SHARP METAL

CLASSIFICAZIONE DEI MATERIALI

Acciai, acciai inossidabili ferritici e martensitici

SHARP	DESCRIZIONE	POPRIETA'	RIFERIMENTO	kc1.1	mc
P1	Acciai automatici	360 < Rm < 880	11 SMn30 Rm = 385 N/mm2	1500	0,14
P2	Acciai basso legati, C < 0,25% Acciai da costruzione saldabili basso legati	320 < Rm < 600	S235JRG2 Rm = 420 N/mm2	1600	0,23
P3	Acciai ferritici e ferritico-perlitici, C < 0,25% Acciai da costruzione saldabili	430 < Rm < 610	16 MnCr 5 Rm = 550 N/mm2	1800	0,14
P4	Acciai da costruzione basso legati, 0,25% < C < 0,67% Acciai da bonifica basso legati	520 < Rm < 1200	C 45E Rm = 660 N/mm2	2000	0,15
P5	Acciai da costruzione, 0,25% < C < 0,67% Acciai da bonifica	550 < Rm < 1200	42 CrMo 4 Rm = 700 N/mm2	2020	0,18
P6	Acciai basso legati per tempra a cuore, C > 0,67% Acciai basso legati per molle e cuscinetti	520 < Rm < 1200	C 100S Rm = 600 N/mm2	2100	0,17
P7	Acciai per tempra a cuore, C > 0,67% Acciai per molle e cuscinetti	600 < Rm < 1200	100 Cr 6 Rm = 650 N/mm2	2160	0,17
P8	Acciai da utensili Acciai super-rapidi (HSS)	600 < Rm < 1200	X 40 CrMoV 5 1 Rm = 700 N/mm2	2400	0,20
P11	Acciai inossidabili ferritici e martensitici	415 < Rm < 1200	X 20 Cr 13 Rm = 675 N/mm2	2000	0,15
P12	Acciai inossidabili maraging e per indurimento per precipitazione	500 < Rm < 1200	X 5 CrNiCuNb 16 4 Rm = 1100 N/mm2	2100	0,17

SHARP	TORNITURA			FRESATURA			TRONCATURA			SCORDONATURA		
	F	M	R	F	M	R	F	M	R	M	M	M
	ISO 15	IS0 25	ISO 35	ISO 20	IS0 30	IS0 40	ISO 15	IS0 25	ISO 35	ISO 15	IS0 25	ISO 35
P1	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P2	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P3	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P4	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P5	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P6	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P7	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P8	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P11	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S
P12	YP15T	YP25T	YP35T	DP20M	DP30M	DP40M	DP15P	DP25P	DP35P	GP15S	GP25S	GP35S

Acciai inossidabili automatici, austenitici e duplex

SHARP	DESCRIZIONE	POPRIETA'	RIFERIMENTO	kc1.1	mc
M1	Acciai inossidabili austenitici automatici		X 10 CrNiS 18 9	1700	0,14
M2	Acciai inossidabili austenitici con contenuto di elementi in lega basso		X 10 CrNiS 18 9	1920	0,18
M3	Acciai inossidabili austenitici con contenuto di elementi in lega medio		X 10 CrNiS 18 9	2070	0,17
M4	Acciai inossidabili austenitici con contenuto di elementi in lega alto ed acciai inossidabili duplex		X 10 CrNiS 18 9	2230	0,16
M5	Acciai inossidabili austenitici con contenuto di elementi in lega alto ed acciai inossidabili duplex, di difficile lavorabilità		X 10 CrNiS 18 9	2230	0,13

SHARP	TORNITURA			FRESATURA			TRONCATURA			SCORDONATURA		
	F	M	R	F	M	R	F	M	R	M	M	M
	ISO 15	IS0 25	ISO 35	ISO 20	IS0 30	IS0 40	ISO 15	IS0 25	ISO 35	ISO 15	IS0 25	ISO 35
M1	RM15T	RM25T	RM35T	RM20M	RM30M	RM40M	RM15P	RM25P	RM35P	GM15S	GM25S	GM35S
M2	RM15T	RM25T	RM35T	RM20M	RM30M	RM40M	RM15P	RM25P	RM35P	GM15S	GM25S	GM35S
M3	RM15T	RM25T	RM35T	RM20M	RM30M	RM40M	RM15P	RM25P	RM35P	GM15S	GM25S	GM35S
M4	RM15T	RM25T	RM35T	RM20M	RM30M	RM40M	RM15P	RM25P	RM35P	GM15S	GM25S	GM35S
M5	RM15T	RM25T	RM35T	RM20M	RM30M	RM40M	RM15P	RM25P	RM35P	GM15S	GM25S	GM35S

Ghise

SHARP	DESCRIZIONE	POPRIETA'	RIFERIMENTO	kc1.1	mc
K1	Ghise grigie		EN-GJL-250	930	0,32
K2	Ghise a grafite compatta		EN-GJL-250	1000	0,35
K3	Ghise malleabili		EN-GJL-250	1050	0,37
K4	Ghise sferoidali (nodulari)		EN-GJL-250	1050	0,37
K5	Ghise sferoidali (nodulari)		EN-GJL-250		
K6	Ghise austenitiche lamellari		EN-GJL-250		
K7	Ghise austenitiche sferoidali (nodulari)		EN-GJL-250		

SHARP	TORNITURA			FRESATURA			TRONCATURA			SCORDONATURA		
	F	M	R	F	M	R	F	M	R	M	M	M
	ISO 15	IS0 25	ISO 35	ISO 20	IS0 30	IS0 40	ISO 15	IS0 25	ISO 35	ISO 15	IS0 25	ISO 35
K1	BK15T	BK25T	BK35T	BK20M	BK30M	BK40M	DK15P	DK25P	DK35P	DK15S	DK25S	DK35S
K2	BK15T	BK25T	BK35T	BK20M	BK30M	BK40M	DK15P	DK25P	DK35P	DK15S	DK25S	DK35S
K3	BK15T	BK25T	BK35T	BK20M	BK30M	BK40M	DK15P	DK25P	DK35P	DK15S	DK25S	DK35S
K4	BK15T	BK25T	BK35T	BK20M	BK30M	BK40M	DK15P	DK25P	DK35P	DK15S	DK25S	DK35S
K5	BK15T	BK25T	BK35T	BK20M	BK30M	BK40M	DK15P	DK25P	DK35P	DK15S	DK25S	DK35S
K6	BK15T	BK25T	BK35T	BK20M	BK30M	BK40M	DK15P	DK25P	DK35P	DK15S	DK25S	DK35S
K7	BK15T	BK25T	BK35T	BK20M	BK30M	BK40M	DK15P	DK25P	DK35P	DK15S	DK25S	DK35S

Materiali non ferrosi

SHARP	DESCRIZIONE	POPRIETA'	RIFERIMENTO	kc1.1	mc
N1	Leghe di alluminio, Si < 9%		AW-7075		
N2	Leghe di alluminio, 9% < Si < 16%		AC-44200 Si = 12%		
N3	Leghe di alluminio, Si >16%		AC-44200 Si = 12%		
N11	Leghe di rame		AC-44200 Si = 12%	740	0,26

SHARP	TORNITURA			FRESATURA			TRONCATURA			SCORDONATURA		
	F	M	R	F	M	R	F	M	R	-	-	-
	ISO 15	IS0 25	ISO 35	ISO 20	IS0 30	IS0 40	ISO 15	IS0 25	ISO 35	-	-	-
N1	NN15T	NN25T	NN35T	NN20M	NN30M	NN40M	NN15P	NN25P	NN35P	-	-	-
N2	NN15T	NN25T	NN35T	NN20M	NN30M	NN40M	NN15P	NN25P	NN35P	-	-	-
N3	NN15T	NN25T	NN35T	NN20M	NN30M	NN40M	NN15P	NN25P	NN35P	-	-	-
N11	NN15T	NN25T	NN35T	NN20M	NN30M	NN40M	NN15P	NN25P	NN35P	-	-	-

Materiali ad elevata durezza

SHARP	DESCRIZIONE	POPRIETA'	RIFERIMENTO	kc1.1	mc
H3	Acciai induriti superficialmente	58 < HRC < 62	16 MnCr 5 60 HRC	2070	0,14
H5	Acciai induriti superficialmente	38 < HRC < 56	42 CrMo 4 50 HRC	2320	0,18
H7	Acciai bonificati Acciai per cuscinetti	56 < HRC < 64	100 Cr 6 60 HRC	2480	0,17
H8	Acciai da utensili Acciai super-rapidi (HSS)	38 < HRC < 64	X 40 CrMoV 5 1 50 HRC	2750	0,20
H11	Acciai inossidabili martensitici	38 < HRC < 50	X 20 Cr 13 45 HRC	2300	0,15
H12	Acciai inossidabili maraged ed induriti per precipitazione	1200 < Rm < 1650	X 5 CrNiCuNb 16 4 Rm = 1450 N/mm2	2410	0,17
H21	Acciai inossidabili maraged ed induriti per precipitazione	23 < HRC < 64	X 120 Mn 12 50 HRC		
H31	Acciai inossidabili maraged ed induriti per precipitazione	50 < HRC < 64	EN-GJN-HV600(XCr11) 55 HRC		

SHARP	TORNITURA			FRESATURA			TRONCATURA			SCORDONATURA		
	F	M	R	F	M	R	F	M	R	M	M	M
	ISO 15	IS0 25	ISO 35	ISO 20	IS0 30	IS0 40	ISO 15	IS0 25	ISO 35	-	-	-
H3	RH15T	RH25T	RH35T	RH20M	RH30M	RH40M	RH15P	RH25P	RH35P	-	-	-
H5	RH15T	RH25T	RH35T	RH20M	RH30M	RH40M	RH15P	RH25P	RH35P	-	-	-
H7	RH15T	RH25T	RH35T	RH20M	RH30M	RH40M	RH15P	RH25P	RH35P	-	-	-
H8	RH15T	RH25T	RH35T	RH20M	RH30M	RH40M	RH15P	RH25P	RH35P	-	-	-
H11	RH15T	RH25T	RH35T	RH20M	RH30M	RH40M	RH15P	RH25P	RH35P	-	-	-
H12	RH15T	RH25T	RH35T	RH20M	RH30M	RH40M	RH15P	RH25P	RH35P	-	-	-
H21	RH15T	RH25T	RH35T	RH20M	RH30M	RH40M	RH15P	RH25P	RH35P	-	-	-
H31	RH15T	RH25T	RH35T	RH20M	RH30M	RH40M	RH15P	RH25P	RH35P	-	-	-

Superleghe

SHARP	DESCRIZIONE	POPRIETA'	RIFERIMENTO	kc1.1	mc
S1	Superleghe a base ferro		Discalloy		
S2	Superleghe a base cobalto		Stellite 21		
S3	Superleghe a base nichel		Inconel 718	2530	0,21

SHARP	TORNITURA			FRESATURA			TRONCATURA			SCORDONATURA		
	F	M	R	F	M	R	F	M	R	-	-	-
	ISO 15	IS0 25	ISO 35	ISO 20	IS0 30	IS0 40	ISO 15	IS0 25	ISO 35	-	-	-
S1	RS15T	RS25T	RS35T	RS20M	RS30M	RS40M	RS15P	RS25P	RS35P	-	-	-
S2	RS15T	RS25T	RS35T	RS20M	RS30M	RS40M	RS15P	RS25P	RS35P	-	-	-
S3	RS15T	RS25T	RS35T	RS20M	RS30M	RS40M	RS15P	RS25P	RS35P	-	-	-

Titanio

SHARP	DESCRIZIONE	POPRIETA'	RIFERIMENTO	kc1.1	mc
T11	Titanio, basso legato, (α)		Ti		
T12	Titanio, medio legato, (α+β)		iAl6V4	1500	0,24
T13	Titanio, alto legato, ("quasi β" e β)		Ti10V2Fe3Al		

SHARP	TORNITURA			FRESATURA			TRONCATURA			SCORDONATURA		
	F	M	R	F	M	R	F	M	R	-	-	-
	ISO 15	IS0 25	ISO 35	ISO 20	IS0 30	IS0 40	ISO 15	IS0 25	ISO 35	-	-	-
T11	ZT15T	ZT25T	ZT35T	ZT20M	ZT30M	ZT40M	ZT15P	ZT25P	ZT35P	-	-	-
T12	ZT15T	ZT25T	ZT35T	ZT20M	ZT30M	ZT40M	ZT15P	ZT25P	ZT35P	-	-	-
T13	ZT15T	ZT25T	ZT35T	ZT20M	ZT30M	ZT40M	ZT15P	ZT25P	ZT35P	-	-	-

SHARP	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI
P1	11 SMn 30	1.0715	1.0715	9 SMn 28	S 250	230 M 07	CF 9 SMn 28
P1	11 SMnPb 30	1.0718	1.0718	9 SMnPb 28	S 250 Pb		CF 9 SMnPb 28
P1	10 S 20	1.0721	1.0721	10 S 20	10 F 1	210 M 15	CF 10 S 20
P1			1.0722	10 SPb 20	10 PbF 2		CF 10 SPb 20
P1	15 SMn 13	1.0725	1.0723	15 S 20		210 A 15	
P1	35 S20	1.0726	1.0726	35 S 20	35 MF 4	212 M 36	
P1	46 S20	1.0727	1.0727	46 S 20	45 MF 4	212 M 44	
P1	11 SMn 37	1.0736	1.0736	9 SMn 36	S 300	240 M 07	CF 9 SMn 36
P1	11 SMn 37	1.0736	1.0736	9 SMn 36	S 300	240 M 07	CF 9 SMn 36
P2	S235JR	1.0037	1.0037	St 37-2	E 24-2		Fe 360 B
P2	S235JRG2	1.0038	1.0116	St 37-3	E 24-3, E 24-4	4360-40 C	Fe 360 D FF
P2	S275J2G3	1.0144	1.0144	St 44-3 N	E 28-3, E 28-4	4360-43 C	Fe 430 D FF
P2	C 10	1.0301	1.0301	C 10	34 C 10, XC 10	045 M 10	C 10
P2			1.0401	C 15	37 C 12, XC 18	080 M 15	C 15, C 16
P2	C22	1.0402	1.0402	C 22	C 20	050 A 20	C 20, C 21
P2	S355JR	1.0570	1.0570	St 52-3	E 36-3, E 36-4	4360-50 C	Fe 510 B
P2	C 15R	1.1141	1.1141	Ck 15	XC 15, XC 18	080 M 15	C 15, C 16
P2			1.1158	Ck 25	XC 25	060 A 25	C 25
P3			1.2162	21 MnCr 5	20 NC 5		
P3	16 Mo 3	1.5415	1.5415	15 Mo 3	15 D 3	1501-240	16 Mo 3
P3			1.5423	16 Mo 5		1503-245-420	16 Mo 5
P3	14 NiCr 14	1.5752	1.5752	14 NiCr 14	12 NC 15	655 M 13	
P3			1.5919	15 CrNi 6	16 NC 6	S 107	16 CrNi 4
P3	18 NiCrMo 7 6	1.6587	1.6587	18 CrNiMo 7 6	18 NCD 6	820 A 16	18 NiCrMo 7
P3	16 MnCr 5	1.7131	1.7131	16 MnCr 5	16 MC 5	527 M 17	16 MnCr 5
P3	16 MnCrS 5	1.7139	1.7139	16 MnCrS 5			
P3	20 MnCr 5	1.7147	1.7147	20 MnCr 5	20 MC 5		20 MnCr 5
P3	20 MnCrS 5	1.7149	1.7149	20 MnCrS 5	20 MnCrS 5		
P3	13 CrMo 4 5	1.7335	1.7335	13 CrMo 4 4	15 CD 3.5	1501-620 Gr. 27	14 CrMo 4 5
P3			1.7337	16 CrMo 4 4	15 CD 4.5	1501-620 Gr. 27	14 CrMo 4 5
P3	10 CrMo 9 10	1.7380	1.7380	10 CrMo 9 10	10 CD 9.10	1501-622 Gr. 31	12 CrMo 9 10
P4	C35		1.0501	C 35	55 C 35	060 A 35	C 35
P4	E 335	1.0503	1.0503	C 45	65 C 45	80 M 46	C 45
P4	C40		1.0511	C 40	60 C 40	080 M 40	C 40
P4	E 360	1.0070	1.0535	St 70-2	A 70-2	080 A 62	Fe 690
P4	C60	1.0601	1.0601	C 60	CC 55	150 M 36	C 60
P4			1.1157	40 Mn 4	35 M 5	120 M 36	
P4	G 28 Mn6	1.1165	1.1165	30 Mn 5		080 M 36	
P4	C 35E	1.1181	1.1181	Ck 35	XC 38 H1	080 M 46	C 35
P4	C 45E	1.1191	1.1191	Ck 45	XC 42	080 A 62	C 45
P4	C 60E	1.1221	1.1221	Ck 60	XC 60		C 60
P4			1.1740	C 60 W	Y3 55	250 A 53	

JIS	SS	UNS	U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Marchi misti	Condizione	Strut-tura
SUM 22	1912	G12130		1213				Ricotto	
SUM 22 L	1914	G12134		12 L 13				Ricotto	
				1108				Ricotto	
				11 L 08				Ricotto	
SUM 32	1922							Ricotto	
	1957	G11400		1140	40			Ricotto	
	1973	G11460		1146				Ricotto	
		G12150		1215				Ricotto	
		G12150		12 L 14				Ricotto	
STKM 12 C	1311				16D			Ricotto	
	1312, 1313			A573 Grade 58	18kp	11 378		Ricotto	
SM 41 C	1412, 1414			A573 Grade 70	St14kP	11 448		Ricotto	
S 10 C		G10100		1010	10			Ricotto	
	1350	G10170	F.1110	1015	15			Ricotto	
	1450	G10200		1020, 1023	20	12 024		Ricotto	
SM 50 YA	2172, 2132				17G1S	11 523		Ricotto	
S 15 C, S 15 CK	1370	G10170	F.1511	1015	15			Ricotto	
S 25 C		G10250	F.1120	1025	25			Ricotto	
SCR 420 H								Ricotto	
	2912			A204 Grade A		15 020		Ricotto	
SB 450 M		G45200		4520				Ricotto	
SNC 815 (H)		G33106		3310, 9314	20X2H4A	16 420		Ricotto	
				4320		16 220		Ricotto	
								Ricotto	
SCR 415	2511	G51170	F.1516	5115	12KHN2	14 220		Ricotto	
					18HG			Ricotto	
SMnC 420 (H)		G51200		5120	20KH	14 221		Ricotto	
SMnC 21 H				5120 H	20KH			Ricotto	
	2216			A182-F11, A182-F12	12KHM	15 121		Ricotto	
	2216			A387 Grade 12 Cl. 2				Ricotto	
	2218	J21890	F.155	A182-F22	12KH8	15 313		Ricotto	
	1550	G10350	F.1130	1035	35	12 040		Ricotto	
S 45 C	1650	G10430	F.5110	1045	45	12 050		Ricotto	
S 40 C				1040	40	12 041		Ricotto	
	1655		F.1150	1055	55			Ricotto	
		G10600		1060	60	12 061		Ricotto	
		G10390		1039	40G			Ricotto	
SMn 1 H, SCMn 2		G13300		1330	30G2			Ricotto	
S 35 C	1572	G10340	F.1135	1035	35			Ricotto	
S 45 C	1672	G10420	F.1140	1045	45	12 050		Ricotto	
S 58 C	1665, 1678	G10640	F.1150	1064	60			Ricotto	
SK 7				1060	60			Ricotto	

SHARP	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI
P5	55 SiCr7	1.7100	1.0904	55 Si 7	55 S 7	250 A 53	55 Si 8
P5			1.2330	35 CrMo 4	34 CD 4	708 A 37	35 CrMo 4
P5			1.2542	45 WCrV 7		BS 1	45 WCrV 8 KU
P5		1.2714	1.2714	56 NiCrMoV 7		BH 224-5	56 NiCrMoV7-KU
P5			1.5121	46 MnSi 4			
P5			1.5710	36 NiCr 6	35 NC 6	640 A 35	
P5			1.5736	36 NiCr 10	35 NC 11		35 NiCr 9
P5	36 CrNiMo 4		1.6511	36 CrNiMo 4	40 NCD 3	816 M 40	38 NiCrMo 4 (KB)
P5	34 CrNiMo 6	1.6582	1.6582	34 CrNiMo 6	35 NCD 6	817 M 40	35 NiCrMo 6 (KW)
P5	34 Cr 4	1.7033	1.7033	34 Cr 4	32 C 4	530 A 32	34 Cr 4 (KB)
P5	41 Cr 4	1.7035	1.7035	41 Cr 4	42 C 4	530 M 40	41 Cr 4
P5	25 CrMo 4	1.7218	1.7218	25 CrMo 4	25 CD 4 S	708 M 25	25 CrMo 4 (KB)
P5	42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4
P5	42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4
P5			1.7361	32 CrMo 12	30 CD 12	722 M 24	32 CrMo 12
P5	50 CrV 4	1.8159	1.8159	50 CrV 4	50 CV 4	735 A 50	51 CrV 4
P5	41 CrAlMo 7 10	1.8509	1.8509	41 CrAlMo 7	40 CAD 6.12	905 M 39	41 CrAlMo 7
P6	C 67S	1.1231	1.1231	Ck 67	XC 68	060 A 67	C 70
P6	C 100S	1.1274	1.1274	Ck 101		060 A 96	
P6	C 105U	1.1545	1.1545	C 105 W1	Y1 105		C 100 KU
P6			1.1645	C 105 W2	Y1 105		C 100 KU
P6			1.1663	C 125 W	Y2 120		C 120 KU
P7	107 CrV 3	1.2210	1.2210	115 CrV 3	100 C 3		107 CrV 3 KU
P7			1.2510	100 MnCrW 4	90 MWCV 5	BO 1	95 MnWCr 5 KU
P7	90 MnCrV 8	1.2842	1.2842	90 MnCrV 8	90 MV 8	BO 2	90 MnVCr 8 KU
P7	100 Cr 6	1.3505	1.3505	100 Cr 6	100 C 6	534 A 99	100 Cr 6
P8	X 210 Cr 12	1.2080	1.2080	X 210 Cr 12	Z 200 C 12	BD 3	X 210 Cr 13 KU
P8			1.2343	X 38 CrMoV 5 1	Z 38 CDV 5	BH 11	X 37 CrMoV 5 1 KU
P8	X 40 CrMoV 5 1	1.2344	1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	BH 13	X 40 CrMo 5 1 1 KU
P8	X 100 CrMoV 5	1.2363	1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1 KU
P8			1.2365	X 32 CrMoV 3 3	32 DCV 28	BH 10	30 CrMoV 12 27 KU
P8			1.2436	X 210 CrW 12			X 215 CrW 12 1 KU
P8			1.2601	X 165 CrMoV 12			X 165 CrMoW 12 KU
P8			1.2713	55 NiCrMoV 6	55 NCDV 7		
P8	HS 6-5-2-5	1.3243	1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05-04-02		HS 6-5-2-5
P8	HS 2-10-1-8	1.3247	1.3247	S 2-10-1-8	Z 110 DKCWV 09-08-04	BM 42	HS 2-9-1-8
P8	HS 18-1-2-5	1.3255	1.3255	S 18-1-2-5	Z 80 WKCV 18-05-04-01	BT 4	HS 18-1-1-5
P8	HS 6-5-2	1.3343	1.3343	S 6-5-2	Z 85 WDCV 06-05-04-02	BM 2	HS 6-5-2
P8	HS 2-9-2	1.3348	1.3348	S 2-9-2	Z 100 DCWV 09-04-02-02		HS 2-9-2
P8	HS 2-9-2	1.3355	1.3355	S 18-0-1	Z 80 WCV 18-04-01	BT 1	HS 18-0-1

JIS	SS	UNS	U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Marchi misti	Condizione	Struttura
			F.144	9255	55S2			Ricotto	
		T51620	F.1250	4135	35KHM			Ricotto	
		T41901	F.5241	S1	5KHV2S			Ricotto	
SKT 4		T61206		L6	5KHNV			Ricotto	
				5045				Ricotto	
SNC 236				3135				Bonificato	
SNC 631 (H)				3435				Ricotto	
		G98400		9840				Bonificato	
SNCM 447	2541	G43400	F.1280	4340	38H2N2MA	16 343		Ricotto	
SCR 430 (H)		G51320		5132	35KH			Bonificato	
SCR 440 (H)		G51400		5140	40H	14 140		Bonificato	
SCM 425	2225	G41300	F.1251	4130	20KHM	15 130		Bonificato	
SCM 440 (H)	2244	G41400	F.1252	4142, 4140	38HM	15 142		Ricotto	
SCM 440 (H)	2244	G41400	F.1252	4142, 4140	38HM	15 142		Bonificato	
	2240							Bonificato	
SUP 10	2230	H61500	F.143	6150	50KHFA	15 260		Bonificato	
SACM 645	2940	K24065	F.1740	A355 Cl. A				Ricotto	
	1770	G10700	F.5103	1070	70			Ricotto	
SUP 4	1870	G10950	F.5117	1095				Ricotto	
	1880		F.5118	W1	U10A			Ricotto	
SK 3					U10			Ricotto	
SK 2				W1	U13			Ricotto	
		T61202	F.520L	L2	11KHF			Ricotto	
SKS 3	2140	T31501	F.5220	O1	9KHVG			Ricotto	
		T31502		O2	9G2F			Ricotto	
SUJ 2	2258	G51986	F.5230	52100	SHKH15	14 109		Ricotto	
SKD 1		T30403	F.5212	D3	KH12			Ricotto	
SKD 6		T20811		H11	4KH5MFS			Ricotto	
SKD 61	2242	T20813	F.5318	H13	4KH5MF1S			Ricotto	
SKD 12	2260	T30102	F.5227	A2	9KH5VF			Ricotto	
SKD 7		T20810		H10	3KH3M3F			Ricotto	
SKD 2	2312		F.5213		KH12			Ricotto	
	2310				KH12MF			Ricotto	
SKT 4		T61206	F.520.S	L6	5KHNM			Ricotto	
SKH 55	2723		F.5613	M35	R6M5K5			Ricotto	
SKH 51		T11342		M42	R2AM9K5			Ricotto	
SKH 3		T12004		T4	R18K5F2			Ricotto	
SKH 9, SKH 51	2722	T11302	F.5603	M2	R6M5			Ricotto	
SKH 58	2782	T11307		M7				Ricotto	
SKH 2		T12001		T1	R18			Ricotto	

SHARP	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI
P11	X 6 Cr 13	1.4000	1.4000	X 6 Cr 13	Z 6 C 12	403 S 17	X 6 Cr 13
P11	X 12 Cr 13	1.4006	1.4006	X 10 Cr 13	Z 10 C 13	410 S 21	X 12 Cr 13
P11	X 6 Cr 17	1.4016	1.4016	X 6 Cr 17	Z 8 C 17	430 S 15	X 8 Cr 17
P11	X 20 Cr 13	1.4021	1.4021	X 20 Cr 13	Z 20 C 13	420 S 37	X 20 Cr 13
P11	X 39 Cr 13	1.4031	1.4031	X 40 Cr 13	Z 40 C 14	420 S 45	X 40 Cr 14
P11	X 70 CrMo 15	1.4109	1.4109	X 65 CrMo 14	Z 70 D 14		
P11	X 90 CrMoV 18	1.4112	1.4112	X 90 CrMoV 18	Z 2 CND 18 05	409 S 19	X CrTi 12
P11	X 105 CrMo 17	1.4125	1.4125	X 105 CrMo 17	Z 100 CD 17		X 105 CrMo 17
P11	X 3 CrNIMo 13 3	1.4313	1.4313	X 5 CrNi 13 4	Z 5 CN 13.4	425 C 11	X 6 CrNi 13 04
P11	X 18 CrN 28	1.4749	1.4749	X 18 CrN 28	Z 18 C 25		
P12	X 6 NiCrTiMoV 25 15	1.4534	1.4534	X 3 CrNiMoAl 13 8 2			
P12	X 4 CrNiCuNb 16 4	1.4540	1.4540	X 4 CrNiCuNb 16 4			
P12		1.4540	1.4540	X 4 CrNiCuNb 16 4	Z 4 CNUNb 16.4 M		
P12	X 4 CrNiCuNb 16 4	1.4540	1.4540	X 4 CrNiCuNb 16 4			
P12	X 5 CrNiCuNb 16 4	1.4542	1.4542	X 5 CrNiCuNb 16 4			
P12	X 5 CrNiCuNb 17 4	1.4548	1.4542	X 5 CrNiCuNb 17 4	Z 6 CNU 17.4		
P12	X 7 CrNiAl 17 7	1.4564	1.4564	X 7 CrNiAl 17 7	Z 9 CAN 17.7	301 S 81	X 7 CrNiAl 17 7
P12	X 2 NiCoMoTi 18 12 4	1.6356	1.6356	X 2 NiCoMoTi 18 12 4			
P12	X 2 NiCoMoTi 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09		
P12	X 2 NiCoMo 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09		
P12	X 2 NiCoMo 18 8 5	1.6359	1.6359	X 2 NiCoMo 18 8 5			
P12	X 2 NiCoMo 18 8 5	1.6359	1.6359	X 2 NiCoMo 18 8 5			
M1	X 10 CrNiS 18 9	1.4305	1.4305	X 10 CrNiS 18 9	Z 10 CNF 18.09	303 S 31	X 10 CrNi 18 09
M2	X 2 CrNi 19 11	1.4306	1.4306	X 2 CrNi 19 11	Z 2 CN 18.10	304 S 12	X 3 Cr Ni 18 11
M2	X 5 CrNi 18 10	1.4301	1.4301	X 5 CrNi 18 10	Z 6 CN 18.09	304 S 31	X 5 CrNi 18 11
M2	X 5 CrNiMo 17 12 2	1.4401	1.4401	X 5 CrNiMo 17 12 2	Z 3 CND 17.11.1	316 S 31	X 5 CrNiMo 17 12
M2	X 6 CrNiNb 18 10	1.4550	1.4550	X 6 CrNiNb 18 10	Z 6 CNNb 18.10	347 S 31	X 6 CrNiNb 18 11
M2	X 9 CrNi 18 8	1.4310	1.4310	X 12 CrNi 17 7	Z 12 CN 17.07	301 S 21	X 12 CrNi 17 07
M2	X 12 CrNi 18 8	1.4310	1.4300	X 12 CrNi 18 8	Z 12 CN 18	302 S 25	

JIS	SS	UNS	U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Marchi misti	Condizione	Struttura
SUS 403	2301	S41008		403	08KH13			Ricotto	
SUS 410	2302	S41000	F.3401	410, CA-15	12KH13, 08KH13			Ricotto	
SUS 430	2320	S43000	F.3113	430	12KH17			Ricotto	
SUS 420 J 1	2303	S42000	F.5261	420	20KH13	17 022		Ricotto	
SUS 420	2304	S40280	F.3404	420	40KH13			Ricotto	
SUS 440 A		S44002		440 A				Ricotto	
SUS 440 B	2327	S44003		440 B	95KH18			Ricotto	
SUS 440 C		S44004		440 C	95KH18			Ricotto	
SCS 5	2385	S41500		A182 F6NM				Ricotto	
	2322	S44600		446	15KH28			Ricotto	
		S13800		XM-13			PH 13-8 Mo	Ricotto solubilizzato	Austenitico
		S15500		XM-12			15-5 PH	H1150	Martensitico
		S15500		XM-12			15-5 PH	Ricotto solubilizzato	Martensitico
		S15500		XM-12			15-5 PH	H1025	Martensitico
SUS 630		S17400		SAE 630			17-4 PH	H1150	Martensitico
SCS 24, SUS 630		S17400		630			17-4 PH	Ricotto solubilizzato	Martensitico
SUS 631	2388	S17700		631	09KH17N7YU1		17-7 PH	Ricotto solubilizzato	Austenitico/ Ferritico
		K93160		AMS 6515			Marage 350	Ricotto solubilizzato	Martensitico
		K93120		AMS 6521			Marage 300	Ricotto solubilizzato	Martensitico
		K93120		AMS 6514			Marage 300, Vascomax C300	Ricotto solubilizzato	Martensitico
		K92890		AMS 6512			Marage 250	Ricotto solubilizzato	Martensitico
		K92890		AMS 6512			Marage 250, Vascomax C250	Ricotto solubilizzato	Martensitico
SUS 303	2346	S30300	F.3508	303	12KH19N9			Ricotto	Austenitico
SUS 304 L	2352	S30403	F.3504	304 L	03KH18N11			Ricotto	Austenitico
SUS 304	2333	S30400	F.3504	304	08KH18N10	17 240		Ricotto	Austenitico
SUS 316	2347	S31600	F.3534	316	08KH17H13M2T	17 346		Ricotto	Austenitico
SUS 347	2338	S34700	F.3524	347	08KH18N12B			Ricotto	Austenitico
SUS 301		S30100	F.3517	301	07KH16N6			Ricotto	Austenitico
SUS 302	2331	S30200		302	12KH18N9			Ricotto	Austenitico

SHARP	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI
M3	X 2 CrNiMo 18 14 3	1.4435	1.4435	X 2 CrNiMo 18 14 3	Z 2 CND 17.13	316 S 12	X 2 CrNiMo 17 13 2
M3	X 2 CrNiMoN 17 13 3	1.4429	1.4429	X 2 CrNiMoN 17 13 3	Z 2 CND 17.13 Az	316 S 62	X 2 CrNiMoN 17 13 3
M3	X 2 CrNiN 18 10	1.4311	1.4311	X 2 CrNiN 19 11	Z 2 CN 18 .10 Az	304 S 62	X 2 CrNiN 18 11
M3	X 3 CrNiMo 18 12 3	1.4466	1.4466	X 5 CrNi 18 15		317 S 16	X 5 CrNi 18 15
M3	X 9 CrNiSiNCe 21 11 2	1.4835	1.4893	X 9 CrNiSiNCe 21 11 2		310 S 31	
M3	X 12 CrNi 25 21	1.4335	1.4335	X 12 CrNi 25 21	Z 12 CN 25.20	310 S 24	X 6 CrNi 26 20
M4	X 2 CrNiMoN 22 5 3	1.4462	1.4462	X 2 CrNiMoN 22 5	Z 2 CND 22.05 Az	332 S 15	X 2 CrNiMoN 22 5
M4	X 2 CrNiMoSi 19 5	1.4424	1.4417	X 2 CrNiMoSi 19 5	Z 2 CND 18.05.03		
M4	X 2 NiCrMoCu 25 20 5	1.4539	1.4539	X 2 NiCrMoCu 25 20 5	Z 2 NCDU 25 20	904 S 13	
M4	X 3 CrNiMo 27 5 2	1.4460	1.4460	X 4 CrNiMo 27 5 2	Z 3 CND 25.7 Az		X 3 CrNiMo 27 5 2
M4	X 5 CrNiCuNb 16 4	1.4980	1.4943	X 4 NiCrTi 25 15	Z 6 NCTDV 25.15	HR 51	
M5	X 1 CrNiMoN 20 18 7	1.4547	1.4529	X 1 CrNiMoN 20 18 7	Z 1 CNDU 20.18.05 Az		X 1 CrNiMoN 20 18 7
M5	X 1 CrNiMoN 25 22 8	1.4652	1.4652	X 2 CrNiMoN 25 22 7			
M5	X 10 NiCrAlTi 32 20	1.4876	1.4876	X 10 NiCrAlTi 32 20	Z 10 NC 32.21		
M5	X 2 CrNiMoN 25 7 4	1.4410	1.4410	X 2 CrNiMoN 25 7 4	Z 3 CND 25.07 Az		X 2 CrNiMoN 25 7 4
K1	EN-GJL-150	0.6150	0.6150	GG-15	Ft 15 D	Grade 150	G15
K1	EN-GJL-200	0.6200	0.6200	GG-20	Ft 20 D	Grade 220	G20
K1	EN-GJL-250	0.6250	0.6250	GG-25	Ft 25 D	Grade 260	G25
K1	EN-GJL-350	0.6350	0.6350	GG-35	Ft 35 D	Grade 350	G35
K1	EN-GJL-215			GG-220 HB			
K2	EN-GJV-300			GJV-300			
K2	EN-GJV-350			GJV-350			
K2	EN-GJV-400			GJV-400			
K2	EN-GJV-450			GJV-450			
K2	EN-GJV-500			GJV-500			
K3	EN-GJMB-550-4	0.8155		GTS-55-04	P 540/5	P 540/5	P 55-04

JIS	SS	UNS	U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Marchi misti	Condizione	Struttura
SCS 16, SUS 316 L	2353	S31603	F.3533	(316 L)	03KH17N14M3	17 349		Ricotto	Austenitico
SUS 316 LN	2375	S31653		316 LN	03KH16N15M3			Ricotto	Austenitico
SUS 304 LN	2371	S30453	F.3541	304 LN	03KH18N11			Ricotto	Austenitico
SUS 317	2366	S31700		317	08KH17H15M3T			Ricotto	Austenitico
	2368	S30815						Ricotto	Austenitico
SUH 310, SUS 310 S	2361	S31008		310 S	12KH25N20			Ricotto	Austenitico
	2377	S31803		329 LN			SAF 2205	Ricotto	Duplex
	2376	S31500					3RE60	Ricotto	Duplex
	2562	N08904		904L				Ricotto	Super austenitico
SUS 329 J 1	2324	S32900		329				Ricotto	Duplex
	2570	S66286		660			A286	Ricotto solubilizzato	Austenitico
	2778	S31254					254 SMO	Ricotto	Super austenitico
		S32654					654 SMO	Ricotto	Super austenitico
NCF 800		N08800					Alloy 800	Ricotto	Austenitico
	2328	S32750		F 53			SAF 2507	Ricotto	Super duplex
FC 150	01 15-00	F11601		A48 25 B	Sc 15	422 415			Ghisa grigia
FC 200	01 20-00	F12101		A48 30 B	Sc 20	422 420			Ghisa grigia
FC 250	01 25-00	F12401		A48 35 B	Sc 25	422 425			Ghisa grigia
FC 350	01 35-00	F13502		A48 50 B	Sc 35				Ghisa grigia
	02 19			G 3500					Ghisa grigia
				Grade 350					Ghisa a grafi te compatta
				Grade 400					Ghisa a grafi te compatta
				Grade 400-15					Ghisa a grafi te compatta
				Grade 450					Ghisa a grafi te compatta
				Grade 500					Ghisa a grafi te compatta
PCMP55-04	08 54-00	F24130		A220 60004				Rinvenuto	Ghisa malleabile

SHARP	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI
K4	EN-GJS-350-22	0.7033	0.7033	GGG-35.3	FGS 370-17	Grade 350/22	
K4	EN-GJS-400-15	0.7040	0.7040	GGG-40	FGS 400-12	Grade 420/12	GS 400-12
K4	EN-GJS-400-18	0.7043	0.7043	GGG-40.3	FGS 370-17	Grade 370/17	GSO 42/17
K4	EN-GJS-500-7	0.7050	0.7050	GGG-50	FGS 500-7	Grade 500/7	GS 500-7
K4	EN-GJS-600-3	0.7060	0.7060	GGG-60	FGS 600-3	Grade 600/3	GS 600-3
K4	EN-GJS-700-2	0.7070	0.7070	GGG-70	FGS 700-2	Grade 700/2	GS 700-2
K5							
K5	EN-GJS-1000-5			GJS-1000-5			
K5	EN-GJS-1200-2			GJS-1200-2			
K5	EN-GJS-1400-1			GJS-1400-1			
K5	EN-GJS-800-8			GJS-800-8			
K6	EN-GJLA-XNiCr 20-2	0.6660	0.6660	GGL-NiCr 20 2	FGL Ni20 Cr2	Grade F2	
K6	EN-GJLA-XNiCr 30-3	0.6676	0.6676	GGL-NiCr 30 3	FGL Ni30 Cr3	Grade F3	
K6	EN-GJLA-XNiCuCr 15-6-2	0.6655	0.6655	GGL-NiCuCr 15 6 2	FGL Ni15 Cu6 Cr2	Grade F1	
K7	EN-GJSA-XNiMn 13-7	0.7652	0.7652	GGG-NiMn 13 7	FGS Ni13 Mn7	Grade S6	
K7	EN-GJSA-XNiCr 20-2	0.7660	0.7660	GGG-NiCr 20 2	FGS Ni20 Cr2	Grade S2	
K7	EN-GJSA-XNiMn 23-4	0.7673	0.7673	GGG-NiMn 23 4	FGS Ni23 Mn4	Grade S2M	
K7	EN-GJSA-XNiCr 30-3	0.7676	0.7676	GGG-NiCr 30 3	FGS Ni30 Cr3	Grade S3	
K7	EN-GJSA-XNi 35	0.7683	0.7683	GGG-Ni 35	FGS Ni35		
N1	AW-1050A	Al99.5	3.0255	Al99.5	A-5/1050A	1B	
N1	AW-2011	AlCuBiPb	3.1655	AlCuBiPb	A-U5PbBi/2011	FC1	
N1	AW-2014	AlCuSiMn	3.1255	AlCuSiMn	A-U4SG/2014	H15	
N1	AW-5005	AlMg1	3.3315	AlMg1	A-G0.6	N41	
N1	AW-6060	AlMgSi0.5	3.3206	AlMgSi0.5	A-GS/6060	(H9)	
N1	AW-6063	AlMgSi0.7	3.3210	AlMgSi0.7	A-GSUC/6061	(H10)	
N1	AW-3103	AlMn1	3.0515	AlMn1		N3	
N1	AW-3003	AlMn1Cu	3.0517	AlMn1Cu	A-M1/3003		
N1	AW-7020	AlZn4.5Mg1	3.4335	AlZn4.5Mg1	A-Z5G/7020	H17	
N1	AW-7075		3.4365	AlZnMgCu1.5	A-Z5GU/7075	2L95/2L96	
N1	AC-42000		3.2341	G-AlSi5Mg	A-S7G	LM25	3599
N1	AC-46200	AlSi8Cu3(Si)	3.2161	G-AlSi8Cu3			
N1	MG-P-63	MgAl6Zn	3.5612	G-MgAl6Zn	G-A6-Z1	MAG-E-121	
N1	MG-P-61	MgAl8Zn	3.5812	G-MgAl8Zn	(G-A7-Z1)		
N1	MN65120	MgSe3Zn-2Zr1	3.5103	G-MgSe3Zn2Zr1	ZRE1	MAG6-TE	

JIS	SS	UNS	U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Marchi misti	Condi-zione	Struttura
FCD 350-22L	07 17-15								Ghisa sferoidale (nodulare)
FCD 400-18L	07 17-02	F32800	FGE 38-17	FGE 70-2	Vc 42-12	422 304			Ghisa sferoidale (nodulare)
	07 17-12	F32800		60-40-18	Vc 42-12				Ghisa sferoidale (nodulare)
FCD 500-7	07 27-02	F33800	FGE 50-7	A536, 80-55-06	Vc 50-2	422 305			Ghisa sferoidale (nodulare)
FCD 600-3	07 32-03	F34100	FGE 60-2	A476, 80-60-03	Vc 60-2	422 306			Ghisa sferoidale (nodulare)
FCD 700-2	07 37-01	F34800	FGE 70-2	A536, 100-70-03	Vc 70-2				Ghisa sferoidale (nodulare)
		ADI grade 5		1600/1300/-					Ghisa austemperata
		ADI grade 2		1050/700/7					Ghisa austemperata
		ADI grade 3		1200/850/4					Ghisa austemperata
		ADI grade 4		1400/1100/1					Ghisa austemperata
		ADI grade 1		850/550/10					Ghisa austemperata
	05 23-00	F41002		A436 Type 2			Ni-Resist 2		Ghisa austenitica lamellare
		F41004		A436 Type 3			Ni-Resist 3		Ghisa austenitica lamellare
		F41000		A436 Type 1			Ni-Resist 1		Ghisa austenitica lamellare
	07 72-00						Nodumag		Ghisa austenitica sferoidale (nodulare)
		F43000		A436 Type D-2			Ni-Resist D-2		Ghisa austenitica sferoidale (nodulare)
		F43010		A439 Type D-2M			Ni-Resist D-2M		Ghisa austenitica sferoidale (nodulare)
		F43003		A436 Type D-3			Ni-Resist D-3		Ghisa austenitica sferoidale (nodulare)
		F43006		A439 Type D-5			Ni-Resist D-5		Ghisa austenitica sferoidale (nodulare)
(A1050)	4007	AA1050A							
A2011	4355	AA2011							
	4338	AA2014							
	4106	AA5005							
	4103	AA6060							
(A6063)	4104, 4107	AA6005							
	4054	AA3103							
A3003		AA3003							
	4425	AA7020							
A7075		AA7075							
AC 4C	4244			B26					
	4251	A13800		A380					
		M11600		AZ61A					
				AZ80A					
		M12330		AMS 4442					

SHARP	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI
N2	AC-43400	AlSi10Mg(Fe)	3.2381	G-AlSi10Mg	A-S10G	LM9	
N2	AC-44200	AlSi12	3.2382	GD-AlSi12			
N2	AW-6082	AlMgSi1	3.2315	AlMgSi1	A-SGM0.7/6082	H30	
N3		AlSi17Cu5					
N11	CC331G		2.0940.01	CuAl10Fe	CuAl10Fe	AB1	
N11	CC333G		2.0975.01	CuAl10Ni	CuAl10Ni5Fe5	AB2	
N11		CuNi10Fe1Mn	2.0872	CuNi10Fe1Mn	CuNi10Fe1Mn	CN102	
N11				CuNi10Zn45			
N11		CW408J	2.0790	CuNi18Zn19Pb	CuNi18Zn19Pb1		
N11	CW352H		2.1176	CuPb10Sn	CuSn10Pb10	LB2	
N11	CC480K		2.1050.01	CuSn10	CuSn10	CT1	
N11			2.1087	CuSn10Zn			
N11	CW452K	CuSn6	2.1020	CuSn6	CuSn6	PB103	
N11	CW502L	CuZn15	2.0240	CuZn15	CuZn15	CZ102	
N11	CW706R	CuZn28Sn1	2.0470	CuZn28Sn1	CuZn29Sn1		
N11	CW508L	CuZn37	2.0321	CuZn37	CuZn37	CZ108	
N11	CW717R	CuZn38Sn1	2.0530	CuZn38Sn1			
N11	CW614N	CuZn39Pb3	2.0401	CuZn39Pb3	CuZn39Pb3	CZ121	
N11	CW612N	CuZn40Pb2	2.0402	CuZn40Pb2	CuZn39Pb2	CZ120	
N11	CW622N	CuZn44Pb2	2.0410	CuZn44Pb2		CZ104	

JIS	SS	UNS	U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Marchi misti	Condizione	Struttura
	4253	A13600		B85				Indurito per precipitazione	
				A413.2					
	4212	AA6082							
ADC14				B390.0					
	5710	C95200		CA952	BrA9ZH3L				
	5716	C95500		CA955	BrA10ZH4N4L				
	5667	C70600							
		C76300							
	5640	C93700		CA937					
	5443	C90700							
	5458	C90500							
C5191	5428	C51900			BrOF6.5-0.15				
C2300	5112	C23000			L90				
	5220	C44300			LOMsh70-1-0.05				
	5150	C27200							
		C46400			LO60-1				
	5170	C38500							
	5168	C37800							
	5272	C68700			LAMsh77-2-0.05				

SHARP	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI
H3	16 MnCr 5	1.7131	1.7131	16 MnCr 5	16 MC 5	527 M 17	16 MnCr 5
H5	C 67S	1.1231	1.1231	Ck 67	XC 68	060 A 67	C 70
H5	C 75S	1.1248	1.1248	Ck 75	XC 75	060 A 78	C 75
H5	C 100S	1.1274	1.1274	Ck 101		060 A 96	
H5	C 105U	1.1545	1.1545	C 105 W1	Y1 105		C 100 KU
H5			1.2550	60 WCrV 7	55 WC 20		55 WCrV 8 KU
H5	55 Cr 3	1.7176	1.7176	55 Cr 3	55 C 3	527 A 60	55 Cr 3
H5	42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4
H7	107 CrV 3	1.2210	1.2210	115 CrV 3	100 C 3		107 CrV 3 KU
H7			1.2510	100 MnCrW 4	90 MWCV 5	BO 1	95 MnWCr 5 KU
H7	90 MnCrV 8	1.2842	1.2842	90 MnCrV 8	90 MV 8	BO 2	90 MnVCr 8 KU
H7	100 Cr 6	1.3505	1.3505	100 Cr 6	100 C 6	534 A 99	100 Cr 6
H8	X 40 CrMoV 5 1	1.2344	1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	BH 13	X 40 CrMo 5 1 1 KU
H8	X 100 CrMoV 5	1.2363	1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1 KU
H8	X 155 CrVMo 12 1		1.2379	X 155 CrVMo 12 1	Z 160 CDV 12	BD 2	X 155 CrVMo 12 1 KU
H8			1.2436	X 210 CrW 12			X 215 CrW 12 1 KU
H8			1.2601	X 165 CrMoV 12			X 165 CrMoW 12 KU
H8			1.2713	55 NiCrMoV 6	55 NCDV 7		
H8	HS 6-5-2-5	1.3243	1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05-04-02		HS 6-5-2-5
H8	HS 2-10-1-8	1.3247	1.3247	S 2-10-1-8	Z 110 DKCWV 09-08-	BM 42	HS 2-9-1-8
H8	HS 18-0-1	1.3355	1.3355	S 18-0-1	Z 80 WCV 18-04-01	BT 1	HS 18-0-1
H11	X 20 Cr 13	1.4021	1.4021	X 20 Cr 13	Z 20 C 13	420 S 37	X 20 Cr 13
H11	X 70 CrMo 15	1.4109	1.4109	X 65 CrMo 14	Z 70 D 14		
H11	X 90 CrMoV 18	1.4112	1.4112	X 90 CrMoV 18	Z 2 CND 18 05	409 S 19	X CrTi 12
H11	X 105 CrMo 17	1.4125	1.4125	X 105 CrMo 17	Z 100 CD 17		X 105 CrMo 17
H12	X 4 CrNiCuNb 16 4	1.4540	1.4540	X 4 CrNiCuNb 16 4			
H12	X 5 CrNiCuNb 16 4	1.4542	1.4542	X 5 CrNiCuNb 16 4			
H12	X 5 CrNiCuNb 16 4	1.4542	1.4542	X 5 CrNiCuNb 16 4			
H12	X 7 CrNiAl 17 7	1.4568	1.4568	X 7 CrNiAl 17 7	Z 9 CAN 17.7	301 S 81	X 7 CrNiAl 17 7
H12	X 8 CrNiMoAl 15 7 5	1.4574	1.4574	X 8 CrNiMoAl 15 7 5			
H12	X 6 NiCrTiMoV 25 15	1.4980	1.4943	X 4 NiCrTi 25 15	Z 6 NCTDV 25.15	HR 51	
H12	X 2 NiCoMo 18 8 5	1.6359	1.6359	X 2 NiCoMo 18 8 5		S 162	
H12	X 2 NiCoMoTi 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09		
H12	X 2 NiCoMoTi 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09		
H12	X 2 NiCoMoTi 18 12 4	1.6356	1.6356	X 2 NiCoMoTi 18 12 4			
H21	X 120 Mn 12	1.3401	1.3401	X 120 Mn 12	Z 120 M 12	BW 10	
H31	EN-GJN-HV520	0.9620	0.9620	G-X330 NiCr 4 2	FB Ni4 Cr2 BC	Grade 2 A	
H31	EN-GJN-HV550	0.9625	0.9625	G-X260 NiCr 4 2	FB Ni4 Cr2 HC	Grade 2 B	
H31	EN-GJN-HV600(XCr11)	0.9630	0.9630	G-X300 CrNiSi 9 5 2	FB Cr9 Ni5	Grade 2 C, D, E	

JIS	SS	UNS	U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Marchi misti	Condizione	Strut-tura
SCR 415	2511	G51170	F.1516	5115	12KHN2	14 220		Indurito superfi cialmente	
	1770	G10700	F.5103	1070	70			Bonifi cato	
	1774, 1778	G10780	F.5107	1078, 1080	75			Bonifi cato	
SUP 4	1870	G10950	F.5117	1095				Bonifi cato	
	1880		F.5118	W1	U10A			Bonifi cato	
				S1	5KHV2SF			Bonifi cato	
SUP 9 (A)	2253	G51550		5155				Bonifi cato	
SCM 440 (H)	2244	G41400	F.1252	4142, 4140	38HM	15 142		Bonifi cato	
		T61202	F.520L	L2	11KHF			Bonifi cato	
SKS 3	2140	T31501	F.5220	O1	9KHVG			Bonifi cato	
		T31502		O2	9G2F			Bonifi cato	
SUJ 2	2258	G51986	F.5230	52100	SHKH15	14 109		Bonifi cato	
SKD 61	2242	T20813	F.5318	H13	4KH5MF1S			Bonifi cato	
SKD 12	2260	T30102	F.5227	A2	9KH5VF			Bonifi cato	
SKD 11		T30402	F.5211	D2	KH12MF			Bonifi cato	
SKD 2	2312		F.5213		KH12			Bonifi cato	
	2310				KH12MF			Bonifi cato	
SKT 4		T61206	F.520.S	L6	5KHNM			Bonifi cato	
SKH 55	2723		F.5613	M35	R6M5K5			Bonifi cato	
SKH 51		T11342		M42	R2AM9K5			Bonifi cato	
SKH 2		T12001		T1	R18			Bonifi cato	
SUS 420 J 1	2303	S42000	F.5261	420	20KH13	17 022		Bonifi cato	
SUS 440 A		S44002		440 A				Bonifi cato	
SUS 440 B	2327	S44003		440 B	95KH18			Bonifi cato	
SUS 440 C		S44004		440 C	95KH18			Bonifi cato	
		S15500		XM-12			15-5 PH	H900	
SUS 630		S17400		SAE 630			17-4 PH	H1025	
SUS 630		S17400		SAE 630			17-4 PH	H900	
SUS 631	2388	S17700		AMS 5528	09KH17N7YU1		17-7 PH	TH1050	
		S15700		632			PH 15-7 Mo	TH1050	
SUH 660	2570	S66286		660			A286	Indurito per precipitazione	
		K92890		AMS 6512			Marage 250	Indurito per precipitazione	
		K93120		AMS 6521			Marage 300	Indurito per precipitazione	
		K93120		AMS 6521			Marage 300	Indurito per precipitazione	
		K93160		AMS 6515			Marage 350	Indurito per precipitazione	
SC MnH 1	2183			A128 Grade A			Hadfi eld		
	05 12-00	F45001		A532 IB (NiCr-LC)			Ni-Hard 2		
	05 13-00	F45000		A532 IA (NiCr-HC)			Ni-Hard 1		
	04 57-00	F45003		A532 ID (Ni-HiCr)			Ni-Hard 4		

SHARP	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI
S1							
S2							
S2							
S3	NiMo30		2.4810				
S3	NiMo16Cr15W		2.4819				
S3							
S3	NiCr19Fe19Nb5Mo3		2.4668				
S3			2.4669				
S3	NiCr20TiAl		2.4631				
S3							
S3	NiCr19Co18Mo4Ti3Al3						
S3	NiCr20Co13Mo4Ti3Al		2.4654				
T11			3.7024				
T11							
T12							
T12	TiAl6V4		3.7164				
T13				TiV10Fe2Al3			

JIS	SS	UNS	U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Marchi misti	Condizione	Struttura
							Discalloy	Indurito per precipitazione	
							Haynes 25		
							Stellite 21		
		N10002					Hastelloy C		
		N10276			KHN65MV		Hastelloy C-276		
							IN 100		
		N07718					Inconel 718		
		N07750					Inconel X-750	Ricotto solubilizzato	
		N07080					Nimonic 80A		
							René 41		
		N07500					Udimet 500		
		N07001					Waspalloy		
							Ti	Commercialmente puro	Ti (α)
		R54620		AMS 4919			Ti 6-2-4-2	Ricotto	Ti (α)
		R56320		AMS 4943			Ti 3Al-2.5V (grd 9)	Ricotto	Ti (α+β)
		R56400		AMS 4920, Grade 5	VT6		Ti 6Al-4V	Ricotto	Ti (α+β)
				AMS 4986			Ti 10V-2Fe-3Al	Ricotto	Ti (β)


SHARP
METAL