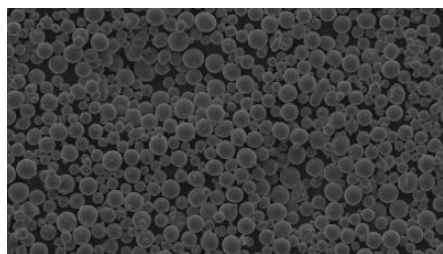


Corrax Die Steel

[Strong corrosion resistance and stable alloy performance]

Material Introduction

Corrax is a type of time hardened stainless steel. Compared with other die steel alloys, it has excellent corrosion resistance. Heat treatment has little effect on the corrosion resistance of materials. Its hardness range of 34–50 HRC can be achieved through heat treatment.



Applications

It is suitable for SLM mold processing such as injection molds, extrusion molds, plastic forming molds, etc.



Conformal cooling channel<1>



Conformal cooling channel<2>

Chemical Composition (wt.%)

Fe	Ni	Cr	Mo	C	Al	Si
Bal.	8.4–10.0	11.0–13.0	1.1–1.7	≤0.05	1.2–2.0	≤0.4
Mn	P	S	O	N	/	/
≤0.4	≤0.015	≤0.015	≤0.03	≤0.02	/	/

Physical Property

Granularity(μm)			Sphericity	Loose density (g/cm ³)	Tap density (g/cm ³)	Flowability (s/50g)
D10	D50	D90				
≥15	30–40	≤60	≥0.9	≥4.0	≥4.5	≤20

Parameters

Laser power(W)	Laser speed(mm/s)	Scanning spacing(mm)	Layer thickness (mm)
300	950	0.07	0.04

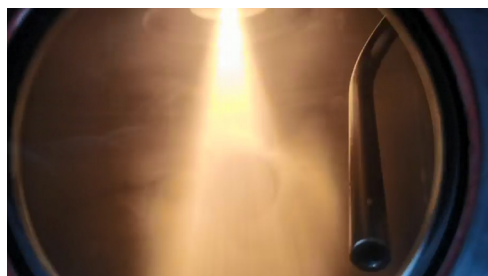
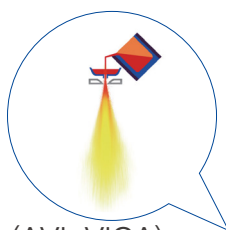


Mechanical Property

Condition	Rockwell Hardness/HRC	Tensile Strength/MPa	Elongation/%
As-Deposited	34-38	≥ 1100	≥ 15.0
Heat-Treated	48-52	≥ 1350	≥ 10.0

Advanced Powder Metallurgy Technology

The powder metallurgy technology and equipment production line—
Vacuum Induction Gas Atomization (AVI-VIGA)



Adapting Devices

10+ proprietary LPBF equipment systems supporting build sizes from 100 mm to 1500 mm.



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