Carbon steels for machine structual use・Alloy steel and related materials

Japan Industrial Standards		International Standards	Foreign Standards						European Standards	
Standard number /name (stainless steel abbreviation)	JIS	ISO TR 15510 L・No.	United States UNS	United States AISI	United Kingdom BS	Germany DIN	France NF	Russia (Former USSR) ГОСТ	EN Type	EN Number
JIS G 4303～4305	SUS 201	12	S20100	201			Z12CMN17-07Az		X12CrMnNiN17-7-5	1.4372
	SUS 202		S20200	202	284S16			12X17Г9АН4	X12CrMnNiN18-9-5	1.4373
Rods	SUS 301	5	S30100	301	301S21	X12CrNi17 7	Z11CN17-08	07X16H6	X5CrNi17-7	1.4319
Hot-rolled sheets and strips	SUS 301L	4				X2CrNiN18-7			X2CrNiN18-7	1.4318
Cold-rolled sheets and strips	SUS 301J1					X12CrNi17 7				
JIS G 4308～4309	SUS 302		S30200	302	302S25		Z12CN18-09	12X18H9		
	SUS 302B		S30215	302B						
Wire	SUS 303	13	S30300	303	303S21	X10CrNiS18 9	Z8CNF18-09		X8CrNiS18-9	1.4305
Cable	SUS 303Se		S30323	303Se	303S41			12X18H10E		
	SUS 303Cu									
JIS G 4313～4315	SUS 304	6	S30400	304	304S31	X5CrNi18 10	Z7CN18-09	08X18H10	X4CrNi18-10	1.4301
	SUS 304L	1	S30403	304L	304S11	X2CrNi19 11	Z3CN19-11	03X18H11	X2CrNi19-11	1.4307
		2								1.4307
Spring strips	SUS 304N1	10	S30451	304N			Z6CN19-09Az		X2CrNi18-9	1.4306
Spring wire	SUS 304N2		S30452							
Cold pressed wire	SUS 304LN	3	S30453	304LN		X2CrNiN18 10	Z3CN18-10Az		X2CrNiN18-10	1.4311
JIS G 4317～4320	SUS 304J1									
	SUS 304J2									
Hot-rolled equal angle steel	SUS 304J3		S30431	S30431						
Cold-rolled rods	SUS 305	8	S30500	305	305S19	X5CrNi18 12	Z8CN18-12	06X18H11	X4CrNi18-12	1.4303
Steel fragments of cast objects	SUS 305J1									
Cold-rolled equal angle steel	SUS 309S	X6CrNi23-14	S30908	309S			Z10CN24-13			
	SUS 310S	X6CrNi25-21	S31008	310S	310S31		Z8CN25-20	10X23H18	X6CrNi25-20	
	SUS 315J1									
	SUS 315J2									
	SUS 316	26	S31600	316	316S31	X5CrNiMo17 12 2	Z7CND17-12-02		X4CrNiMo17-12-2	1.4401
	SUS 316F	27				X5CrNiMo17 13 3	Z6CND18-12-03		X4CrNiMo17-13-3	1.4436
	SUS 316L	19	S31603	316L	316S11	X2CrNiMo17 13 2	Z3CND17-12-02		X2CrNiMo17-12-2	1.4404
		20				X2CrNiMo17 14 3	Z3CND17-13-03	03X17H14M3	X2CrNiMo17-13-3	1.4432
									X2CrNiMo18-14-3	1.4435
	SUS 316N		S31651	316N						
	SUS 316LN	22	S31653	316LN		X2CrNiMoN17 12 2	Z3CND17-11Az		X2CrNiMoN17-11-2	1.4406
		23				X2CrNiMoN17 13 3	Z3CND17-12Az		X2CrNiMoN17-13-3	1.4429
	SUS 316Ti	28	S31635			X6CrNiMoTi17 12 2	Z6CNDT17-12	08X17H13M2T	X6CrNiMoTi17-12-2	1.4571
	SUS 316J1									
	SUS 316J1L									
	SUS 317		S31700	317	317S16					
	SUS 317L	21	S31703	317L	317S12	X2CrNiMo18 16 4	Z3CND19-15-04		X2CrNiMo18-15-4	1.4438
	SUS 317LN	24	S31753				Z3CND19-14Az		X2CrNiMoN18-12-4	1.4434
	SUS 317J1								X2CrNiMoN17-13-5	1.4439
	SUS 317J2									
	SUS 317J3L									
	SUS 836L		N08367							
	SUS 890L	31	N08904	N08904	904S14		Z2NCDU25-20		X1CrNiMoCuN25-25-5	1.4539
	SUS 321	15	S32100	321	321S31	X6CrNiTi18 10	Z6CNT18-10	08X18H10T	X6CrNiTi18 10	1.4541
	SUS 347	17	S34700	347	347S31	X6CrNiNb18 10	Z6CNNb18-10	08X18H12Б	X6CrNiNb18 10	1.4550
	SUS 384	9	S38400	384			Z6CN18-16			
	SUS XM7	D26(1)	S30430	304Cu	394S17		Z2CNU18-10		X3CrNiCu18-9-4	1.4587
	SUS XM15J1		S38100				Z15CNS20-12		X1CrNiSi18-15-4	1.4381
	SUS 329J1		S32900	329						
	SUS 329J3L	33	S39240	S31803			Z3CNDU22-05Az	08X21H6M2T	X2CrNiMoN22-5-3	1.4462
	SUS 329J4L	34	S39275	S31260			Z3CNDU25-07Az		X2CrNiMoCuN25-6-3	1.4507

Japan Industrial Standards		International Standards	Foreign Standards						European Standards	
Standard number /name (stainless steel abbreviation)	JIS	ISO TR 15510 L・No.	UNS UNS	UNS AISI	United Kingdom BS	Germany DIN	France NF	Russia (Former USSR) ГОСТ	EN Type	EN Number
	SUS 405	40	S40500	405	405S17	X6CrAl13	Z8CA12		X6CrAl13	1.4002
	SUS 410L						Z3C14			
	SUS 429		S42900	429						
	SUS 430	41	S43000	430	430S17	X6Cr17	Z8C17	12X17	X6Cr17	1.4016
	SUS 430F	42	S43020	430F		X7CrMoS18	Z8CF17		X6CrMoS17	1.4105
	SUS 430LX	44	S43035			X6CrTi17	Z4CT17		X3CrTi17	1.4510
						X6CrNb17			X2CrTi17	1.4520
	SUS 430J1L						Z4CNb17		X3CrNb17	1.4511
	SUS 434	43	S43400	434	434S17	X6CrMo17 1	Z8CD17-01		X6CrMo17-1	1.4113
	SUS 436L		S43600	436					X1CrMoTi16-1	1.4513
	SUS 436J1L									
	SUS 444	46	S44400	444			Z3CDT18-02		X2CrMoTi18-2	1.4521
	SUS 445J1									
	SUS 445J2									
	SUS 447J1		S44700							
	SUS XM27		S44627				Z1CD26-01			
	SUS 403		S40300	403						
	SUS 410	48	S41000	410	410S21	X10Cr13	Z13C13		X12Cr13	1.4006
	SUS 410S	39	S41008	410S	403S17	X6Cr13	Z8C12	08X13	X6Cr13	1.4000
	SUS 410F2									
	SUS 410J1		S41025							
	SUS 416	49	S41600	416	416S21		Z11CF13		X12CrS13	1.4005
	SUS 420J1	50	S42000	420	420S29	X20Cr13	Z20C13	20X13	X20Cr13	1.4021
	SUS 420J2	51	S42000	420	420S37	X30Cr13	Z33C13	30X13	X30Cr13	1.4028
	SUS 420F		S42020	420F			Z30CF13		X29CrS13	1.4029
	SUS 420F2									
	SUS 429J1									
	SUS 431	57	S43100	431	431S29	X20CrNi17 2	Z15CN16-02	20X17H2	X19CrNi17 2	1.4057
	SUS 440A		S44002	440A			Z70C15		X70CrMo15	1.4109
	SUS 440B		S44003	440B						
	SUS 440C		S44004	440C			Z100CD17	95X18	X105CrMo17	1.4125
	SUS 440F		S44020	S44020						
	SUS 630	58	S17400	S17400			Z6CNU17-04		X5CrNiCuNb16-4	1.4542
	SUS 631	59	S17700	S17700		X7CrNiAl17 7	Z9CNA17-07	09X17H7 IO	X7CrNiAl17-7	1.4568
	SUS 632J1									
JIS G 4311～4315	SUH 31				331S42		Z35CNWS14-14	45X14H14B2M		
	SUH 35	X53CrMnNi21 4 (2)			349S52		Z52CMN21-09Az			
Heat resisting steel bar										
Heat resisting steel plate	SUH 36		S63008		349S54	X53CrMnNi21 9	Z55CMN21-09Az	55X20Г9АН4		
	SUH 37		S63017		381S34					
	SUH 38									
	SUH 309		S30900	309	309S24		Z15CN24-13			
	SUH 310		S31000	310	310S24	CrNi2520	Z15CN25-20	20X25H20C2		
	SUH 330		N08330	N08330			Z12NCS35-16			
	SUH 660		S66286				Z6NCTV25-20			
	SUH 661		R30155							
	SUH 21					CrAl1205				
	SUH 409	37	S40900	409	409S19	X6CrTi12	Z6CT12			
	SUH 409L	36					Z3CT12		X2CrTi12	1.4512
	SUH 446	X15CrN26(2)	S44600	446			Z12C25	15X28		
	SUH 1	X45CrSi9-3(2)	S65007		401S45	X45CrSi9 3	Z45CS9			
	SUH 3						Z40CSD10	40X10C2M		
	SUH 4				443S65		Z80CSN20-02			
	SUH 11	X50CrSi18-2(2)						40X 9C2		
	SUH 600							20X12ВНМБф г		
	SUH 616		S42200							

Notes：1. ISO is according to ISO TR 15510:1997. The notation is the same as for the English. However, (1) is based on ISO 4954 and (2) is based on ISO683・15.
2. We referred to the UNS registration numbers and AISI material manual for American data.
3. European standards are based upon EN10088-1:1995.
4. We referred to standards of the individual countries in Europe, BS, DIN, and NF, but the standards will be abolished do to the EN regulations.
5. ГOCT is based on 5632.

Tool steels and related materials

Japan Industrial Standard		Steel types related to foreign standards					
Standard number Name	Code	ISO	AISI ASTM	BS	DIN VDEh	NF	ГOCT
JIS G 4401 Carbon tool steel	SK140(Old SK1)	TC140	—	—	—	C140E3U	Y13
	SK120(Old SK2)	TC120	W1—11½	—	—	C120E3U	Y12
	SK105(Old SK3)	TC105	W1—10	—	C105W1	C105E2U	Y11
	SK95 (Old SK4)	TC 90	W1— 9	—	—	C 90E2U	Y10
	SK85 (Old SK5)	TC 90 TC 80	W1— 8	—	C 80W1	C 90E2U C 80E2U	Y8 Г Y9
	SK75 (Old SK6)	TC 80 TC 70	—	—	C 80W1	C 80E2U C 70E2U	Y8
	SK65 (Old SK7)	—	—	—	C 70W2	C 70E2U	Y7
JIS G 4403 High-speed tool steel	SKH 2	HS18—0—1	T 1	BT 1	—	HS18—0—1	P18
	SKH 3	HS18—1—1—5	T 4	BT 4	S18—1—2—5	HS18—1—1—5	—
	SKH 4	HS18—0—1—10	T 5	BT 5	—	HS18—0—2—9	—
	SKH10	HS12—1—5—5	T15	BT15	S12—1—4—5	HS12—1—5—5	—
	SKH51	HS 6—5—2	M2	BM 2	S 6—5—2	HS 6—5—2	—
	SKH52	—	M3—1	—	—	—	—
	SKH53	HS 6—5—3	M3—2	—	S 6—5—3	HS 6—5—3	—
	SKH54	—	M4	BM 4	—	HS 6—5—4	—
	SKH55	HS 6—5—2—5	—	BM35	S 6—5—2—5	HS 6—5—2—5HC	P6M5K5
	SKH56	—	M36	—	—	—	—
	SKH57	HS10—4—3—10	—	BT42	S10—4—3—10	HS10—4—3—10	—
	SKH58	HS 2—9—2	M7	—	—	HS 2—9—2	—
	SKH59	HS 2—9—1—8	M42	BM42	S 2—10—1—8	HS 2—9—1—8	—
JIS G 4404 Alloy tool steel	SKS11	—	F2	—	—	—	XB4
	SKS 2	105WCr1	—	—	105WCr6	105WCr5	XB Г
	SKS21	—	—	—	—	—	—
	SKS 5	—	—	—	—	—	—
	SKS51	—	L6	—	—	—	—
	SKS 7	—	—	—	—	—	—
	SKS 8	—	—	—	—	C140E3UCr4	13X
	SKS 4	—	—	—	—	—	—
	SKS41	—	—	—	—	—	—
	SKS43	TCV105	W2—9½	BW2	—	100V2	—
	SKS44	—	W2—8	—	—	—	—
	SKS 3	—	—	—	—	—	9XB Г
	SKS31	105WCr1	—	—	105WCr6	105WCr5	XB Г
	SKS93	—	—	—	—	—	—
	SKS94	—	—	—	—	—	—
	SKS95	—	—	—	—	—	—
	SKD 1	210Cr12	D3	BD3	X210Cr12	X200Cr12	X12
	SKD11	—	D2	BD2	—	X160CrMoV12	—
	SKD12	100CrMoV5	A2	BA2	—	X100CrMoV5	—
	SKD 4	30WCrV5	—	—	—	X32WCrV3	—
	SKD 5	30WCrV9	H21	BH21	—	X30WCrV9	—
	SKD 6	—	H11	BH11	X38CrMoV51	X38CrMoV5	4X5MфC
	SKD61	40CrMoV5	H13	BH13	X40CrMoV51	X40CrMoV5	4X5Mф1C
	SKD62	—	H12	BH12	—	X35CrWMoV5	3X3M3ф

Japan Industrial Standard		Steel types related to foreign standards					
Standard number Name	Code	ISO	AISI ASTM	BS	DIN VDEh	NF	ГOCT
JIS G 4404 (Continued)	SKD 7	30CrMoV3	H10	BH10	X32CrMoV33	32CrMoV12—18	—
	SKD 8	—	H19	BH19	—	—	—
	SKT 3	—	—	—	—	55CrNiMoV4	—
	SKT 4	55NiCrMoV2	—	BH224/5	55NiCrMoV6	55NiCrMoV7	5XHM

Special purpose steels

Japan Industrial Standard		Steel types related to foreign standards					
Standard number Name	Code	ISO	AISI SAE	BS	DIN	NF	ГOCT
JIS G 4801 Spring steel	SUP 3	—	1075 1078	—	—	—	75 80 85
	SUP 6	59Si7	—	—	—	60Si7	60C2
	SUP 7	59Si7	9260	—	—	60Si7	60C2Г
	SUP 9	55Cr3	5155	—	55Cr3	55Cr3	—
	SUP 9A	—	5160	—	—	60Cr3	—
	SUP10	51CrV4	6150	735A51,735H51	50CrV4	51CrV4	XфA50XГфA
	SUP11A	60CrB3	51B60	—	—	—	50XГP
	SUP12	55SiCr63	9254	685A57,685H57	54SiCr6	54SiCr6	—
	SUP13	60CrMo33	4161	705A60,705H60	—	60CrMo4	—
JIS G 4804 Sulfur and sulfur combined free cutting steel	SUM11	—	1110	—	—	—	—
	SUM12	—	1108	—	—	—	—
	SUM21	9 S20	1212	—	—	—	—
	SUM22	11SMn28	1213	(230M07)	9 SMn28	S250	—
	SUM22L	11SMnPb28	12L13	—	9 SMnPb28	S250Pb	—
	SUM23	—	1215	—	—	—	—
	SUM23L	—	—	—	—	—	—
	SUM24L	11SMnPb28	12L14	—	9 SMnPb28	S250Pb	—
	SUM25	12SMn35	—	—	9 SMn36	S300	—
	SUM31	—	1117	—	15S10	—	—
	SUM31L	—	—	—	—	—	—
	SUM32	—	—	210M15,210A15	—	(13MF4)	—
	SUM41	—	1137	—	—	(35MF6)	—
	SUM42	—	1141	—	—	(45MF6.1)	—
	SUM43	44SMn28	1144	(226M44)	—	(45MF6.3)	—
JIS G 4805 High carbon-chrome bearing steel	SUJ 1	—	51100	—	—	—	—
	SUJ 2	B1 or 100Cr6	52100	—	100Cr6	100Cr6	щX15
	SUJ 3	B2 or 100CrMnSi4-4	ASTM A 485 Grade 1	—	—	—	—
	SUJ 4	—	—	—	—	—	—
	SUJ 5	—	—	—	—	—	—