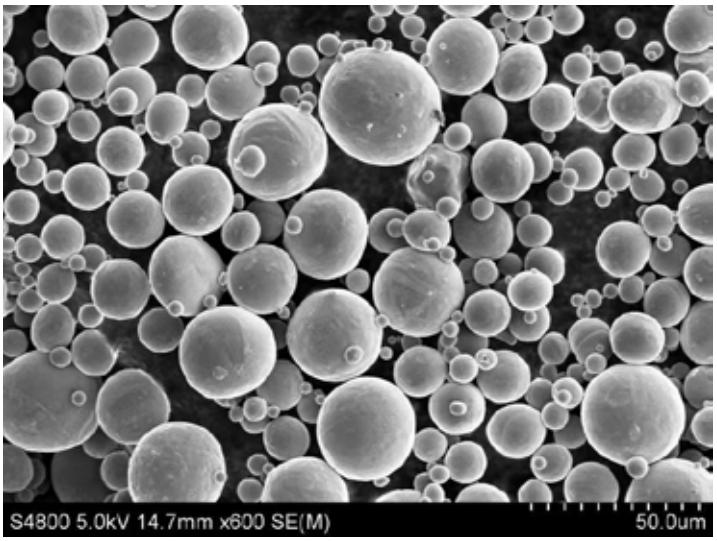
17-4PH steel is a martensite precipitation hardened stainless steel with high strength, high hardness, good welding performance and corrosion resistance.

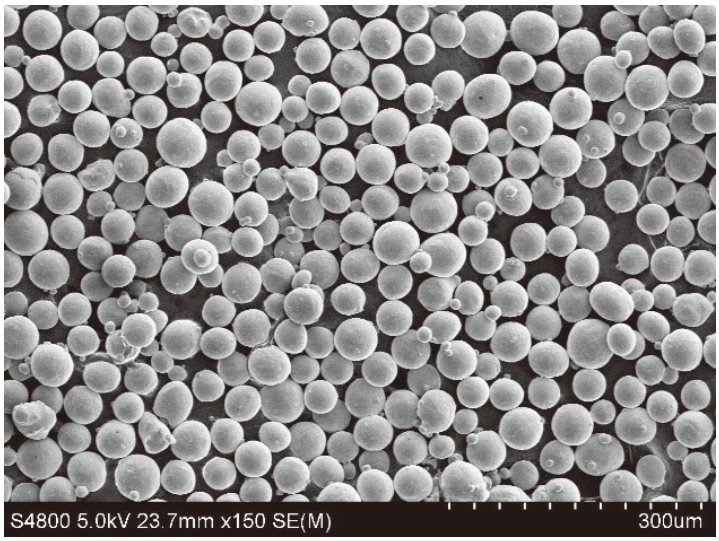
Powder Chemical Composition (wt.%)

Element	Cr	Ni	Cu	Si	Mn
Content Range	15.0-17.5	3.0-5.0	3.0-5.0	≤1.0	≤1.0

Element	C	P	S	Nb+Ta	Fe
Content Range	≤0.07	≤0.04	≤0.03	0.15-0.45	Bal.

Powder EM Map (spherical 0.9)





Advantages

17-4PH has features including high strength, high hardness, excellent corrosion resistance, good heat treatment and welding properties.

Tolerance

200 μm or 0.2%

Attributes

Performance	Printing State	Thermal Treatment State
Tensile Strength (Mpa)	1100±100	1250±100
Yield Strength (Mpa)	1050±100	1150±100
Hardness HRC/HV	28-41HRC	36±3HRC
Extensibility	16±4	16±4

Note: Surface hardness can vary greatly depending on how the specimen is prepared.

Applications

- 17-4PH stainless steel powder is mainly used in valves, shaft type, steam turbine parts and other high strength components with certain corrosion resistance requirements.