



16. OUTSOURCING PRODUCTION

Finished Wires / Wire Rod



- PRODUCTION STEEL WIRES FOR NORMAL SUPPLY -

SAE Nonresulfurized Carbon Steels

UNS No.	SAE No.	Chemical Composition %			
		C	Mn	P	S
G10060	1006	0.08 MAX	0.25-0.40	NIL	NIL
G10080	1008	0.10 MAX	0.30-0.50	NIL	NIL
G10100	1010	0.08-0.13	0.30-0.60	NIL	NIL
G10150	1015	0.13-0.18	0.30-0.60	NIL	NIL
G10180	1018	0.15-0.20	0.60-0.90	NIL	NIL
G10220	1022	0.18-0.23	0.70-1.00	NIL	NIL
G10380	1038	0.35-0.42	0.60-0.90	NIL	NIL
G10450	1045	0.43-0.50	0.60-0.90	NIL	NIL

JIS Carbon Steel Wire Rods for Cold Heading and Cold Forging

SYMBOL	Chemical Composition %					
	C	Si	Mn	P	S	Al
SWRCH 6A	0.08 MAX	0.10 MAX	0.60 MAX	0.030 MAX	0.035MAX	0.02MIN
SWRCH 8A	0.10 MAX	0.10 MAX	0.60 MAX	0.030 MAX	0.035MAX	0.02MIN
SWRCH10A	0.08-0.13	0.10 MAX	0.30-0.60	0.030 MAX	0.035MAX	0.02MIN
SWRCH15A	0.13-0.18	0.10 MAX	0.30-0.60	0.030 MAX	0.035MAX	0.02MIN
SWRCH18A	0.15-0.20	0.10 MAX	0.60-0.90	0.030 MAX	0.035MAX	0.02MIN
SWRCH22A	0.18-0.23	0.10 MAX	0.70-1.00	0.030 MAX	0.035MAX	0.02 MIN
SWRCH40K	0.37-0.43	0.10-0.35	0.60-0.90	0.030 MAX	0.035MAX	NIL
SWRCH45K	0.42-0.48	0.10-0.35	0.60-0.90	0.030 MAX	0.035 MAX	NIL
SWRCH50K	0.47-0.53	0.10-0.35	0.60-0.90	0.030 MAX	0.035 MAX	NIL

Carbon Steels for Machine Structural Use

SYMBOL	Chemical Composition %				
	C	Si	Mn	P	S
S 20 C	0.18-0.23	0.15-0.35	0.30-0.60	0.030 MAX	0.035 MAX
S 25 C	0.22-0.28	0.15-0.35	0.30-0.60	0.030 MAX	0.035 MAX
S 40 C	0.37-0.43	0.15-0.35	0.60-0.90	0.030 MAX	0.035 MAX
S 45 C	0.42-0.48	0.15-0.35	0.60-0.90	0.030 MAX	0.035 MAX
S 50 C	0.47-0.53	0.15-0.35	0.60-0.90	0.030 MAX	0.035 MAX