



E STEEL SDN BHD (891338-A)

NO 3, Lorong Sungai Puloh 7/KU 6,
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SCM415 Steel | 15CrMo5 | 1.7262

SCM415 steel round bar is a kind of Low carbon and Cr-Mo heat treated by surface hardening process, use for gears and wear resistant parts with tough cores.

SCM415 round bars chemical composition by %, maximum

Grade	C	Si	Mn	P	S	Ni	Cr	Mo
JIS G4053	0.13-	0.15-	0.6-0.9	≤0.03	≤0.03	≤0.25	0.9-1.2	0.15-0.25
SCM415	0.18	0.35						

SCM415 round bars mechanical properties

Grade	Delivery State	T.S. N/mm ² Min	Y.S. N/mm ² Min	A, % Min	Z, % Min	Hardness, (annealing or tempering) HB,max	Forging ratio	Grain Size (level)	Nonmetal ratio
JIS G4053 SCM415	Hot rolled, forged, or heat treatment	834	-	16	40	235-321	≥ 4:1	≥ 6	≤ 2.0

Applications

SCM415 steel is a alloy structural steel. It is used for engineering structural, like high tensile shafts, bolts and nuts, gears, pinions and spindles. Locomotive traction with the big gear, supercharger drive gear, pressure vessel, rear axle, gear load of connecting rod and a spring clip, SCM415 can also be used to under 2000 m deep well of oil drill pipe joint and the fishing Alloy, and can be used for bending machine mould, etc



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SCM415 steel Heat treatment Related

- **Forging Of SCM415 steel-hot work alloy Alloy steel**

Heat to 900-1100 °C (1652-2012°F), forged temperature not below 843°(1550°F)

- **Annealing of SCM415 Alloy steel**

Slowly heated to 800~850 °C (1472~1562°F) and allow enough times, let the steel to be thoroughly heated, Then cool slowly at Maximum of 4°C (40°F) per hours. The SCM415 Alloy steel will get MAX 235 HB (Brinell hardness) .

- **Hardening of SCM415 Alloy steel**

SCM415 steels should be heated uniformly to 840-875°C (1544-1607°F) until completely heated through. If needed, the steels can be preheated at 300-500°C (572-932°F). About 30 min/per 25 mm of ruling section is to be provided and then the steels should be immediately quenched in oil.

- **Tempering of SCM415 Alloy steel**

Tempering of SCM415 steels is performed at 500-700°C (932-1292°F), Soak well at the selected temperature and soak for at least one hour per 25mm of total thickness. Then cool in air. Low Tempering is not advised as tempering within this range will seriously reduce the impact value. (250-375°C)