Supplementary Table S1. The specific information of physical metallurgy parameters.

	Min	Max	Mean	Std.
Cr-ACR-ST	0.000871	0.002432	0.001475	0.000355
Mn-ACR-ST	4.22E-16	6.96E-05	1.24E-05	1.38E-05
Ni-ACR-ST	6.74E-05	0.000267	0.00016	4.39E-05
Cu-ACR-ST	1.03E-14	0.000562	0.000111	0.000149
Al-ACR-ST	7.10E-18	1.42E-06	6.87E-07	2.49E-07
Si-ACR-ST	1.10E-18	1.82E-07	1.44E-08	2.27E-08
Nb-ACR-ST	3.90E-16	2.03E-05	4.82E-06	4.66E-06
V-ACR-ST	8.71E-16	2.84E-06	3.98E-07	3.94E-07
Ti-ACR-ST	6.03E-18	3.06E-06	1.48E-07	4.79E-07
Mo-ACR-ST	1.30E-14	0.000361	0.000139	0.00011
W-ACR-ST	1.71E-14	0.001238	0.00013	0.000242
Y-ACR-ST	5.45E-14	8.81E-05	2.83E-06	9.03E-06
Zr-ACR-ST	1.40E-18	2.37E-08	2.40E-09	6.44E-09
C-ACR-ST	2.61E-06	0.007996	0.001056	0.001313
B-ACR-ST	5.73E-13	0.000309	7.41E-05	4.57E-05
P-ACR-ST	1.63E-19	2.32E-10	7.62E-11	6.81E-11
Cr-ACR-CT	0.004714	0.017605	0.008459	0.002232
Mn-ACR-CT	9.78E-16	0.000226	3.35E-05	3.94E-05
Ni-ACR-CT	0.000139	0.000649	0.000324	8.52E-05
Cu-ACR-CT	5.35E-14	0.004502	0.000839	0.001126
Al-ACR-CT	2.29E-19	1.88E-07	5.74E-08	3.72E-08
Si-ACR-CT	5.96E-21	6.73E-09	3.46E-10	8.15E-10
Nb-ACR-CT	3.83E-16	4.59E-06	1.08E-06	9.43E-07
V-ACR-CT	1.29E-15	5.56E-06	7.55E-07	7.91E-07
Ti-ACR-CT	4.60E-19	8.64E-07	5.85E-08	1.86E-07
Mo-ACR-CT	6.41E-14	0.001348	0.00046	0.000351
W-ACR-CT	3.19E-14	0.001029	0.000232	0.000251
Y-ACR-CT	3.64E-13	0.000778	2.07E-05	8.00E-05
Zr-ACR-CT	8.42E-20	8.61E-09	2.66E-10	8.57E-10
C-ACR-CT	4.21E-07	0.001047	7.92E-05	0.000107
B-ACR-CT	4.59E-13	3.27E-05	9.04E-06	6.14E-06
P-ACR-CT	2.59E-21	1.08E-11	2.51E-12	2.64E-12
MC-VF-ST	0	0.017123	0.00508	0.004589
$M_{23}C_6$-VF-ST	0	0.037578	0.000843	0.003604
LAVES-VF-ST	0	0.060843	0.000863	0.005311
$NbNi_3$-VF-ST	0	0	0	0
MC-VF-CT	0	0.993109	0.02477	0.148726
$M_{23}C_6$-VF-CT	0	0.237106	0.003714	0.021921
LAVES-VF-CT	0	0.156132	0.013934	0.026396
$NbNi_3$-VF-CT	0	0.124575	0.009163	0.021104
MC-DF-ST	-10581.9	28151.32	14576.37	7133.184
$M_{23}C_6$-DF-ST	-10374.3	3143.66	-1167.02	2728.826
LAVES-DF-ST	-7544.88	3180.535	-1435.32	1796.286
$NbNi_3$-DF-ST	-32950	-1427.66	-8372.93	3612.555
MC-DF-CT	6420.135	45762.87	34923.22	6223.409
$M_{23}C_6$-DF-CT	-1178.32	12944.92	8147.738	2749.653
LAVES-DF-CT	-249.788	10611.38	6576.647	1749.2
$NbNi_3$-DF-CT	-28315.9	8043.612	2311.045	2896.315