



RELIABLE PIPES & TUBES LTD.

ALLOY STEEL

Equivalent Grades					
Internal Standard	BS	DIN	IS	EN	SAE/AISI
EN18	530A40	37Cr4	40Cr1	EN18	5140
EN24	817M40	34CrNiMo6	40NiCr4Mo3	EN24	4340
EN19C	709M40	-	40Cr4Mo3	EN19C	41,404,142
EN19	709M40	42Cr4Mo2	40Cr4Mo3	EN19	41,404,142
EN18D	530A40	37Cr4	40Cr1	EN18D	5140
EN18C	530A40	37Cr4	40Cr1	EN18C	5140
EN353	815M17	-	15NiCr1Mo12	EN353	-
EN18A	530A40	37Cr4	40Cr1	EN18A	5140
EN354	820M17	-	15NiVCr1Mo15	EN354	4320
27C15	-	28Mn6	27C15	-	1527
20MnCr5	-	20MnCr5	20MnCr1	-	-
20Mn2	150M28	-	20Mn2	EN14A	1524
16MnCr5	-	16MnCr5	17Mn1Cr95	-	5120
15Cr3	523A14	15Cr3	15Cr65	EN206	5015
FILESTEEL	-	-	-	-	-
EN18B	530A40	37Cr4	40Cr1	EN18B	5140
SCM420	708M20	-	-	-	-
SAE8620	805M20	-	20NiCrMo2	EN362	SAE8620

CARBON STEEL

Internal Standard	Equivalent Grades					
	BS	DIN	IS	EN	SAE/AISI	JIS
EN15B	150M36	36Mn5	37Mn2, 37C15	EN15B	1536	-
EN32B	-	CK15	C14	EN32B	101,510,161,018	-
SAE1038	-	CK38	-	-	1038	-
EN43C	-	-	C50	EN43C	1050	-
CK45	-	CK45	45C8	1045	-	-
EN9	070M55	CK55	C55	EN9	1055	-
C35	-	C35	35C8, C35Mn75	-	1035	-
EN42	-	CK75	80C6	EN42	1074	-
EN42B	-	C67	65C6	EN42B	1065	-
EN43	080M50	C55	60C6	EN43	1055	-
EN43B	080A47	CK45	-	EN43B	1045	-
SAE1541	150M36	36Mn7	37C15	EN15,15A	SAE1541	SMn438
EN8	080A40	CK45	45C8	EN8	10,401,045	-
EN8A	080A40	CK45	45C8	EN8A	10,401,045	-
EN8B	080A40	CK45	45C8	45C8	10,401,045	-
EN8C	080A40	CK45	45C8	EN8C	10,401,045	-
EN8D	080A40	CK45	45C8	EN8D	10,401,045	-

HIGH CARBON STEEL

Internal Standard	Equivalent Grades		
	EN	SAE/AISI	JIS***
PC77	-	1075	SWRH77B
PC80	-	1080	SWRH82B
PC80CR	-	1080	SWRH82B
PC270K	-	1080	SWRH82B
PC270KCrV	-	1080	SWRH82B
R30	EN5D	1030	SWRH32B
R35	-	1035	SWRH37B
R40	EN8	1040	SWRH42B
R45	EN43B	1045	SWRH47B
R50	-	1050	SWRH52B
R55	EN9	1055	SWRH57B
R60	EN43D	1060	SWRH62B
R65	EN42B	1065	SWRH67B
R70	-	1070	SWRH72B
R75	-	1075	SWRH77B, SUP2
R80	-	1080	SWRH82B
R80M	-	1085	SWRH87B
R95	-	1090	3CD95A

SPRING STEEL

Internal Standard	Equivalent Grades					
	BS	DIN	IS	EN	SAE/AISI	JIS
60Si7	-	60Si7	60Si7	EN45A	-	-
SUP7	-	59Si7	-	EN45A	9260	SUP7
SUP12V	685A57	54SiCr6	-	-	9254	SUP12V
55Si7	-	55Si7	55Si7	EN45A	-	-
EN45	250A53	55Si7	55Si2Mn90	EN45	9255	-
65Si7	-	65Si7	-	EN45A	9260	-
EN45A	250A58	-	-	EN45A	9260	-
50CrV4	735A51	50CrV4	50Cr4V2	EN47	6150	SUP10
SAE9254	-	-	-	-	9254	-
SUP7N	-	-	-	-	9260	SUP7N
SUP11A	-	-	-	-	51B60	SUP11A
SUP9	-	55Cr5	-	-	5155	SUP9

BEARING QUALITY STEEL

Internal Standard	Equivalent Grades				
	BS	DIN	IS	EN	SAE/AISI
SAE52100	534A99/535A99	100Cr6	103Cr1	EN31	SAE52100
EN31M	534A99/535A99	100Cr6	103Cr1	EN31M	52100
EN31	534A99/535A99	100Cr6	103Cr1	EN31	52100

COLD HEADING QUALITY STEEL - CHQ

Internal Standard	Equivalent Grades					
	BS	DIN	IS	EN	SAE/AISI	JIS
SAE1020CHQ	070M20	CK22	C20	EN 3A	SAE1020	SWRCH20A
SAE1022CHQ	-	-	-	-	SAE1022	-
SAE4140CHQ	709M40	42CrMo4	40Cr4Mo3	EN19	SAE4140	SCM440
SAE1018CHQ	-	H111	C-15Mn75	EN2C	SAE1018	-
SAE1541CHQ	150M36	36Mn7	37C15	EN15,15A	SAE1541	SMn438
15B41	-	-	-	-	15B41	-
1045CHQ	-	CK45,C45	45C8,C45	-	1045	-
SAE1015CHQ	-	CK15	-	EN32B	SAE1015	-
1038CHQ	-	CK38	-	-	1038	-
SAE1012CHQ	040A12	CK10	C7, C10	2A/1,2B	SAE1012	SWRCH12A
15B25	-	-	26C10BT	-	15B25	-
SAE1010CHQ	-	CK10	C10	-	SAE1010	-
10B21	-	-	21C10BT	-	10B21	-
SAE1008CHQ	040A04	C10	C5	2A,2A/1,2B	SAE1008	SWRCH8A

FREE CUTTING STEEL

Internal Standard	Equivalent Grades					
	BS	DIN	IS	EN	SAE/AISI	JIS
EN15(AM)	216M36	-	40Mn15S12	EN15(AM)	1137	-
EN1A	220Mo7	9SMn28	11C10S25	EN1A	1213	SUM22
EN1APB	220Mo7Pb	9SMnPb36	-	EN1APB	12L14	SUM24L
EN8M	212M36	-	40C10S18	EN8M	1146	-
SAE1146	-	-	40C10S18	EN8M	SAE1146	-

LOW CARBON STEEL

Internal Standard	Equivalent Grades					
	BS	DIN	IS	EN	SAE/AISI	JIS
LCCF	040A04	C10	CS	2A, 2A/1, 2B	SAE1008	SWRCH8A
SAE1015	-	CK15	-	-	SAE1015	-
SAE1012	040A12	CK10	C7, C10	2A/1, 2B	SAE1012	SWRCH12A
SAE1010	-	CK10	C10	-	SAE1010	-
SAE1008	040A04	C10	C5	2A, 2A/1, 2B	SAE1008	SWRCH8A
SAE1020	070M20	CK22	C20	EN 3A	SAE1020	SWRCH20A
P12	-	-	-	-	-	-
SAE1018	-	CK15	C15Mn75	EN32B,EN32C	SAE1018	-

MATERIAL CROSS REFERENCE LIST

CARBON STEEL

USA	Japan	Germany		U. K.		France	Italy
AISI/SAE	JIS	W.-nr.	DIN	BS	EN	AFNOR	UNI
A570.36	STKM 12A STKM 12C	1	RSt.37-2	4360 40 C	—	E 24-2 Ne	—
1015	—	1.04	C15	080M15	—	CC12	C15, C16
1020	—	1.04	C22	050A20	2C	CC20	C20, C21
1213	SUM22	1.07	9SMn28	230M07	1A	S250	CF9SMn28
12L13	SUM22L	1.07	9SMnPb28	—	—	S250Pb	CF9SMnPb28
—	—	1.07	10SPb20	—	—	10PbF2	CF10Pb20
1215	—	1.07	9SMn36	240M07	1B	S300	CF9SMn36
12L14	—	1.07	9SMnPb36	—	—	S300Pb	CF9SMnPb36
1015	S15C	1.11	Ck15	080M15	32C	XC12	C16
1025	S25C	1.12	Ck25	—	—	—	—
A572-60	—	1.89	StE380	4360 55 E	—	—	FeE390KG
1035	—	1.05	C35	060A35	—	CC35	C35
1045	—	1.05	C45	080M46	—	CC45	C45
1140	—	1.07	35S20	212M36	8M	35MF4	—
1039	—	1.12	40Mn4	150M36	15	35M5	—
1335	SMn438(H)	1.12	36Mn5	—	—	40M5	—
1330	SCMn1	1.12	28Mn6	150M28	14A	20M5	C28Mn
1035	S35C	1.12	Cf35	060A35	—	XC38TS	C36
1045	S45C	1.12	Ck45	080M46	—	XC42	C45
1050	S50C	1.12	Cf53	060A52	—	XC48TS	C53
1055	—	1.05	C55	070M55	9	—	C55
1060	—	1.06	C60	080A62	43D	CC55	C60
1055	S55C	1.12	Ck55	070M55	—	XC55	C50
1060	S58C	1.12	Ck60	080A62	43D	XC60	C60
1095	—	1.13	Ck101	060A96	—	XC100	—
W1	SK3	1.15	C105W1	BW1A	—	Y105	C36KU
W210	SUP4	1.15	C105W1	BW2	—	Y120	C120KU

Spain	Sweden	China
UNE	SS	GB
–	1311	15
F.111	1350	15
F.112	1450	20
F.2111 11SMn28	1912	Y15
11SMnPb28	1914	–
10SPb20	–	–
12SMn35	–	Y13
12SMnP35	1926	–
C15K	1370	15
–	–	25
–	2145	–
F.113	1550	35
F.114	1650	45
F210G	1957	–
–	–	40Mn
36Mn5	2120	35Mn2
–	–	30Mn
–	1572	35Mn
C45K	1672	Ck45
–	1674	50
–	1655	55
–	–	60
C55K	–	55
–	1678	60Mn
F.5117	1870	–
F.5118	1880	–
F.515	2900	–