

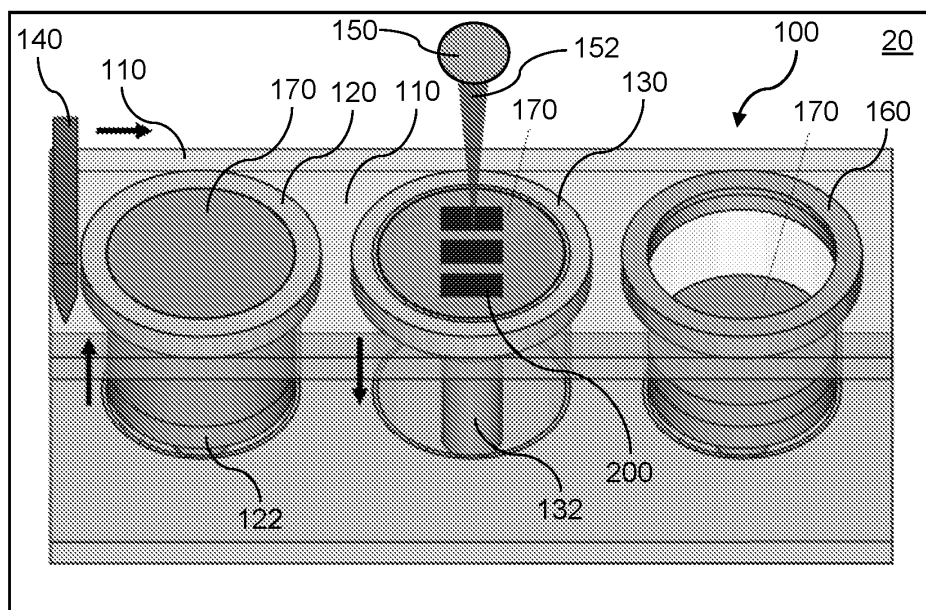


Figure 1

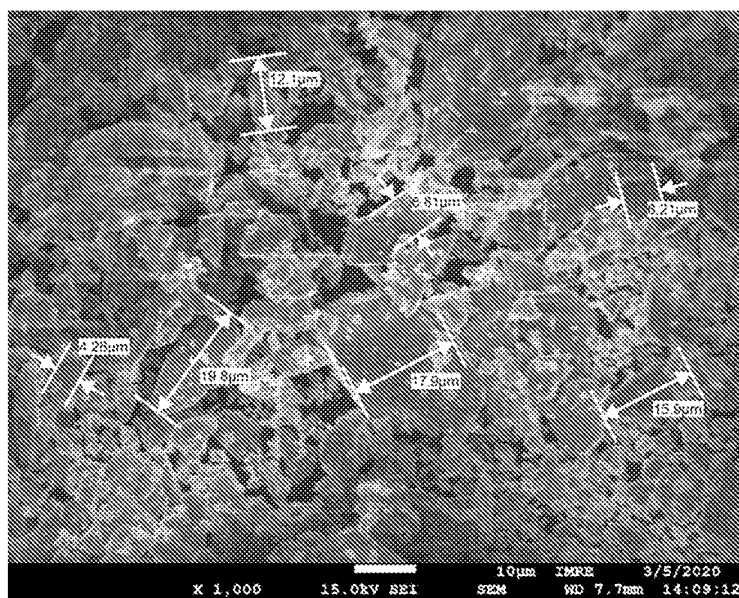


Figure 2A

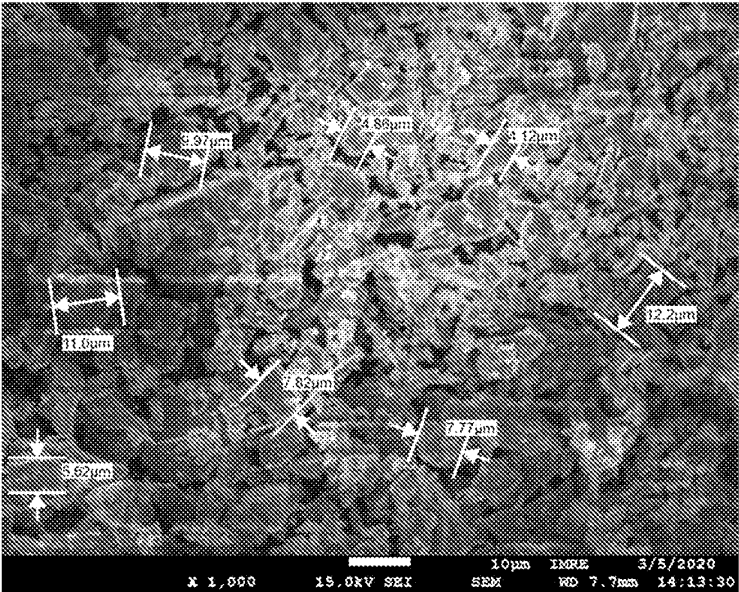


Figure 2B

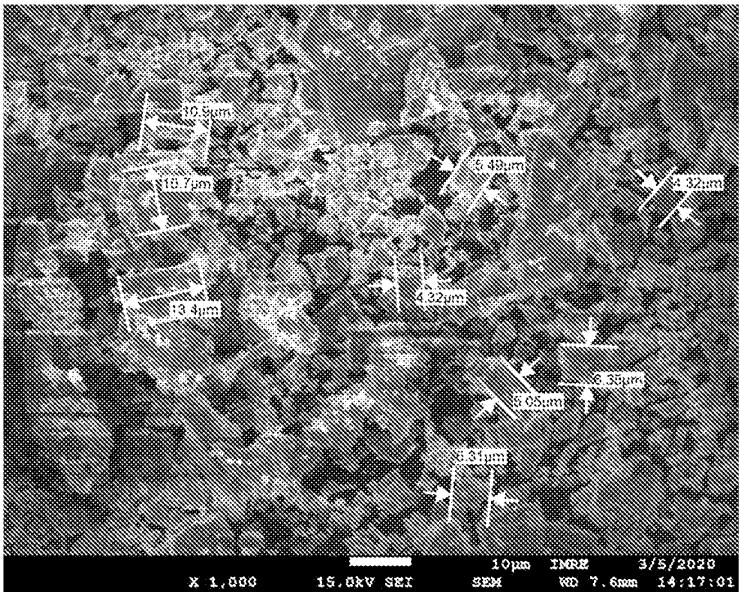


Figure 2C

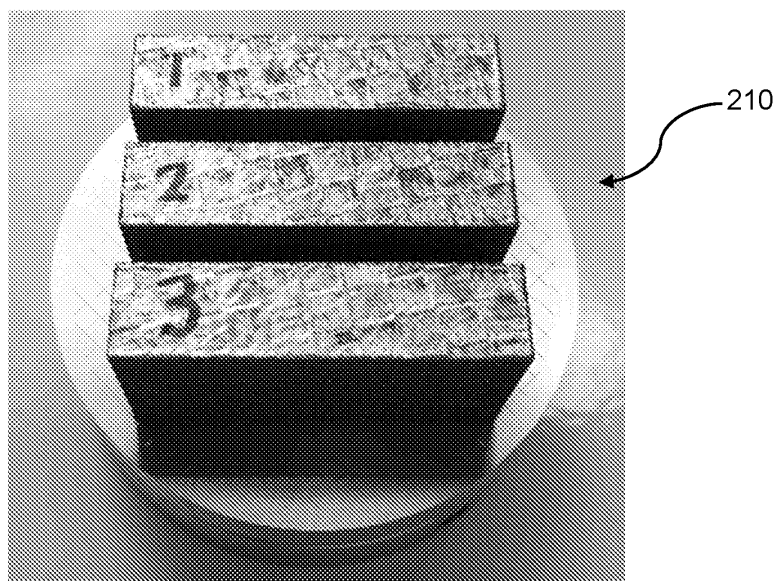


Figure 3A

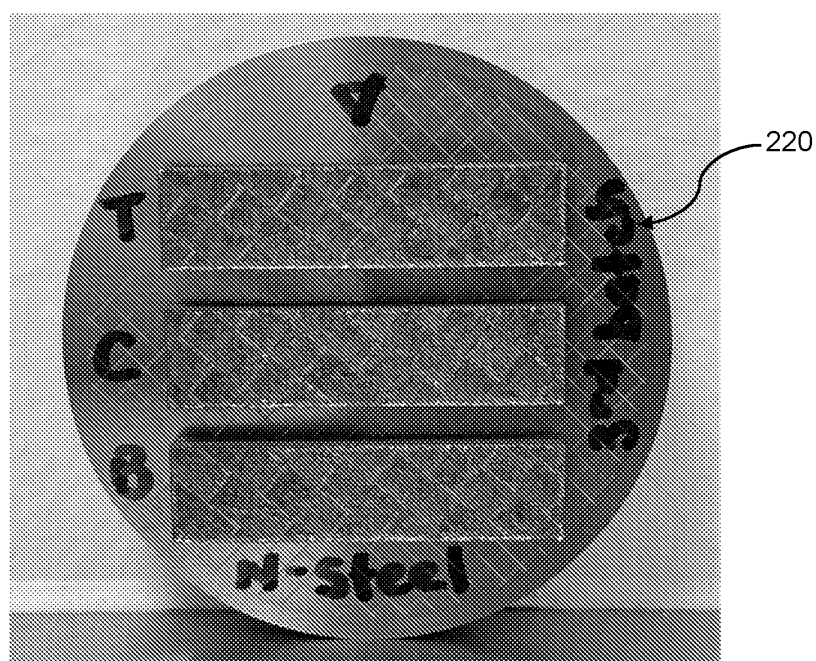


Figure 3B

Composition of Material Powder				
Batch	FeMn	FeCr	Fe	CrN / Cr ₂ N
First	50.0	45.0	0	5.0
Second	48.38	22.88	19.31	9.43

Figure 4A

Processing Parameters		
Batch	First	Second
Laser Power (W)	175	175
Laser Scan Speed (mm/s)	200	300
Layer Thickness (microns)	30	30
Hatch Spacing (microns)	100	100
Island Length (mm)	4	4
Island Overlap (mm)	4	4

Figure 4B

Composition of Nitrogenous Steel Material									
Batch	C	Si	Mn	S	P	Cr	N	O	Fe
First	0.02	0.59	22.3	0.003	0.016	24.1	0.56	0.13	Balance
Second	0.02	0.40	20.2	0.01	0.01	19.03	0.87	Not tested	Balance

Figure 5A

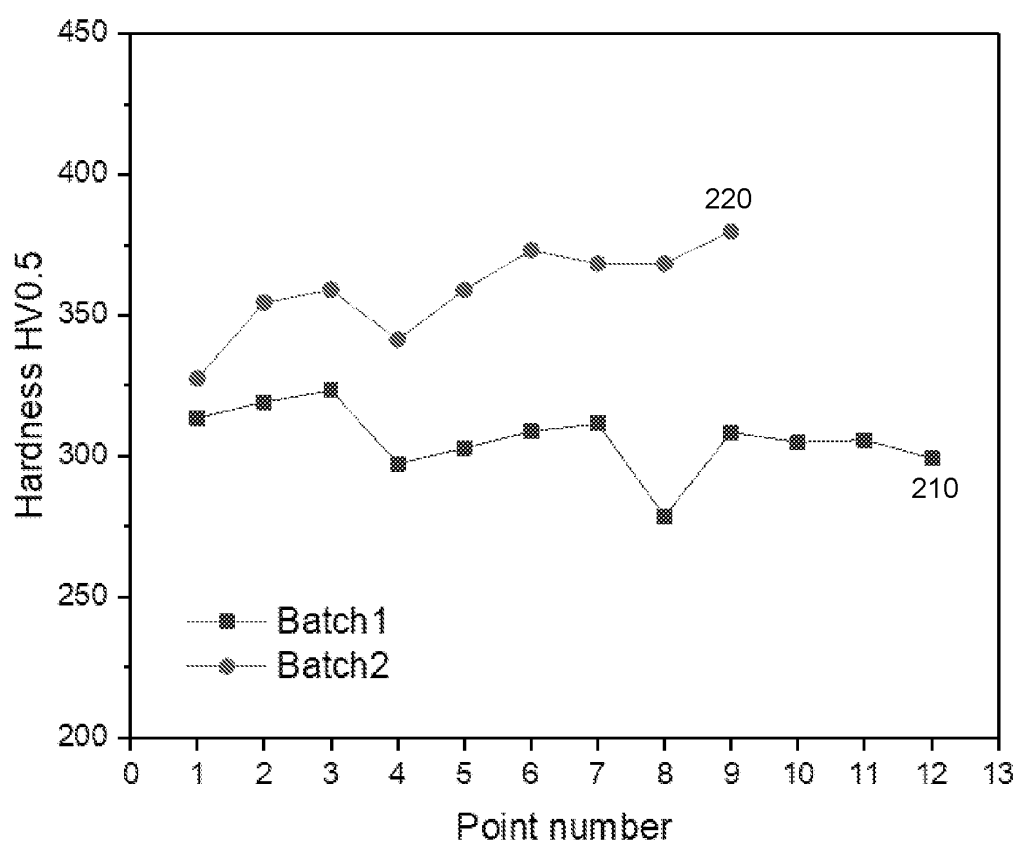


Figure 5B