

Steel Grade: 19Mn5(P310GH) | Material No: 1.0482

CHEMICAL COMPOSITION

C(%) ≤	Si(%) ≤	Mn(%) ≤	P(%) ≤	S(%) ≤	Cr(%)	Mo(%)	Ni(%)	Other(%)
0.17~0.22	0.30~0.60	1.00~1.30	0.045	0.045	≤0.30	—	—	—

HARDNESS AND HEAT TREATMENT MECHANICAL PROPERTIES

Hot Working °C	Annealing/Normalizing °C	Quench °C	Temper °C	Brinell Hardness HBS	Tensile Strength $\sigma_b \geq$ Mpa	Normal Temp Yield Strength $\sigma_s \geq$ Mpa	Extensibility $\delta_5 \geq$ (%)	Ballistic $akv \geq$ J⑥		
1100~850	880~910③	—	550~620④	152~180	510~610	315	20	34		
Yield Strength $\sigma_{0.2} \geq$ /Mpa					Creep Limit/Mpa 1000h					
200°C	300°C	350°C	400°C	450°C	500°C	450°C	500°C	550°C	600°C	10000h 450°C
314	226	206	177	177	—	147	83	—	—	108
Creep Limit/Mpa 10000h			Creep Rupture/Mpa 1000h			Creep Rupture/Mpa 10000h				
500°C	550°C	600°C	450°C	500°C	550°C	600°C	450°C	500°C	550°C	600°C
55	—	—	—	31	—	—	137	76	—	—

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