

Comparison of steel grades

JUS	-
DIN	20MnMoNi4-5
BS	-
GOST	-
AISI	-
UNI	-
NF	-

20MnMoNi4-5 EN 10250-3:1999, Number: 1.6311

20MnMoNi4-5 steel grade is one of grade in En10028-2, which is non alloy and **alloy steels** with specified elevated temperature properties.

In accordance with en10020, 20MnMoNi4-5 steel grade is alloy special steels.

20MnMoNi4-5 Grade delivery condition is normalized and tempered or quenched and tempered.

Bebonsteel could supply 20MnMoNi4-5 steel grade in super thick steel plate for fabricators serving the oil and gas industry, heat exchangers, weldable pressure vessels and boilers

20MnMoNi4-5 steel plate Chemical analysis -% by mass

Chemical elements	C	Si	Mn	P	S	Cr	Mo	Ni**	-
				max.	max.				
%, by mass	0,17-0,23	£ 0,40	1,00-1,50	0.035	0.035	£ 0,50	0,45-0,60	0,40-0,80	-
Permissible deviation	± 0,02	+ 0,03	± 0,06	+ 0,005	+ 0,005	+ 0,05	± 0,06	± 0,05	-

At the option the manufacturer the elements aluminium, titanium, vanadium and niobium may be added singly or in combination for grain control purposes. Elements not quoted in tables shall not be added intentionally to the steel without the agreement of the purchaser, except for the purpose of finishing the heat. For greater cross-sections up to 1,00 % Ni is admissible. Mechanical properties in the quenched and tempered condition

Thickness of ruling section tR

Diameter in mm	tR ≤ 160mm	160 < tR ≤ 330mm	330 < tR ≤ 660mm
Re min. (N/mm ²)	420	390	-
Rm min. (N/mm ²)	580	550	-
A % longitudinal	17	17	-
tr	14	14	-

BEBON international — We are specialized in hot rolled steel plate/coil.

Tel:0086-371-86151827 86151627

E-mail:BB@Bebonchina.com

Fax: 0086-371-86011881

Web:<http://www.bebonchina.com>

Oficina Dir: 2801 B# International enterise center Zhengzhou city in China.

	-transverse			
KV min	l-longitudin	39	39	-
(J)	al			
	tr	24	24	-
	-transverse			

1N/mm²=1MPa Heat treatment conditions

Quenching temperature, 0C

Tempering temperature, 0C

870 to 940

630 to 680

Quenching from hardening may be carried out in oil, water, or water based solutions. Caution should be observed in the use of water as a quenching medium to avoid the risk of cracking the forgings

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