3Dprint AM 15-5PH

WAAM solid wire, martensitic stainless steel

Material Type			
S15500	AMS 5659	AMS 5862	1.4545

Characteristics

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 of the solid wire (wt.-%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb
wt.-%	0.04	0.5	0.55	14.6	4.8	<0.3	3.4	0,28

Available products

Diameter: 1,0 mm – 1,2 mm

Package: BS300 15 kg – ECOdrum 100 – ECOdrum 250 – S760 300

Other diameters and packages on request.

Typical mechanical properties acc. to EN ISO 15792-1

Heat treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation ($L_0=5d_0$)
	MPa	MPa	%
u	780	1000	14

u untreated, as welded – Shielding gas Ar + 8-10 % CO_2