PROCESS DATA SHEET

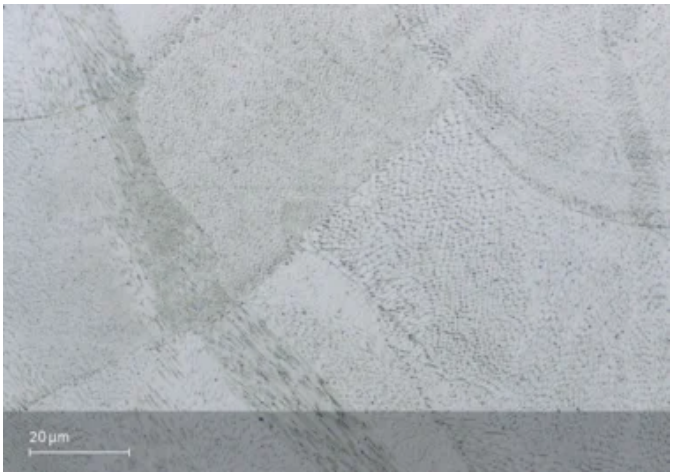
EOS StainlessSteel 254 for EOS M 290 | 60 µm

EOS M 290 - 60 µm - TRL 3

System Setup	EOS M 290
EOS Material set	254_060_CoreM291_100
Software Requirements	EOSPRINT 2.8 or newer EOSYSTEM 5.20 or newer
Recoater Blade	HSS (High Speed Steel)
Nozzle	EOS Grid Nozzle
Inert gas	Argon
Sieve	75 µm

Additional Information	
Layer Thickness	60 µm
Volume Rate	6.1 mm^3/s

Chemical and Physical Properties of Parts



Micrograph etched as manufactured Etchant: ASTM E407-07, etchant 12

Microstructure of the Produced Parts

Defects	Thickness	Result	Number of Samples
Average Defect Percentage	60 µm	0.02 %	-

Density EN ISO 3369	Thickness	Result	Number of Samples
Average Density	60 µm	≥ 8.07 g/cm³	-

Mechanical Properties

Mechanical Properties Heat Treated

EN ISO 6892-1 Room Temperature	Yield Strength [MPa]	Tensile Strength [MPa]	Elongation at Break [%]	Reduction of Area Z [%]	Number of Samples
Vertical	360	660	48	-	-
Horizontal	360	700	44	-	-

Optional solution annealing
At 1 180 °C for 2 h after parts have fully heated through, water quenching.

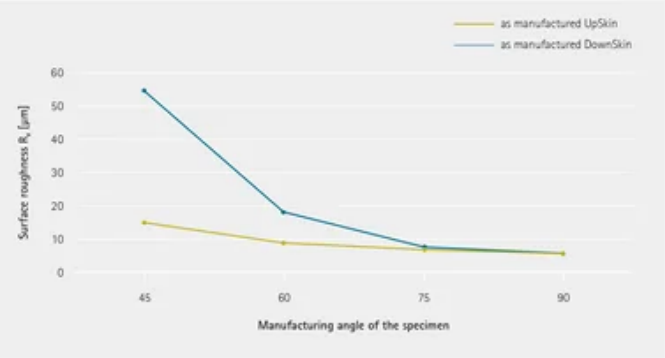
Typical dimensional change after heat treatment: 0.06 %

Mechanical Properties

Mechanical Properties As Manufactured

EN ISO 6892-1 Room Temperature	Yield Strength [MPa]	Tensile Strength [MPa]	Elongation at Break [%]	Reduction of Area Z [%]	Number of Samples
Vertical	580	730	36	-	-
Horizontal	660	800	30	-	-

Surface Roughness



Coefficient of Thermal Expansion

ASTM E228	Temperature
14.8*10^{-6}/K	25 – 100 °C
15.7*10^{-6}/K	25 – 200 °C
16.3*10^{-6}/K	25 – 300 °C
16.7*10^{-6}/K	25 – 400 °C

HEADQUARTERS

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Status as of 15.07.2025. Subject to technical modifications. EOS is certified according to ISO 9001.