3Dprint AM 15-5 PH

WAAM Solid Wire, stainless, martensitic

Classifications

Material Type

S15500 - AMS 5659 - AMS 5862 - 1.4545 - X5CrNiCu15-5

Characteristics and typical fields of application

Solid wire designed for 3D-printing of martensitic stainless steel structured of type 15-5PH for precipitation-hardening. The alloy offers a combination of high strength with a comparable corrosion resistance.
Depending upon the requirements (mechanical properties) the structures can be used as printed, as printed and precipitation hardened or solution annealed and precipitation hardened. Solution annealed and precipitation-hardened components can be cold deformed by bending with a mandrel of 5 x component thickness. The alloy is magnetic in all conditions.
Typical applications are structural parts in aerospace, food industry, valves for paper mill equipment.

Typical analysis

	C	Si	Mn	Cr	Ni	Mo	Nb	Cu
wt.-%	0.04	0.50	0.55	14.60	4.80	<0.3	0.28	3.4

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)
	MPa	MPa	%
EN ISO 15792-1	780	1000	14
untreated, Shielding gas Ar + 8-10 % CO2			

Operating data

Dimension mm

Diameter: 1,0 mm – 1,2 mm
Package: BS300 15 kg – ECOdrum 100 – ECOdrum 250 – S760 300
Other diameters and packages on request.

Approvals

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