

**İSKENDERUN DEMİR ve ÇELİK A.Ş.
ÜRÜNLER KATALOĞU**

**ISKENDERUN IRON&STEEL WORKS CO.
PRODUCTS CATALOGUE**



İSDEMİR ÜRÜNLER KATALOĞU İSDEMİR PRODUCTS CATALOGUE





İÇİNDEKİLER TABLE OF CONTENTS

TEKNİK ÖZELLİKLER TECHNICAL SPECIFICATIONS

• Çelik kaliteleri ve kullanım alanları Steel grades & applications	05
• Karbon çelikleri(1) Carbon steels (1)	06-07
• Karbon çelikleri(2) Carbon steels (2)	08
• Karbon çelikleri(3) Carbon steels (3)	09
• Köşebent ve profil imalat yapı çelikleri Steels for angle iron and profile production	10
• Balya teli imalat çelikleri Steels for baling wire production	11-12
• Hasırlık Çelikler For mesh quality steel production	13
• Gemi profili imalat çelikleri Steels for ship profile production	13
• Nervürlü inşaat çeliği imalat çelikleri For deformed reinforcing steel bar production	14
• Vanadyumlu, kaynaklanabilir nervürlü inşaat çeliği imalat çelikleri	15-16
• <i>For weldable deformed reinforcing steel bar production (vanadium added)</i>	17
• İhrac kayıtlı inşaat çeliği imalat çelikleri For export deformed reinforcing steel bar production	18
• Boru imalat çelikleri Steels for seamless pipe production	19
• Elektrot imalat çelikleri Steels for electrode production	20-21
• Yüksek mukavemetli zımba teli imalat çelikleri Steels for high strength staple production	22
• Civata imalat çelikleri Steels for bolt production	23
• Vida ve somun imalat çelikleri Steels for screw production	23

ÜRÜN TOLERANSLARI TOLERANCES

• Düz yuvarlak beton çeliği Wire rods	25
• Nervürlü beton çeliği Deformed reinforcing steel bar	26
• Sürekli döküm küçük makinalarında üretilen kütükler CCM billets	27
	28

YAN ÜRÜNLER BY PRODUCTS

• Genel tanıtım General Information	31
• Mevcut ürün yelpazesi Available products	32
• Pik demir Cast pig iron	33
• Ham katran Tar	34
• Ham Benzol Curude Benzene	34
• Yan ürünler By products	35
• Amonyum sülfat Amonium sulphate	35
• İsdemir granüle curuf spesifikasyonu İsdemir granulated slag specification	35
• Ceviz Kok	36
• Kok tozu Mikronize	36

ÜRETİM SÜREÇLERİ MANUFACTURING PROCESS

37-39



TEKNİK ÖZELLİKLER

TECHNICAL SPECIFICATIONS

ÇELİK KALİTELERİ VE KULLANIM ALANLARI STEEL GRADES & APPLICATIONS

GENEL KULLANIM ALANI APPLICATION AREA	İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	SAYFA NO PAGE NR
İNCE TEL ÇEKİMİNE UYGUN KARBON ÇELİKLERİ CARBON STEELS FOR THIN WIRE DRAWING	1.1006	SAE J 403 1006 (1995)	08
	1.1006_01	SAE J 403 1006 (1995)	08
	1.1006_02	SAE J 403 1006 (1995) MODIFIED	08
	1.1006_03	SAE J 403 1006 (1995)	08
	1.1006_04	SAE J 403 1006 (1995) MODIFIED	08
	4.1006_00	SAE 1006 J 403 (1995) MODIFIED	08
	1.2006	SAE J 403 1006 (1995)	08
	1.3006_01	SAE J 403 1006 (1995)	08
	5.3006_00	SAE J 403 1006 (1995)	08
	5.1006_00	SAE J 403 1006 (1995) MODIFIED	08
	5.1006_02	SAE J 403 1006 (1995) MODIFIED	08
	5.1006_03	SAE J 403 1006 (1995) MODIFIED	08
	5.1006_04	SAE J 403 1006 (1995) MODIFIED	08
	1.2008	SAE J 403 1008 (1995)	08
ÇİVİ, KÖŞEBENT & PROFİL İMALATINA UYGUN KARBON ÇELİKLERİ CARBON STEELS FOR NAIL, ANGLE IRON & PROFILE PRODUCTION	1.3008_00	SAE J 403 1008 (1995)	08
	1.1012_00	SAE J 403 1012 (1995)	09
	1.1013_00	SAE J 1249 1013 (1995)	09
	1.1015_00	SAE J 403 1015 (1995)	09
	1.1017_00	SAE J 403 1017 (1995)	09
	1.1018_01	SAE J 403 1018 (1995)	09
	1.1018_02	SAE J 403 1018 (1995)	09
	1.1022_00	SAE J 403 1022 (1995)	09
	1.1008	SAE J 403 1008 (1995)	09
	1.1008_02	SAE J 403 1008 (1995)	09
TEL ÇEKİMİNE UYGUN ve HASIRLIK ÇELİKLER STEELS FOR WIRE DRAWING & FOR MESH QUALITY STEEL PRODUCTION	4.1008_00	SAE J 403 1008 (1995)	09
	1.1010	SAE J 403 1010 (1995)	09
	8.1035_00	SAE J 403 1035 (MODIFIED) (1995)	10
	8.1038_00	SAE J 403 1038 (1995)	10
	8.1039_00	SAE J 403 1039 (MODIFIED) (1995)	10
	1.1045	DIN 17140 D45-2 (ESKİ), DIN EN 10016-2 (1994) C48D DIN EN 10083-2 C45 (1991)	10
	1.1050	SAE J 403 1050 (1995), DIN EN 10016-2 (1994) C50D DIN EN 10016-2 (1994) C52D	10
	1.1052_00		10
	1.1055_00	SAE 1055 J403 (1995)	10
	1.1060_00	DIN EN 10016-2 (1994) C60D	10
ALAŞIMSIZ YÜKSEK MUKAVEMETLİ KARBON ÇELİKLERİ NON-ALLOYED HIGH STRENGTH STEELS	1.1065_01	DIN EN 10016-2 (1994) C66D	10
	5.1065_00	DIN EN 10016-2 (1994) C66D	10
	1.1068_00	DIN EN 10016-2 (1994) C68D	10
	1.1070_00	DIN EN 10016-2 (1994) C70D	10
	1.1234	DIN EN 10025 S235JR (1990)	11-12
	1.1235	DIN EN 10025 S235JR (1990)	11-12
	1.1236_01	DIN EN 10025 S235JR (1990)	11-12
	1.1235_01	DIN EN 10025 S235JR (1990)	11-12
	4.1235	DIN EN 10025 S235JR (1990)	11-12
	1.1236_00	DIN EN 10025 S235 JR (1990)	11-12
KÖŞEBENT VE PROFİL İMALAT YAPı ÇELİKLERİ STRUCTURAL STEELS FOR ANGLE IRON AND PROFILE PRODUCTION	1.1245_00	JIS G 3101 SS400 (1995)	11-12
	1.1275	DIN EN 10025 S275JR (1990)	11-12
	1.2275_00	DIN EN 10025 S275 J2G3	11-12
	5.1345_00	ASTM A 572 Gr 50 (1988)	11-12
	1.1355_01	DIN EN 10025 S 355 JR	11-12
	1.1355_02	DIN EN 10025 S 355 JR	11-12
	1.2355	DIN EN 10025 S 355 JR	11-12
	1.2355_01	DIN EN 10025 S 355 J0	11-12
	1.1380_00	GOST 380-88 S13 sp [DIN 10025 S 235JR62 1993]	11-12
	1.1380_01	GOST 380-88 S13 sp [DIN 10025 S 235JR62 1993]	13
HASIRLIK FOR MESH QUALITY STEEL PRODUCTION	1.1009_01	SAE J 403 1009 (1995)	13

GENEL KULLANIM ALANI APPLICATION AREA	İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	SAYFA NO PAGE NR
BALYA TELİ İMALAT ÇELİKLERİ STEELS FOR BALING WIRE PRODUCTION	1.1281_01	ASTM A 615 Gr 40 (1999)	13
GEMİ PROFİLİ İMALAT ÇELİKLERİ STEELS FOR SHIP PROFILE PRODUCTION	5.2355_00	GL-D 36 (S355 G2S) MODIFIED	14
	5.2355_01	ABS AH, DH 36	14
	5.2355_02	ABS AH, DH 36	14
	5.1400_00	SI-739 S-400	15-16
	8.1400	SI 4466, SI 739 S400	15-16
NERVÜRLÜ İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ FOR DEFORMED REINFORCING STEEL BAR PRODUCTION	1.1420_01	TS 708 Bç IIIa (1996), DIN 488 BSt 42/50RU, ASTM A 615 Gr60	15-16
	1.1421_01	TS 708 Bç IIIa (1996), DIN 488 BSt 42/50RU, ASTM A 615 Gr60	15-16
	1.1421_02	TS 708 Bç IIIa (1996), DIN 488 BSt 42/50RU, ASTM A 615 Gr60	15-16
	1.1422	TS 708 Bç IIIa (1996), DIN 488 BSt 42/50RU, ASTM A 615 Gr60	15-16
VANADYUMLU, KAYNAKLANABİLİR NERVÜRLÜ İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ FOR WELDABLE DEFORMED REINFORCING STEEL BAR PRODUCTION (VANADIUM ADDED)	5.1460_00	BS 4449 Gr 460 (1997)	17
İHRAC KAYITLI İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ FOR EXPORT DEFORMED REINFORCING STEEL BAR PRODUCTION	1.1280	ASTM A 615 Gr 40 (1999)	18
	1.1281	ASTM A 615 Gr 40 (1999)	18
	1.1350	20MnSi (Çin Normu)	18
	1.1029_00	SAE J 403 1029 (1995)	18
	1.1030_00	SAE J 403 1030 (1995)	18
BORU İMALAT ÇELİKLERİ SEAMLESS PIPE STEELS	1.3235	DIN 17175 St 35.8	19
	1.3380	API 5CT 99 J-55	19
	5.1238	St37 Mo	19
	1.1324	24Mn4	19
	5.1270	DIN 17175 15 Mo 3	19
	1.1020	SAE J 403 1020 (1995) MODIFIED	19
	8.1023_01	SAE J 403 1023 (MODIFIED) (1995)	19
	6.2008	DIN 17145 S-1	20-21
	6.3008_00	(DIN EN 756:1995) S-1	20-21
	6.3008_01	(DIN EN 756:1995) S-1	20-21
ELEKTROT İMALAT ÇELİKLERİ ELECTRODE STEELS	6.3008_02	(DIN EN 756:1995) S-1	20-21
	6.3008_03	(DIN EN 756:1995) S-1	20-21
	6.1300	DIN EN 756 (95-12) S2Mo	20-21
	6.1360	DIN 8559 (TS 5618) SG2	20-21
	6.1360_01	DIN 8559 (TS 5618) SG2 (BORLU)	20-21
	6.1360_02	DIN 8559 (TS 5618) SG2 (BORLU)	20-21
	6.1360_03	DIN 8559 (TS 5618) SG2 (BORLU) MODIFIED	20-21
	6.1470_00	DIN EN 756 (1995) S2	20-21
	6.1470_01	DIN EN 756 (1995) S2Si	20-21
	6.1470_02	DIN EN 756 (1995) S2	20-21
YÜKSEK MUKAVEMETLİ ZIMBA TELİ İMALAT ÇELİKLERİ HIGH STRENGTH STAPLE STEELS	6.2470	DIN EN 756 (1995) S2	20-21
	5.1026_00	SAE J 403 1026 (1995) MOD (BORLU)	22
VİDA İMALAT ÇELİKLERİ FOR SCREW STEELS PRODUCTION	1.2390_00	DIN EN 10263-2:2001 C4C, DIN 1654-2 QSt 32-3 (1989)	23
	1.2410_00	DIN EN 10263-2:2001 C8C, DIN 1654-2 QSt 34-3 (1989)	23
	1.2430_00	DIN EN 10263-2:2001 C10C, DIN 1654-2 QSt 36-3 (1989)	23
	1.2460_00	DIN EN 10263-2:2001 C15C, DIN 1654-2 QSt 38-3 (1989)	23
	5.2580_00	DIN 1654-4 19MnB 4 (1989), EN 10263-4: 2002-02 20MnB4 (C'rlu)	23
ÇİVATA İMALAT ÇELİKLERİ BOLT STEELS	5.2580_01	DIN 1654-4 (1989), EN 10263-4: 2002-02 20MnB4	23
	5.2600_00	DIN 1654-4 22B2, DIN EN 10263-4:2002-02 23B2	23

KARBON ÇELİKLERİ(1) CARBON STEELS

SAE J 403 (1995), EN 10016-2:1994

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
		Chemical	C	Mn	P	S	Si	Al	B	Cu	Ni	Cr
		Limits			max.	max.			ppm	max.	max.	max.
1.1006	SAE J 403 1006 (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050	0.15-0.30					
		İsdemir	0.04-0.07	0.25-0.40	0.025	0.025	0.25 max.	0.015 max.		0.10	0.10	0.10
1.1006_01	SAE J 403 1006 (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050	0.15-0.30					
		İsdemir	0.04-0.07	0.25-0.40	0.025	0.025	0.05-0.15	0.015 max.		0.10	0.10	0.10
1.1006_02	SAE J 403 1006 (MODIFIED) (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050	0.15-0.30					
		İsdemir	0.04-0.07	0.45-0.60	0.025	0.025	0.10-0.20	0.015 max.		0.10	0.10	0.10
1.1006_03	EN 10016-2:1994 C7D	Standart	0.05-0.09	0.30-0.60	0.035	0.035	0.30 max	0.010 max		0.30	0.25	0.20
		İsdemir	0.05-0.08	0.40-0.60	0.020	0.020	0.10-0.20	0.010 max.		0.10	0.10	0.10
1.1006_04	EN 10016-2:1994 C7D MODIFIED	Standart	0.05-0.09	0.30-0.60	0.035	0.035	0.30 max	0.010 max		0.30	0.25	0.20
		İsdemir	0.04-0.07	0.40-0.55	0.020	0.020	0.05-0.15	0.010 max.		0.10	0.10	0.10
4.1006_00	SAE J 403 1006 (MODIFIED) (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050	0.15-0.30					
		İsdemir	0.04-0.07	0.25-0.50	0.025	0.025	0.15-0.30	0.015 max.		0.10	0.10	0.10
1.2006	SAE J 403 1006 (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050						
		İsdemir	0.03-0.07	0.25-0.40	0.025	0.025	0.04 max.	0.025-0.080		0.10	0.10	0.10
1.3006_01	SAE J 403 1006 (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050						
		İsdemir	0.04-0.07	0.25-0.40	0.025	0.025	0.10 max.	0.015		0.10	0.10	0.10
5.3006_00	SAE J 403 1006 (1995) (BORLU)	Standart	0.08 max.	0.25-0.40	0.030	0.050						
		İsdemir	0.04-0.07	0.25-0.40	0.025	0.025	0.08 max.	0.020 max.	40-100	0.10	0.10	0.10
1.2008	SAE J 403 1008 (1995)	Standart	0.10 max.	0.30-0.50	0.030	0.050						
		İsdemir	0.05-0.09	0.30-0.50	0.025	0.025	0.08 max.	0.025-0.100		0.10	0.10	0.10
1.3008_00	SAE J 403 1008 (1995)	Standart	0.10 max.	0.30-0.50	0.030	0.050						
		İsdemir	0.05-0.08	0.30-0.50	0.025	0.025	0.08 max.	0.015		0.10	0.10	0.10
5.1006_00	SAE J 403 1006 (MODIFIED) (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050	0.15-0.30					
		İsdemir	0.04-0.07	0.40-0.55	0.025	0.025	0.10-0.20	0.015 max.	40-100	0.10	0.10	0.10
5.1006_02	SAE J 403 1006 (MODIFIED) (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050	0.15-0.30					
		İsdemir	0.03-0.08	0.40-0.55	0.025	0.025	0.15-0.25	0.015 max.	30-90	0.10	0.10	0.10
5.1006_03	SAE J 403 1006 (MODIFIED) (1995)	Standart	0.08 max.	0.25-0.40	0.030	0.050	0.15-0.30					
		İsdemir	0.03-0.08	0.25-0.40	0.025	0.025	0.12-0.20	0.015 max.	20 min.	0.10	0.10	0.10
5.1006_04	SAE J 403 1006 (1995) MODIFIED (BORLU)	Standart	0.08 max.	0.25-0.40	0.030	0.050						
		İsdemir	0.03-0.07	0.40-0.55	0.025	0.025	0.05-0.15	0.010 max.	20-60	0.10	0.10	0.10

*İNCE TEL ÇEKİMİNE UYGUN KARBON ÇELİKLERİ/CARBON STEELS FOR THIN WIRE DRAWING

KARBON ÇELİKLERİ(2) CARBON STEELS

SAE J 403, EN 10084, JIS G 3101, ASTM A 572, DIN EN 10025

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
		Chemical	C	Mn	P	S	Si	Al	V	Cu	Ni	Cr
		Limits			max.	max.				max.	max.	max.
1.1008	SAE J 403 1008 (1995)	Standart	0.10 max.	0.30-0.50	0.030	0.050	0.15-0.30					
		İsdemir	0.06-0.10	0.30-0.50	0.025	0.025	0.15-0.30	0.015 max.		0.10	0.10	0.10
1.1008_02	SAE J 403 1008 (1995)	Standart	0.10 max.	0.30-0.50	0.030	0.050	0.15-0.30					
		İsdemir	0.06-0.10	0.30-0.50	0.025	0.025	0.06-0.14	0.015 max.		0.10	0.10	0.10
4.1008_00	SAE J 403 1008 (1995)	Standart	0.10 max.	0.30-0.50	0.030	0.050	0.15-0.30					
		İsdemir	0.06-0.10	0.30-0.50	0.025	0.025	0.15-0.25			0.10	0.10	0.10
1.1010	SAE J 403 1010 (1995)	Standart	0.08-0.13	0.30-0.60	0.030	0.050	0.15-0.30					
		İsdemir	0.08-0.13	0.35-0.60	0.025	0.030	0.15-0.30			0.12	0.10	0.10
1.1012_00	SAE J 403 1012 (1995)	Standart	0.10-0.15	0.30-0.60	0.030	0.050	0.15-0.30					
		İsdemir	0.11-0.14	0.45-0.60	0.025	0.025	0.15-0.25			0.12	0.10	0.10
1.1013_00	SAE J 1249 1013 (1995)	Standart	0.11-0.16	0.50-0.80	0.040	0.050	0.15-0.30					
		İsdemir	0.12-0.15	0.55-0.75	0.025	0.025	0.15-0.25			0.12	0.10	0.10
1.1015_00	SAE J 403 1015 (1995)	Standart	0.13-0.18	0.30-0.60	0.030	0.050	0.15-0.30					
		İsdemir	0.13-0.16	0.45-0.60	0.025	0.025	0.15-0.25			0.12	0.10	0.10
1.1017_00	SAE J 403 1017 (1995)	Standart	0.15-0.20	0.30-0.60	0.030	0.050	0.15-0.30					
		İsdemir	0.15-0.20	0.40-0.60	0.020	0.025	0.15-0.25			0.15	0.10	0.10
1.1018_01	SAE J 403 1018 (1995)	Standart	0.15-0.20	0.60-0.90	0.030	0.050						
		İsdemir	0.15-0.20	0.65-0.80	0.020	0.025	0.15-0.25			0.10	0.10	0.10
1.1018_02	SAE J 403 1018 (1995)	Standart	0.15-0.20	0.60-0.90	0.030	0.050						
		İsdemir	0.15-0.20	0.65-0.85	0.020	0.025	0.08 max.			0.10	0.10	0.10
1.1022_00	SAE J 403 1022 (1995)	Standart	0.18-0.23	0.70-1.00	0.030	0.050						
		İsdemir	0.19-0.23	0.75-0.90	0.020	0.020	0.15-0.25	0.015 max.		0.12	0.10	0.10
5.1345_00	ASTM A 572 Gr 50 (1988)	Standart	0.23 max.	1.35 max.	0.040	0.050						
		İsdemir	0.14-0.17	0.85-1.05	0.025	0.030	0.15-0.30		0.016-0.026	0.20	0.15	0.15

KARBON ÇELİKLERİ(3) CARBON STEELS

DIN EN 10016-2 (1994), DIN EN 10083-2 (1991), SAE J 403 (1995)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
		Chemical	C	Mn	P	S	Si	Al	B	Cu	Ni	Cr
		Limits			max.	max.			ppm	max.	max.	max.
8.1035_00	SAE J 403 1035 (MODIFIED) (1995)	Standart	0.32-0.38	0.60-0.90	0.030	0.050	0.15-0.30					
		İsdemir	0.34-0.37	0.70-0.90	0.020	0.020	0.15-0.30			0.15	0.10	0.10
8.1038_00	SAE J 403 1038 (1995)	Standart	0.35-0.42	0.60-0.90	0.030	0.050	0.15-0.30					
		İsdemir	0.36-0.39	0.65-0.85	0.025	0.025	0.15-0.30			0.15	0.10	0.10
8.1039_00	SAE J 403 1039 (MODIFIED) (1995)	Standart	0.37-0.44	0.70-1.00	0.030	0.050	0.15-0.30					
		İsdemir	0.36-0.39	0.80-0.95	0.030	0.030	0.20-0.30			0.20	0.15	0.15
1.1045	DIN 17140 D45-2 (ESKİ), DIN EN 10016-2 (1994) C48D	Standart	0.45-0.50	0.50-0.80	0.035	0.035	0.10-0.30					
		İsdemir	0.45-0.48	0.45-0.65	0.020	0.015	0.18-0.26	0.020-0.040		0.10	0.10	0.10
1.1045_01	DIN EN 10083-2 C45 (1991)	Standart	0.42-0.50	0.50-0.80	0.045	0.045	0.40 max.				0.40	0.40
		İsdemir	0.43-0.48	0.60-0.80	0.025	0.025	0.20-0.30	0.010		0.10	0.10	0.10
1.1050	SAE J 403 1050 (1995), DIN EN 10016-2 (1994) C50D	Standart	0.48-0.53	0.50-0.80	0.035	0.035	0.10-0.30	0.010 max.		0.25	0.20	0.15
		İsdemir	0.49-0.53	0.55-0.75	0.020	0.015	0.18-0.26	0.020-0.040		0.10	0.10	0.10
1.1052_00	DIN EN 10016-2 (1994) C52D	Standart	0.50-0.55	0.50-0.80	0.035	0.035	0.10-0.30	0.010 max.		0.25	0.20	0.15
		İsdemir	0.50-0.54	0.60-0.75	0.025	0.025	0.15-0.30	0.010 max.		0.10	0.10	0.10
1.1055_00	SAE 1055 J403 (1995)	Standart	0.50-0.60	0.60-0.90	0.040	0.050	0.10-0.30	0.010 max.		0.25	0.20	0.15
		İsdemir	0.52-0.58	0.65-0.85	0.020	0.020	0.15-0.30			0.10	0.10	0.10
1.1060_00	DIN EN 10016-2 (1994) C60D	Standart	0.58-0.63	0.50-0.80	0.035	0.035	0.10-0.30	0.010 max.		0.25	0.20	0.15
		İsdemir	0.595-0.635	0.60-0.75	0.025	0.025	0.15-0.30	0.010 max.		0.10	0.10	0.10
1.1065_01	DIN EN 10016-2 (1994) C66D	Standart	0.63-0.68	0.50-0.80	0.035	0.035	0.10-0.30	0.010 max.		0.25	0.20	0.15
		İsdemir	0.63-0.67	0.60-0.80	0.020	0.020	0.15-0.30	0.010 max.		0.10	0.10	0.10
5.1065_00	DIN EN 10016-2 (1994) C66D BORLU	Standart	0.63-0.68	0.50-0.80	0.035	0.035	0.10-0.30	0.010 max.		0.25	0.20	0.15
		İsdemir	0.64-0.67	0.55-0.65	0.020	0.020	0.15-0.25	0.010 max.	40-50	0.10	0.10	0.10
1.1068_00	DIN EN 10016-2 (1994) C68D	Standart	0.65-0.70	0.50-0.80	0.035	0.035	0.10-0.30	0.010 max.		0.25	0.20	0.15
		İsdemir	0.65-0.70	0.55-0.75	0.025	0.025	0.15-0.30	0.010 max.		0.10	0.10	0.10
1.1070_00	DIN EN 10016-2 (1994) C70D	Standart	0.68-0.73	0.50-0.80	0.035	0.035	0.10-0.30	0.010 max.		0.25	0.20	0.15
		İsdemir	0.68-0.73	0.55-0.75	0.025	0.025	0.15-0.30	0.010 max.		0.10	0.10	0.10

* Orta ve Yüksek Karbonlu Çelikler/Medium and High Carbon Steels

KÖŞEBENT VE PROFİL İMALAT YAPI ÇELİKLERİ STRUCTURAL STEELS FOR ANGLE IRON AND PROFILE PRODUCTION

DIN EN 10025, GOST 380-88, DIN EN 10025

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)								
		Chemical	C	Mn	P	S	Si	Al	Cu	Ni	Cr
		Limits			max.	max.			max.	max.	max.
1.1234	DIN EN 10025 S235 JR (2004)	Standart	0.17	1.40 max.	0.035	0.035					
		İsdemir	0.07-0.12	0.35-0.65	0.025	0.030	0.15-0.30	0.015	0.20	0.10	0.10
1.1235	DIN EN 10025 S235 JR (2004)	Standart	0.17	1.40 max.	0.035	0.035					
		İsdemir	0.11-0.16	0.40-0.65	0.025	0.030	0.15-0.30	0.015	0.20	0.10	0.10
1.1235_01	DIN EN 10025 S235 JR (2004)	Standart	0.17 (d<16)	1.40 max.	0.035	0.035					
		İsdemir	0.11-0.14	0.90-1.10	0.025	0.025	0.20-0.30		0.10	0.10	0.10
4.1235	DIN EN 10025 S235 JR (2004)	Standart	0.17 (d<16)	1.40 max.	0.035	0.035					
		İsdemir	0.11-0.16	0.40-0.60	0.025	0.030	0.14-0.20	0.005-0.025	0.20	0.10	0.10
1.1236_00	DIN EN 10025 S235 JR (2004)	Standart	0.17 (d<16)	1.40 max.	0.035	0.035					
		İsdemir	0.05-0.09	0.55-0.75	0.025	0.025	0.15-0.23	0.010 max.	0.10	0.10	0.10
1.1236_01	DIN EN 10025 S235 JR (2004)	Standart	0.17 (d<16)	1.40 max.	0.035	0.035					
		İsdemir	0.07-0.14	0.55-0.75	0.025	0.025	0.15-0.30	0.010 max.	0.10	0.10	0.10
1.1275	DIN EN 10025 S275 JR (2004)	Standart	0.21 (d<16)	1.50 max.	0.035	0.035					
		İsdemir	0.13-0.18	0.65-1.00	0.025	0.030	0.15-0.35		0.20	0.15	0.15
1.2275_00	DIN EN 10025 S275 J2G3 (2004)	Standart	0.18 (d<16)	1.50 max.	0.035	0.035					
		İsdemir	0.15-0.18	1.00-1.35	0.025	0.030	0.15-0.25	0.020-0.035	0.10	0.10	0.10
1.1355_01	DIN EN 10025 S 355 JR (2004)	Standart	0.24 (d<16)	1.60	0.035	0.035	0.55 max.				
		İsdemir	0.21-0.26	0.90-1.25	0.035	0.035	0.20-0.35		0.25	0.15	0.15
1.1355_02	DIN EN 10025 S 355 JR (2004)	Standart	0.24 (d<16)	1.60	0.035	0.035	0.55 max.				
		İsdemir	0.17-0.21	1.30-1.50	0.025	0.030	0.15-0.25		0.12	0.10	0.10
1.2355	DIN EN 10025 S 355 JR (2004)	Standart	0.24 (d<16)	1.60	0.035	0.035	0.55 max.				
		İsdemir	0.16-0.20	1.35-1.60	0.025	0.035	0.30-0.50	0.030-0.080	0.12	0.10	0.10
1.2355_01	DIN EN 10025 S 355 J0 (2004)	Standart	0.20 (d<16)	1.60	0.030	0.030	0.55 max.				
		İsdemir	0.17-0.21	1.30-1.60	0.025	0.030	0.15-0.25	0.025 min.	0.12	0.10	0.10
1.1245_00	JIS G 3101 SS400 (1995)	Standart			0.050	0.050					
		İsdemir	0.13-0.16	0.65-0.85	0.025	0.030	0.15-0.30		0.10	0.10	0.10
1.1380_00	GOST 380-88 St3 sp (DIN 10025 S 235JR G2 1993)	Standart	0.14-0.22	0.40-0.65	0.040	0.050	0.15-0.30		0.30	0.30	0.30
		İsdemir	0.14-0.19	0.40-0.60	0.025	0.025	0.15-0.30	0.015 max.	0.10	0.10	0.10
1.1380_01	GOST 380-88 St3 sp (DIN 10025 S 235JR G2 1993)	Standart	0.14-0.22	0.40-0.65	0.040	0.050	0.15-0.30		0.30	0.30	0.30
		İsdemir	0.14-0.18	0.55-0.70	0.025	0.025	0.15-0.30	0.010 max.	0.10	0.10	0.10

*Köşebent ve Profil İmalatına Uygun Çelikler/Steels For Angle Iron and Profile Production

KÖŞEBENT VE PROFİL İMALAT YAPI ÇELİKLERİ STRUCTURE STEELS FOR ANGLE IRON AND PROFILE PRODUCTION

DIN EN 10025 (1990), JIS G 3101, ASTM A 572 (1988), GOST 380-88

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	FİZİKSEL ÖZELLİKLER MECHANICAL PROPERTIES			
		AKMA MUK. Re(N/mm ²) YIELD STRENGTH	ÇEKME MUK. Rm(N/mm ²) TENSILE STRENGTH		%UZAMA ELONGATION (min)
		min.	min.	max.	
1.1234	DIN EN 10025 S235 JR (1990)	235	340	470	26
1.1235	DIN EN 10025 S235 JR (1990)	235	340	470	26
1.1235_01	DIN EN 10025 S235JR (1990)	235	340	470	26
4.1235	DIN EN 10025 S235JR (1990)	235	340	470	26
1.1236_00	DIN EN 10025 S235 JR (1990)	235	340	470	26
1.1275	DIN EN 10025 S275JR (1990)	275	410	540	22
1.2275_00	DIN EN 10025 S275 J2G3	275	410	540	22
1.1355_01	DIN EN 10025 S 355 JR	355	490	630	22
1.1355_02	DIN EN 10025 S 355 JR	355	490	630	22
1.2355	DIN EN 10025 S 355 JR	355	490	630	22
1.2355_01	DIN EN 10025 S 355 J0	355	490	630	22
1.1245_00	JIS G 3101 SS400 (1995)	245	400	510	20
5.1345_00	ASTM A 572 Gr 50 (1988)	345	450		21
1.1380_00	GOST 380-88 St3 sp (DIN 10025 S 235JR G2 1993)	235	340	470	26
1.1380_01	GOST 380-88 St3 sp (DIN 10025 S 235JR G2 1993)	235	340	470	26

BALYA TELİ İMALAT ÇELİKLERİ STEELS FOR BALING WIRE PRODUCTION

ASTM A 615 (1999)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)							
		Chemical	C	Mn	P	S	Si	Cu	Ni	Cr
		Limits			max.	max.		max.	max.	max.
1.1281_01	ASTM A 615 Gr 40 (1999)	Standart			0.060	0.060				
		İsdemir	0.26-0.28	1.00-1.20	0.025	0.030	0.20-0.30	0.12	0.10	0.10

BALYA TELİ İMALAT ÇELİKLERİ STEELS FOR BALING WIRE PRODUCTION

ASTM A 615 (1999)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	FİZİKSEL ÖZELLİKLER MECHANICAL PROPERTIES		
		AKMA MUK. Re(N/mm ²) YIELD STRENGTH	ÇEKME MUK. Rm(N/mm ²) TENSILE STRENGTH	%UZAMA ELONGATION (min)
		min.	min.	
1.1281_01	ASTM A 615 Gr 40 (1999)	280	490	12

HASIRLIK ÇELİKLER STEELS FOR MESH QUALITY STEEL PRODUCTION

SAE J 403 (1995)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)							
		Chemical	C	Mn	P	S	Si	Cu	Ni	Cr
		Limits			max.	max.		max.	max.	max.
1.1009_01	SAE J 403 1009 (1995) MODIFIED	Standart	0.15 max.	0.60 max	0.030	0.050	0.15-0.30			
		İsdemir	0.08-0.14	0.40-0.70	0.025	0.025	0.12-0.30	0.10	0.10	0.10

GEMİ PROFİLİ İMALAT ÇELİKLERİ STEELS FOR SHIP PROFILE PRODUCTION

GL-D 36 , ABS AH 36- DH 36

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)										
		Chemical	C	Mn	P	S	Si	Al	V	Cu	Ni	Cr	Ceq
		Limits			max.	max.				max.	max.	max.	
5.2355_00	GL-D 36 (S355 G2S) MODIFIED	Standart	0.18 max.	0.90-1.60	0.040	0.040	0.50 max.	0.020 min.	0.05-0.10	0.35	0.40	0.20	
		İsdemir	0.12-0.15	1.20-1.50	0.025	0.025	0.15-0.30	0.025 min.	0.05-0.10	0.12	0.10	0.10	0.38 max.
5.2355_01	ABS AH 36- DH 36	Standart	0.18 max.	0.90-1.60	0.035	0.035	0.10-0.50	0.015		0.35	0.40	0.20	
		İsdemir	0.12-0.15	0.90-1.10	0.025	0.025	0.15-0.25	0.025-0.060	0.07-0.09	0.10	0.10	0.10	0.37 max.
5.2355_02	ABS AH 36-DH 36	Standart	0.18 max	0.90-1.60	0.040	0.040	0.10-0.50	0.015 min.	0.05-0.10				
		İsdemir	0.12-0.15	1.10-1.30	0.025	0.025	0.15-0.25	0.025-0.060	0.02-0.04	0.12	0.10	0.10	0.38 max.

GEMİ PROFİLİ İMALAT ÇELİKLERİ STEELS FOR SHIP PROFILE PRODUCTION

GL-D 36 , ABS AH 36- DH 36

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	FİZİKSEL ÖZELLİKLER MECHANICAL PROPERTIES		%UZAMA ELONGATION (min)
		AKMA MUK. Re(N/mm ²) YIELD STRENGTH	ÇEKME MUK. Rm(N/mm ²) TENSILE STRENGTH	
		min.	min. max.	
5.2355_00	GL-D 36 (S355 G2S) MODIFIED	355	490 630	22
5.2355_01	ABS AH 36-DH 36	355	490 630	22

NERVÜRLÜ İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ FOR DEFORMED REINFORCING STEEL BAR PRODUCTION

SI 4466, SI 739 , TS 708 (1996), DIN 488 , ASTM A 615, BSt 420 S

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
		Chemical	C	Mn	P	S	Si	V	Cu	Ni	Cr	Ceq
		Limits			max.	max.			max.	max.	max.	
5.1400_00	SI 4466, SI 739 S-400	Standart			[%S+%P]=0.080 max.							0.60 max.
		İsdemir	0.33-0.36	1.10-1.20	0.030	0.030	0.25-0.35	0.01-0.02	0.20	0.15	0.15	0.60 max.
8.1400	SI 4466, SI 739 S400	Standart			[%S+%P]=0.080 max.							0.60 max.
		İsdemir	0.33-0.38	1.10-1.35	0.030	0.040	0.20-0.40		0.20	0.15	0.15	0.60 max.
1.1420_01	TS 708 Bç IIIa (1996),(DIN 488 BSt 42/50RU),(ASTM A 615 Gr60)	Standart	0.40 max.		0.050	0.050			Cu+Ni+Cr<0.60			
		İsdemir	0.35-0.38	1.05-1.20	0.040	0.040	0.30-0.50					0.53-0.58
1.1421_01	TS 708 Bç IIIa (1996),(DIN 488 BSt 42/50RU),(ASTM A 615 Gr60)	Standart	0.40 max.		0.050	0.050			Cu+Ni+Cr<0.60			
		İsdemir	0.36-0.39	1.20-1.35	0.040	0.040	0.30-0.50					0.58-0.62
1.1421_02	TS 708 Bç IIIa (1996),(DIN 488 BSt 42/50RU),(ASTM A 615 Gr60)	Standart	0.40 max.		0.050	0.050			Cu+Ni+Cr<0.60			
		İsdemir	0.35-0.39	1.00-1.25	0.040	0.040	0.15-0.35					0.55-0.64
1.1422	TS 708 Bç IIIa (1996),(DIN 488 BSt 42/50RU),(ASTM A 615 Gr60)	Standart	0.40 max.		0.050	0.050			Cu+Ni+Cr<0.60			
		İsdemir	0.36-0.40	1.35-1.55	0.040	0.043	0.25-0.50		0.25	0.25	0.25	0.62-0.65
1.8420_00	BSt 420 S (DIN 488-1 W.nr.1.0428)	Standart	0.22 max		0.050	0.050	0.60max.					
		İsdemir	0.16-0.21	0.85-1.15	0.030	0.035	0.15-0.30		0.15	0.15	0.15	

NERVÜRLÜ İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ FOR DEFORMED REINFORCING STEEL BAR PRODUCTION

SI 4466, SI 739 , TS 708 (1996), DIN 488 , ASTM A 615

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	FİZİKSEL ÖZELLİKLER MECHANICAL PROPERTIES		
		AKMA MUK. $R_e(N/mm^2)$ YIELD STRENGTH	ÇEKME MUK. $R_m(N/mm^2)$ TENSILE STRENGTH	%UZAMA ELONGATION
		min.	min.	(min)
5.1400_00	SI 4466, SI 739 S-400	400	500	12 (lo=10 do)
8.1400	SI 4466, SI 739 S400	400	500	12 (lo=10 do)
1.1420_01	TS 708 Bç IIIa (1996), (DIN 488 BSt 42/50RU)	420	500	12 (lo=10 do)
	(ASTM A 615 Gr60)	414	621	9 (lo=200 mm)
1.1421_01	TS 708 Bç IIIa (1996), (DIN 488 BSt 42/50RU)	420	500	12 (lo=10 do)
	(ASTM A 615 Gr60)	414	621	9 (lo=200 mm)
1.1421_02	TS 708 Bç IIIa (1996), (DIN 488 BSt 42/50RU)	420	500	12 (lo=10 do)
	(ASTM A 615 Gr60)	414	621	9 (lo=200 mm)
1.1422	TS 708 Bç IIIa (1996), (DIN 488 BSt 42/50RU)	420	500	12 (lo=10 do)
	(ASTM A 615 Gr60)	414	621	9 (lo=200 mm)
1.8420_00	BSt 420 S (DIN 488-1 W.nr.1.0428)	420	500	



VANADYUMLU, KAYNAKLANABİLİR NERVÜRLÜ İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ
FOR WELDABLE DEFORMED REINFORCING STEEL BAR PRODUCTION (VANADIUM ADDED)

BS 4449

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
		Chemical	C	Mn	P	S	Si	V	Cu	Ni	Cr	Ceq
		Limits			max.	max.			max.	max.	max.	
5.1460_00	BS 4449 Gr 460 (1997)	Standart	0.25 max.		0.050	0.050						0.51 max.
		İsdemir	0.20-0.24	1.20-1.35	0.030	0.030	0.15-0.30	0.06-0.07	0.20	0.15	0.15	0.47 max.

VANADYUMLU, KAYNAKLANABİLİR NERVÜRLÜ İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ
FOR WELDABLE DEFORMED REINFORCING STEEL BAR PRODUCTION (VANADIUM ADDED)

BS 4449

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	FİZİKSEL ÖZELLİKLER MECHANICAL PROPERTIES		
		AKMA MUK. Re(N/mm ²) YIELD STRENGTH	ÇEKME MUK. Rm(N/mm ²) TENSILE STRENGTH	%UZAMA ELONGATION
		min.	min.	(min)
5.1460_00	BS 4449 Gr 460 (1997)	460	500	14

İHRAÇ KAYITLI İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ FOR EXPORT DEFORMED REINFORCING STEEL BAR PRODUCTION

ASTM A 615 (1999), 20MnSi (Çin Normu), SAE J 403 (1995)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
		Chemical	C	Mn	P	S	Si	Al	Cu	Ni	Cr	Ceq
		Limits			max.	max.			max.	max.	max.	
1.1280	ASTM A 615 Gr 40 (1999)	Standart			0.060	0.060						
		İsdemir	0.23-0.26	0.60-1.00	0.035	0.040	0.25-0.40		0.20	0.15	0.15	0.35-0.42
1.1281	ASTM A 615 Gr 40 (1999)	Standart			0.060	0.060						
		İsdemir	0.27-0.29	1.00-1.20	0.035	0.040	0.25-0.40		0.20	0.15	0.15	0.42-0.49
1.1350	20MnSi (Çin Normu)	Standart	0.17-0.25	1.20-1.60	0.050	0.050	0.40-0.80		0.30	0.30	0.30	
		İsdemir	0.19-0.25	1.25-1.50	0.030	0.035	0.40-0.65		0.12	0.10	0.10	
1.1029_00	SAE J 403 1029 (1995)	Standart	0.25-0.31	0.60-0.90	0.030	0.050	0.15-0.30					
		İsdemir	0.25-0.30	0.60-0.90	0.030	0.035	0.15-0.30		0.20	0.15	0.15	
1.1030_00	SAE J 403 1030 (1995)	Standart	0.28-0.34	0.60-0.90	0.030	0.050	0.15-0.30					
		İsdemir	0.28-0.32	0.60-0.75	0.025	0.025	0.10-0.25	0.015 max.	0.10	0.10	0.10	

İHRAÇ KAYITLI İNŞAAT ÇELİĞİ İMALAT ÇELİKLERİ FOR EXPORT DEFORMED REINFORCING STEEL BAR PRODUCTION

ASTM A 615 (1999)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	FİZİKSEL ÖZELLİKLER MECHANICAL PROPERTIES		
				%UZAMA ELONGATION (min)
		AKMA MUK. Re(N/mm²) YIELD STRENGTH	ÇEKME MUK. Rm(N/mm²) TENSILE STRENGTH	
		min.	min.	
1.1280	ASTM A 615 Gr 40 (1999)	280	490	12
1.1281	ASTM A 615 Gr 40 (1999)	280	490	12

BORU İMALAT ÇELİKLERİ STEELS FOR SEAMLESS PIPE PRODUCTION

DIN 17175 , API 5CT 99 , St37 Mo, 24Mn4, SAE J 403 (1995)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
		Chemical	C	Mn	P	S	Si	Al	B	Cu	Ni	Cr
		Limits			max.	max.			ppm	max.	max.	max.
1.3235	DIN 17175 St 35.8	Standart	0.17 max.	0.40-0.80	0.040	0.040	0.10-0.35					
		İsdemir	0.13-0.17	0.55-0.80	0.035	0.035	0.10-0.30	0.015-0.050		0.12	0.10	0.10
1.3380	API 5CT 99 J-55	Standart										
		İsdemir	0.34-0.38	1.30-1.50	0.030	0.030	0.10-0.30	0.015-0.050		0.12	0.10	0.10
5.1238	St37 Mo	Standart										
		İsdemir	0.12-0.16	0.50-0.60	0.025	0.025	0.15-0.25	0.015-0.035	0.25-0.35	0.12	0.10	0.10
1.1324	24Mn4	Standart										
		İsdemir	0.20-0.28	0.90-1.20	0.035	0.035	0.30-0.60	0.005-0.020		0.12	0.10	0.10
5.1270	DIN 17175 15 Mo 3	Standart	0.12-0.20	0.40-0.80	0.035	0.035	0.10-0.35					
		İsdemir	0.12-0.18	0.40-0.80	0.030	0.030	0.15-0.35	0.015-0.035	0.25-0.35	0.12	0.10	0.10
1.1020	SAE J 403 1020 (1995) MODIFIED	Standart	0.18-0.23	0.30-0.90	0.040	0.050						
		İsdemir	0.19-0.23	0.40-0.65	0.025	0.030	0.15-0.35	0.015 min.		0.12	0.10	0.10
8.1023_01	SAE J 403 1023 (MODIFIED) (1995)	Standart	0.20-0.25	0.30-0.60	0.030	0.050	0.15-0.30					
		İsdemir	0.22-0.25	0.60-0.80	0.020	0.020	0.15-0.30	0.0065		0.12	0.10	0.10

BORU İMALAT ÇELİKLERİ STEELS FOR SEAMLESS PIPE PRODUCTION

DIN 17175 , API 5CT 99 , St37 Mo, 24Mn4, SAE J 403 (1995)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	FİZİKSEL ÖZELLİKLER MECHANICAL PROPERTIES				
		AKMA MUK. Re(N/mm ²) YIELD STRENGTH		ÇEKME MUK. Rm(N/mm ²) TENSILE STRENGTH		%UZAMA ELONGATION (min)
		min.	max.	min.	max.	
1.3235	DIN 17175 St 35.8	235		360	480	25
1.3380	API 5CT 99 J-55	380	552	517		
5.1270	DIN 17175 15 Mo 3	270		450	600	22

ELEKTROT İMALAT ÇELİKLERİ STEELS FOR ELECTRODE PRODUCTION

DIN EN 756 (1995), DIN 8559, TS 5618

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar Chemical Limits	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)										
			C	Mn	P	S	Si	Al	Mo	B	Cu	Ni	Cr
					max.	max.				ppm	max.	max.	max.
6.2008	DIN 17145 S-1, DIN EN 756 (1995) S1	Standart	0.05-0.15	0.35-0.60	0.025	0.025	0.15 max.					0.15	0.15
		İsdemir	0.05-0.09	0.40-0.50	0.025	0.025	0.05 max.	0.025-0.080			0.10	0.10	0.10
6.3008_00	DIN 17145 S-1, DIN EN 756 (1995) S1	Standart	0.05-0.15	0.35-0.60	0.025	0.025	0.15 max.					0.15	0.15
		İsdemir	0.05-0.08	0.40-0.50	0.025	0.025	0.06 max.	0.015			0.10	0.10	0.10
6.3008_01	DIN 17145 S-1, DIN EN 756 (1995) S1	Standart	0.05-0.15	0.35-0.60	0.025	0.025	0.15 max.					0.15	0.15
		İsdemir	0.06-0.09	0.45-0.55	0.025	0.025	0.07 max.	0.010 max.			0.10	0.10	0.10
6.3008_02	DIN 17145 S-1, DIN EN 756 (1995) S1	Standart	0.05-0.15	0.35-0.60	0.025	0.025	0.15 max.					0.15	0.15
		İsdemir	0.06-0.09	0.40-0.55	0.025	0.025	0.04-0.10	0.010 max.			0.10	0.10	0.10
6.3008_03	DIN 17145 S-1, DIN EN 756 (1995) S1	Standart	0.05-0.15	0.35-0.60	0.025	0.025	0.15 max.					0.15	0.15
		İsdemir	0.08-0.11	0.40-0.55	0.025	0.025	0.04-0.10	0.010 max.			0.10	0.10	0.10
6.1300	DIN EN 756 (1995) S2Mo	Standart	0.07-0.15	0.80-1.30	0.025	0.025	0.05-0.25		0.45-0.65			0.15	0.15
		İsdemir	0.07-0.13	0.80-1.20	0.020	0.025	0.15-0.20	0.005-0.020	0.45-0.65		0.10	0.10	0.10
6.1360	DIN 8559 (TS 5618) SG2	Standart	0.06-0.13	1.30-1.60	0.025	0.025	0.70-1.00						
		İsdemir	0.06-0.10	1.35-1.55	0.020	0.020	0.80-1.00	0.005-0.020			0.10	0.10	0.10
6.1360_01	DIN 8559 (TS 5618) SG2 (BORLU)	Standart	0.06-0.13	1.30-1.60	0.025	0.025	0.70-1.00						
		İsdemir	0.06-0.09	1.40-1.55	0.020	0.020	0.80-0.90	0.015		40 - 50	0.10	0.10	0.10
6.1360_02	DIN 8559 (TS 5618) SG2	Standart	0.06-0.13	1.30-1.60	0.025	0.025	0.70-1.00						
		İsdemir	0.06-0.08	1.40-1.50	0.020	0.020	0.80-0.90	0.015 max.			0.10	0.10	0.10
6.1360_03	DIN 8559 (TS 5618) SG2 MODIFIED	Standart	0.06-0.13	1.30-1.60	0.025	0.025	0.70-1.00						
		İsdemir	0.065-0.085	1.50-1.60	0.020	0.020	0.80-0.90	0.015 max.		40 - 50	0.10	0.10	0.10
6.1470_00	DIN EN 756 (1995) S2	Standart	0.07-0.15	0.80-1.30	0.025	0.025	0.15 max.					0.15	0.15
		İsdemir	0.07-0.10	0.85-0.95	0.020	0.020	0.10-0.15	0.015			0.10	0.10	0.10
6.1470_01	DIN EN 756 (1995) S2Si	Standart	0.07-0.15	0.80-1.30	0.025	0.025	0.15-0.40					0.15	0.15
		İsdemir	0.07-0.10	0.85-0.95	0.020	0.020	0.15-0.25	0.015			0.10	0.10	0.10
6.1470_02	DIN EN 756 (1995) S2	Standart	0.07-0.15	0.80-1.30	0.025	0.025	0.15 max.					0.15	0.15
		İsdemir	0.08-0.11	0.85-0.95	0.020	0.020	0.10 max.	0.015			0.10	0.10	0.10
6.2470	DIN EN 756 (1995) S2	Standart	0.07-0.15	0.80-1.30	0.025	0.025	0.15 max.					0.15	0.15
		İsdemir	0.07-0.10	0.85-0.95	0.020	0.020	0.10-0.15	0.015-0.025			0.10	0.10	0.10

ELEKTROT İMALAT ÇELİKLERİ STEELS FOR ELECTRODE PRODUCTION

DIN EN 756 (1995), DIN 8559, TS 5618

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	FİZİKSEL ÖZELLİKLER MECHANICAL PROPERTIES					
		AKMA MUK. Re(N/mm ²) YIELD STRENGTH		ÇEKME MUK. Rm(N/mm ²) TENSILE STRENGTH		KESİT DARALMASI REDUCTION IN AREA [%] (min)	%UZAMA ELONGATION (min)
		min.	max.	min.	max.		
6.2008	DIN 17145 S-1, DIN EN 756 (1995) S1	250	350	360	460	70	16 (l ₀ =100 mm)
6.3008_00	DIN 17145 S-1, DIN EN 756 (1995) S1	250	350	360	460	70	16 (l ₀ =100 mm)
6.3008_01	DIN 17145 S-1, DIN EN 756 (1995) S1	250	350	360	460	70	16 (l ₀ =100 mm)
6.3008_02	DIN 17145 S-1, DIN EN 756 (1995) S1	250	350	360	460	70	16 (l ₀ =100 mm)
6.1300	DIN EN 756 (1995) S2Mo	300	400	450	550	75	16 (l ₀ =100 mm)
6.1360	DIN 8559 (TS 5618) SG2	360	400		530	79	22 (l ₀ =100 mm)
6.1470_00	DIN EN 756 (1995) S2	270	350	400	470	70	16 (l ₀ =100 mm)
6.1470_02	DIN EN 756 (1995) S2	270	350	400	470	70	16 (l ₀ =100 mm)
6.2470	DIN EN 756 (1995) S2	270	350	400	470	70	16 (l ₀ =100 mm)

YÜKSEK MUKAVEMETLİ ZIMBA TELİ İMALAT ÇELİKLERİ STEELS FOR HIGH STRENGTH STAPLE PRODUCTION

SAE J 403

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar Chemical Limits	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
			C	Mn	P	S	Si	Al	B	Cu	Ni	Cr
					max.	max.			ppm	max.	max.	max.
5.1026_00	SAE J 403 1026 (1995) MOD (BORLU)	Standart	0.22-0.28	0.60-0.90	0.030	0.050						
		İsdemir	0.23-0.28	0.75-0.95	0.025	0.025	0.10-0.25	0.010 max.	20 min.	0.10	0.10	0.10

CİVATA İMALAT ÇELİKLERİ STEELS FOR BOLT PRODUCTION

DIN EN 10263-2:2001, DIN EN1654-4 (1989), SAE J 403 (1995)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar Chemical Limits	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)									
			C	Mn	P	S	Si	Al	B	Cu	Ni	Cr
					max.	max.			ppm	max.	max.	max.
5.2580_00	DIN 1654-4 19MnB 4 (1989), EN 10263-4: 2002-02 20MnB4 [Cr'LU]	Standart	0.18-0.23	0.90-1.20	0.025	0.025	0.30 max.		8 - 50	0.25		0.30 max.
		İsdemir	0.20-0.23	0.85-1.00	0.020	0.020	0.08 max.	0.020-0.040	20 - 50	0.10	0.10	0.15-0.20
5.2580_01	DIN 1654-4 19MnB 4 (1989), EN 10263-4: 2002-02 20MnB4	Standart	0.18-0.23	0.90-1.20	0.025	0.025	0.30 max.		8 - 50	0.25		0.30 max.
		İsdemir	0.20-0.23	0.85-1.00	0.020	0.020	0.08 max.	0.020-0.040	20 - 50	0.10	0.10	0.10 max.
5.2600_00	DIN 1654-4 22B2, DIN EN 10263-4:2002-02 23B2	Standart	0.20-0.25	0.60-0.90	0.025	0.025	0.30 max.		8 - 50	0.25		0.30 max.
		İsdemir	0.20-0.24	0.60-0.80	0.020	0.020	0.15 max.	0.025-0.040	20 - 35	0.10	0.10	0.10 max.

VİDA ve SOMUN İMALAT ÇELİKLERİ STEELS FOR SCREW PRODUCTION

DIN EN 10263-2:2001, DIN EN1654-4 (1989), SAE J 403 (1995)

İSDEMİR KALİTE NO GRADE CODE	STANDART KARŞILIĞI CORRESPONDING STANDARDS	Kimyasal Sınırlar Chemical Limits	KİMYASAL BİLEŞİM (%) CHEMICAL COMPOSITION (%)								
			C	Mn	P	S	Si	Al	Cu	Ni	Cr
					max.	max.			max.	max.	max.
1.2390_00	DIN EN 10263-2:2001 C4C, DIN 1654-2 QSt 32-3 (1989)	Standart	0.02-0.06	0.25-0.40	0.020	0.025	0.10 max.	0.020-0.060			
		İsdemir	0.06 max.	0.25-0.40	0.020	0.020	0.10 max.	0.020-0.060	0.10	0.10	0.10
1.2410_00	DIN EN 10263-2:2001 C8C, DIN 1654-2 QSt 34-3 (1989)	Standart	0.06-0.10	0.25-0.45	0.020	0.025	0.10 max.	0.020-0.060			
		İsdemir	0.06-0.09	0.25-0.45	0.020	0.020	0.10 max.	0.020-0.060	0.10	0.10	0.10
1.2430_00	DIN EN 10263-2:2001 C10C, DIN 1654-2 QSt 36-3 (1989)	Standart	0.08-0.12	0.30-0.50	0.025	0.025	0.10 max.	0.020-0.060			
		İsdemir	0.08-0.11	0.30-0.45	0.020	0.020	0.10 max.	0.020-0.060	0.10	0.10	0.10
1.2460_00	DIN EN 10263-2:2001 C15C, DIN 1654-2 QSt 38-3 (1989)	Standart	0.13-0.17	0.35-0.60	0.025	0.025	0.10 max.	0.020-0.060			
		İsdemir	0.13-0.16	0.35-0.50	0.020	0.020	0.10 max.	0.020-0.060	0.10	0.10	0.10





ÜRÜN TOLERANSLARI TOLERANCES

DÜZ YUVARLAK BETON ÇELİĞİ WIRE RODS

TOLERANS STANDARDI TOLERANCE STANDARD

DIN - 59110 (1962)

UYGULANAN İSDEMİR ÜRÜN CİNSİ APPLIED PRODUCT TYPE IN İSDEMİR
KANĞAL (TEL ÇUBUK) COIL

ÇAP TOLERANSI DIAMETER TOLERANCES

DIN EN 756 (1995), DIN 8559, TS 5618

Anma Çapı Dia (mm)	Tolerans Tolerances (mm)	Ağırlık Weight (kg/m)	Kesit Alanı Cross Section (cm ²)	Yanal Alanı Surface Area (cm ² /m)
5.5	±0.3	0.186	0.238	173
6		0.222	0.283	188
6.5		0.260	0.332	204
6.8	±0.4	0.285	0.363	214
7		0.302	0.385	220
7.5		0.347	0.442	236
8		0.395	0.503	251
8.5		0.445	0.567	267
9		0.499	0.636	283
9.35		0.539	0.687	294
10		0.617	0.785	314
10.5		0.680	0.866	330
11		0.746	0.950	345
11.5	±0.5	0.815	1.038	361
12		0.888	1.131	377
12.5		0.963	1.222	393
13		1.042	1.327	408
14		1.208	1.539	440
> 15		1.578	2.011	503

* Düz Yuvarlak Beton Çeliği nominal ağırlığı -1500 [+60,-100]kg olan KANĞAL olarak satılmaktadır.

* Wire rods are packaged in 1500 [+60,-100]kg wire coils.



NERVÜRLÜ BETON ÇELİĞİ DEFORMED REINFORCING STEEL BAR

TOLERANS STANDARDI **TOLERANCE STANDARD**

DIN 488 (TS 708 (1996)

UYGULANAN İSDEMİR ÜRÜN CİNSİ **APPLIED PRODUCT TYPE IN İSDEMİR**
NERVÜRLÜ İNŞAAT (BETON) ÇELİĞİ DEFORMED REINFORCING STEEL BAR

ÇAP TOLERANSI **DIAMETER TOLERANCES**

DIN EN 756 (1995), DIN 8559, TS 5618

Anma Çapı Dia (mm)	Ağırlık Weight (Kg/m)	Kesit Alanı Cross Section (cm ²)	Standart Boy Standard Length (m)
N8	0.395	0.503	1*
N10	0.617	0.785	
N12	0.888	1.13	
N14	1.21	1.54	
N16	1.58	2.01	
N18	2.00	2.54	
N20	2.47	3.14	
N22	2.98	3.80	
N24	3.55	4.52	
N25	3.85	4.91	
N26	4.17	5.31	
N28	4.83	6.16	
N30	5.55	7.07	
N32	6.31	8.04	

1* Nervürlü Beton Çeliği 6-15 m boylarında alıcı taleplerine göre kesilmektedir.

Nervürlü beton çeliği talepleri özel görüşmeye tabidir.

Deformed rebars are cut to 6-15 m length on customer's requests.



SÜREKLİ DÖKÜM KÜTÜK MAKİNALARINDA ÜRETİLEN KÜTÜKLER (CCM BILLETS)

TOLERANS STANDARDI TOLERANCE STANDARD TS 9016 (1991)

UYGULANAN İSDEMİR ÜRÜN CİNSİ APPLIED PRODUCT TYPE IN İSDEMİR BÜTÜN ÇELİK KALİTELERİ ALL GRADES

EBAT TOLERANSI DIMENSION TOLERANCE

DIN EN 756 (1995), DIN 8559, TS 5618

Anma Adı (Size)	Boyut ve Tolerans (Dimensions and tolerances)		Tolerans (Tolerances)	Köşe Yuvarlığı (Roundness) R (mm) (max)	Nominal Ağırlık (Weight) (*) (Kg/m)	Kesit Alanı (Cross Section) cm ²
	a(mm)	b(mm)				
100X100	100	100	± 2.5	12	77.91	98.76
110X110	110	110			94.35	119.76
120X120	120	120			112.36	142.76
130X130	130	130			131.93	167.76
150X150	150	150	± 3.0	15	175.78	223.07
160X160	160	160			200.05	254.07

(*) : TEORİK DEĞERLERDİR.

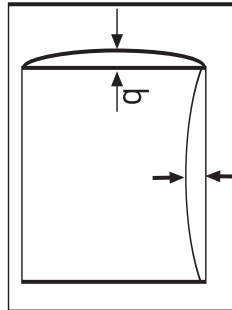
ŞEKİL TOLERANSLARI SHAPE TOLERANCES

DIN EN 756 (1995), DIN 8559, TS 5618

ROMBİK LİK (RHOMBOIDITY)	:	≤ 5 %
EĞRİLİK (CAMBER)	:	≤ 10 mm/m
BURULMA (TWIST)	:	≤ 1° /m
KONVEKS LİK (FACE BULGING)	:	2.5 %
KONKAV LİK (DEPRESSIONS)	:	2.5 %
ANMA ÖLÇÜSÜ TOLERANSI (SIDE DIMENSIONS)	:	± 3 %
BOY TOLERANSI (CUTTING LENGTH)	:	± 100 mm



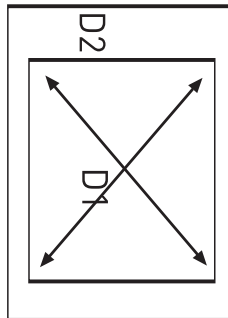
Konvekslik, Konkavlık Bulging, Depression



Bulging and depression

$$b\% = \frac{b}{L} * 100$$

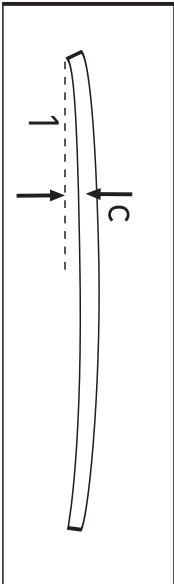
Rombiklik Rhomboidity



Rhomboidity

$$R\% = \frac{|D1 - D2|}{0.5 * (D1 + D2)} * 100$$

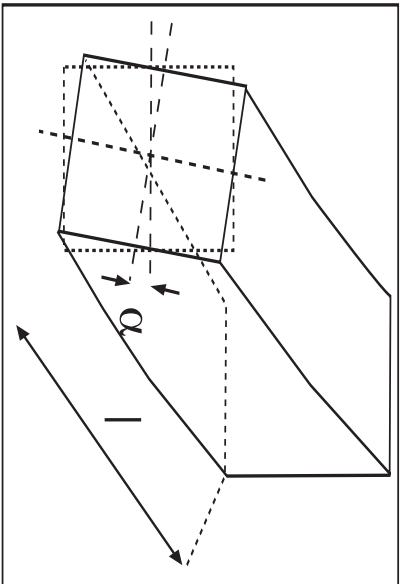
Eğrilik Camber



Camber

$$T = \frac{c}{l}$$

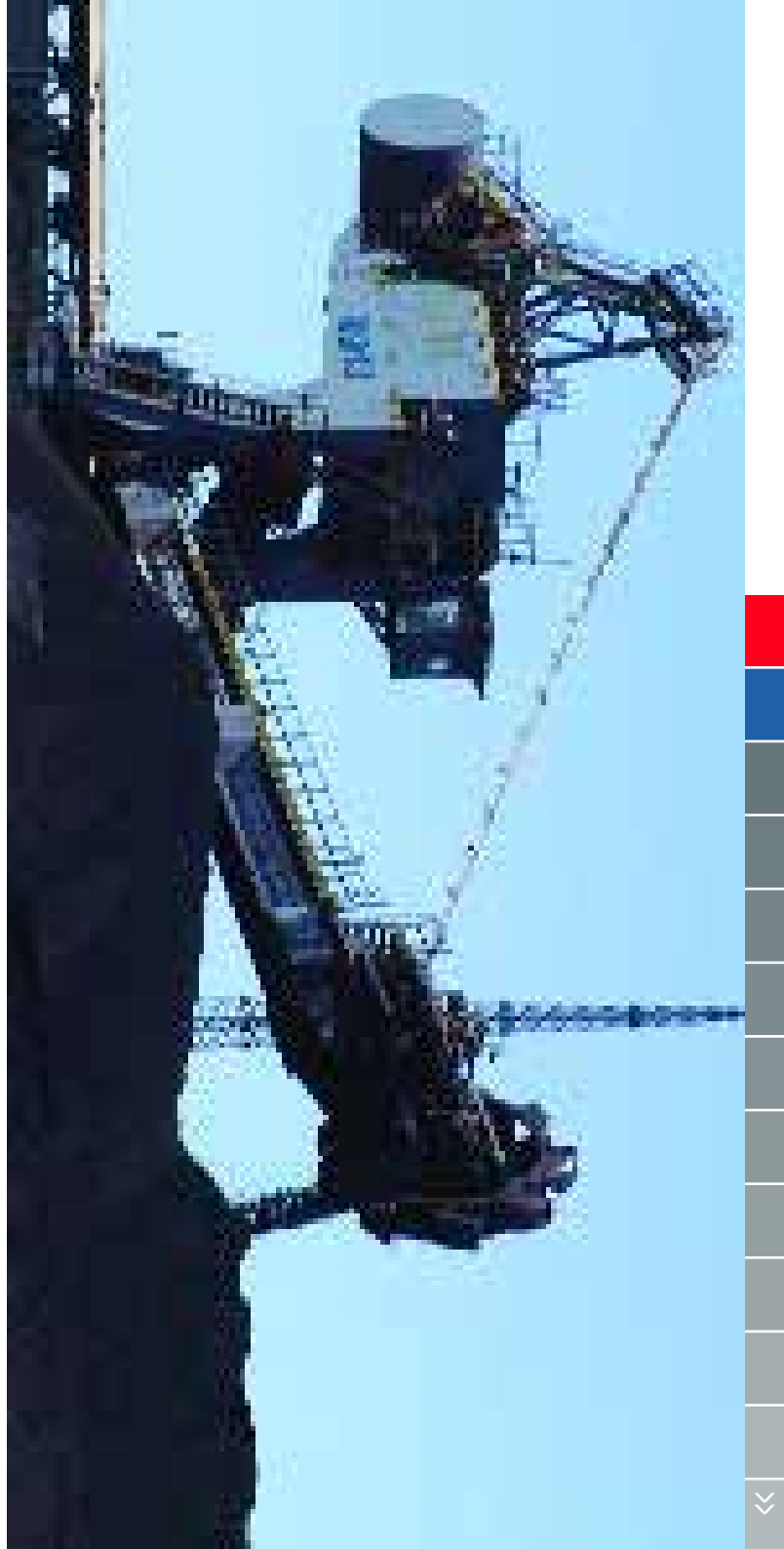
Burulma Twist



Twist

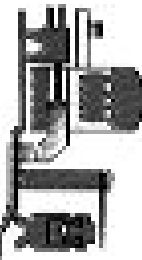
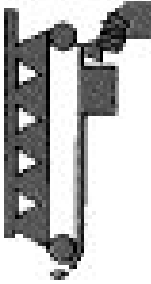
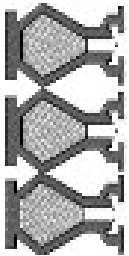
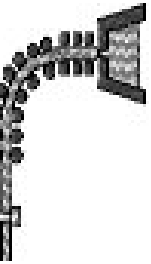
$$T = \frac{\alpha}{l}$$





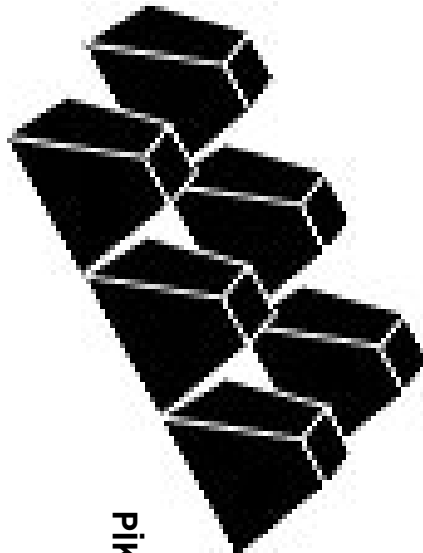
YAN ÜRÜNLER BY PRODUCTS

GENEL TANITIM GENERAL INFORMATION

 LİMAN PORT	Yükleme–Boşaltma (Load-Unload) KAPASİTE Capacity :12 mil.ton/yıl
 KOK FAB. COKE PLANT	4 BATARYA (276 Fırın) 4 Battery (276 Furnaces) KAPASİTE Capacity: 2.0 Mil.ton/yıl
 SİNER FAB. SİNER PLANT	KAPASİTE Capacity: 2.5 mil.ton/yıl
 YÜKSEK FIRINLAR BLAST FURNACES	KAPASİTE Capacity: 2.5 mil.ton/yıl
 PIK MAKİNASI PIG IRON MACHINE	KAPASİTE Capacity: 0.7 Milyon ton/yıl
 ÇELİKHANE STEEL PLANT	SIVI ÇELİK KAPASİTE Molten Steel Capacity: 2.2 mil.ton/yıl
 KÜTÜK DÖKÜM CCM1-CCM2	KAPASİTE Capacity: 2.0 mil.ton/yıl
 KANGAL HADDEHANESİ WIRE ROD MILL	KAPASİTE Capacity: 0.7 mil.ton/yıl

MEVCUT ÜRÜN YELPAZESİ AVAILABLE PRODUCTS

ARA ÜRÜNLER SEMI-PRODUCTS :



PİK PIG IRON



KÜTÜK BILLET

100 – 180 mm
Kare Kesitlerde Square

NİHAİ ÜRÜNLER FINISHED PRODUCTS:



KANGAL COIL

Ø5.5 mm – Ø16 mm

PIK DEMİR (CAST PIG IRON)

STANDARD DIN EN - 10001 - 1991

PIK DEMİRLER (PIG GRADES)	SİMGEİ (SYMBOLS)	KİMYASAL ANALİZ (%) (CHEMICAL ANALYSIS)				
		C	Si	MN	P	S
HEMATİT-1 PİKİ	H-1	3.3-4.5	2.01-2.60	0.4-1.2	0.12 Max	0.06 Max
HEMATİT-2 PİKİ	H-2	3.3-4.5	1.40-2.00	0.4-1.2	0.12 Max	0.06 Max
HEMATİT-3 PİKİ	H-3	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-4 PİKİ	H-4	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-5 PİKİ	H-5	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-6 PİKİ	H-6	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-7 PİKİ	H-7	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-8 PİKİ	H-8	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-9 PİKİ	H-9	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-10 PİKİ	H-10	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-11 PİKİ	H-11	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-12 PİKİ	H-12	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-13 PİKİ	H-13	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-14 PİKİ	H-14	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-15 PİKİ	H-15	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-16 PİKİ	H-16	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-17 PİKİ	H-17	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-18 PİKİ	H-18	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-19 PİKİ	H-19	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-20 PİKİ	H-20	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-21 PİKİ	H-21	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-22 PİKİ	H-22	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-23 PİKİ	H-23	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-24 PİKİ	H-24	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-25 PİKİ	H-25	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-26 PİKİ	H-26	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-27 PİKİ	H-27	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-28 PİKİ	H-28	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-29 PİKİ	H-29	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-30 PİKİ	H-30	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-31 PİKİ	H-31	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-32 PİKİ	H-32	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-33 PİKİ	H-33	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-34 PİKİ	H-34	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-35 PİKİ	H-35	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-36 PİKİ	H-36	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-37 PİKİ	H-37	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-38 PİKİ	H-38	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-39 PİKİ	H-39	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-40 PİKİ	H-40	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-41 PİKİ	H-41	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-42 PİKİ	H-42	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-43 PİKİ	H-43	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-44 PİKİ	H-44	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-45 PİKİ	H-45	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-46 PİKİ	H-46	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-47 PİKİ	H-47	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-48 PİKİ	H-48	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-49 PİKİ	H-49	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-50 PİKİ	H-50	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-51 PİKİ	H-51	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-52 PİKİ	H-52	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-53 PİKİ	H-53	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-54 PİKİ	H-54	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-55 PİKİ	H-55	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-56 PİKİ	H-56	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-57 PİKİ	H-57	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-58 PİKİ	H-58	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-59 PİKİ	H-59	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-60 PİKİ	H-60	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-61 PİKİ	H-61	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-62 PİKİ	H-62	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-63 PİKİ	H-63	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-64 PİKİ	H-64	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-65 PİKİ	H-65	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-66 PİKİ	H-66	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-67 PİKİ	H-67	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-68 PİKİ	H-68	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-69 PİKİ	H-69	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-70 PİKİ	H-70	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-71 PİKİ	H-71	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-72 PİKİ	H-72	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-73 PİKİ	H-73	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-74 PİKİ	H-74	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-75 PİKİ	H-75	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-76 PİKİ	H-76	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-77 PİKİ	H-77	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-78 PİKİ	H-78	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-79 PİKİ	H-79	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-80 PİKİ	H-80	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-81 PİKİ	H-81	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-82 PİKİ	H-82	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-83 PİKİ	H-83	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-84 PİKİ	H-84	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-85 PİKİ	H-85	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-86 PİKİ	H-86	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-87 PİKİ	H-87	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-88 PİKİ	H-88	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-89 PİKİ	H-89	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-90 PİKİ	H-90	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-91 PİKİ	H-91	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-92 PİKİ	H-92	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-93 PİKİ	H-93	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-94 PİKİ	H-94	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-95 PİKİ	H-95	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-96 PİKİ	H-96	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-97 PİKİ	H-97	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-98 PİKİ	H-98	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-99 PİKİ	H-99	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max
HEMATİT-100 PİKİ	H-100	3.3-4.5	1.01-1.39	0.5-1.5	0.25 Max	0.06 Max

ACIKLAMA:

- Bu Standartların dışındaki pikler , fabrika imkanları dahilinde özel anlaşmaya tabidir.

NOTE:

- Orders for pig iron type other than specified are subject to agreement.

HAM KATIRAN TAR

Su miktarı Water	:% 3 max
Yogunluk (d 20 °C) Density	:1.18 -1.25 g/cm³
Kül (susuz katrandal) Ash (dry tar)	:%0.30 max.
Kükürt (susuz katrandal) Sulphur (dry tar)	:%0.80 max.
Naftalin (susuz katrandal) Naphthalene(dry tar)	:% 10 max.
Fenol (susuz katrandal) Phenol (dry tar)	:% 1 max.
Kinolinde Çözünmeyen (susuz katrandal) Insoluble matter in Quinoline (dry tar)	:% 14 max.
Toluolde Çözünmeyen (susuz katrandal) Insoluble matter in Toluene (dry tar)	:% 23 max.
Viskozite 80°C Engler Viscosity	:13 max.
Donma Noktası Freezing point	:-2°C +4°C
Alevlenme Noktası Flash point°C	:110°C max.
Distilasyon Distillation	
0-180°C Geçen	:%2 max.
180-230°C Geçen	:%10 max.
230-270°C Geçen	:%12 max.
270-360°C Geçen	:%20 max.
+360°C (Zift) Pitch	:%65 max.
Kalori (kcal/kg) Calori	:8500 min.
Üretim miktarı Production capacity	:50.000 ton/yıl (t/year)

HAM BENZOL CRUDE BENZENE

Yoğunluk (d 20°C) Density	: 0.883-0.893 gr/cm ³
Distilasyon Distillation	
İlk damlama sıcaklığı Initial dropping point	: 70- 80°C
90°C Gecen	: %45- 60
100°C Gecen	: %70- 80
130°C Gecen	: %80- 88
150°C Gecen	: %83- 90
180°C Gecen	: %86- 93
Kuruma sıcaklığı Drying temperature	: 205- 225°C
Karbon Sülfür Carbon Sulphur	: %0,270 max.
Piridin Pyridine	: %1,50 gr./lt. max.
Toplam Kükürt Total Sulphur	: %0,230 max.
Tepkime Reaction	: Nötr Neutral
Su Miktarı Water	: Eser Trace
Üretim miktarı Production capacity	: 10.000 ton/yıl (t/year)

AMONYUM SÜLFAT AMONIUM SULPHATE:

Görünüm Appearance	: Beyaz renkte kristal Crystal white color
Kimyasal Bileşimi Chemical Compound	: (NH ₄) ₂ SO ₄
Rutubet Moisture	: %1 max
Serbest Asit Free Acid Content	: %0,1 max
Toplam Azot Total Nitrogen	: %20,9 min
Elek Analizi Mesh Analysis	
6 mesh (3.36mm) Elek üstü = %2 max.	
30 mesh (0.59mm) Elek üstü = %55 min.	
70 mesh (0.210mm) Elek üstü = %96 min.	
Üretim miktarı / Production capacity	: 12.000 ton/yıl (t/year)

İSDEMİR GRANÜLE CURUF SPESİFİKASYONU İSDEMİR GRANULATED SLAG SPECIFICATION

Kimyasal Özellikler Chemical Properties	
Element Oksit Element Oxide	% (Kuru Bazda) Dry
MgO	9.00 ± 3
SiO ₂	40.00 ± 4
CaO	34.00 ± 5
Al ₂ O ₃	13.00 ± 3
FeO	max. 1.00
MnO	max. 3.00
S	max. 1.40
K ₂ O	max. 3.00
TiO ₂	max. 0.70
Fiziksel Özellikler Physical Properties	
Elek Analizi Sieve Analysis:	%5 max. +10 mm -10 mm %95
Üretim miktarı Production capacity	: 500.000 ton/yıl (t/year)

CEVİZ KOK

% Toplam Nem <i>Total Moisture</i>	:11,0	max.	[ASTM 3302-91 veya D2961-93]
% Sabit Karbon(kb) * <i>Fixed Carbon</i>	:85,0	min.	[ASTM D3172-89]
% Kül(kb) <i>Ash</i>	:12,50	max.	[ASTM D3174-93]
% Uçucu Maddeler(kb) <i>Volatile Matters</i>	:1,70	max.	[ASTM D3175-89a]
% S(kb)	:0,70	max.	[ASTM D4239-94]
% P(kb)	:0,055	max.	[ASTM D4326-94]
% Kütle K2O (in ash)	:2,00	max.	[ASTM D4326-94]
% Kütle Na2O (in ash)	:1,00	max.	[ASTM D4326-94]
% Kok küllünde toplam alkali <i>Total alkali in coke ash</i>	:3,00	max.	
Net kalorifik değer <i>Net Calorific Value</i>	:6700 kcal/kg	min.	[ASTM D2015-94]
*[kb:kuru baz]			
Tane büyüklüğü <i>Grain Size</i>			
+25 mm	%10 max.		
-10 mm	%10 max.		

KOK TOZU MİKRONİZE

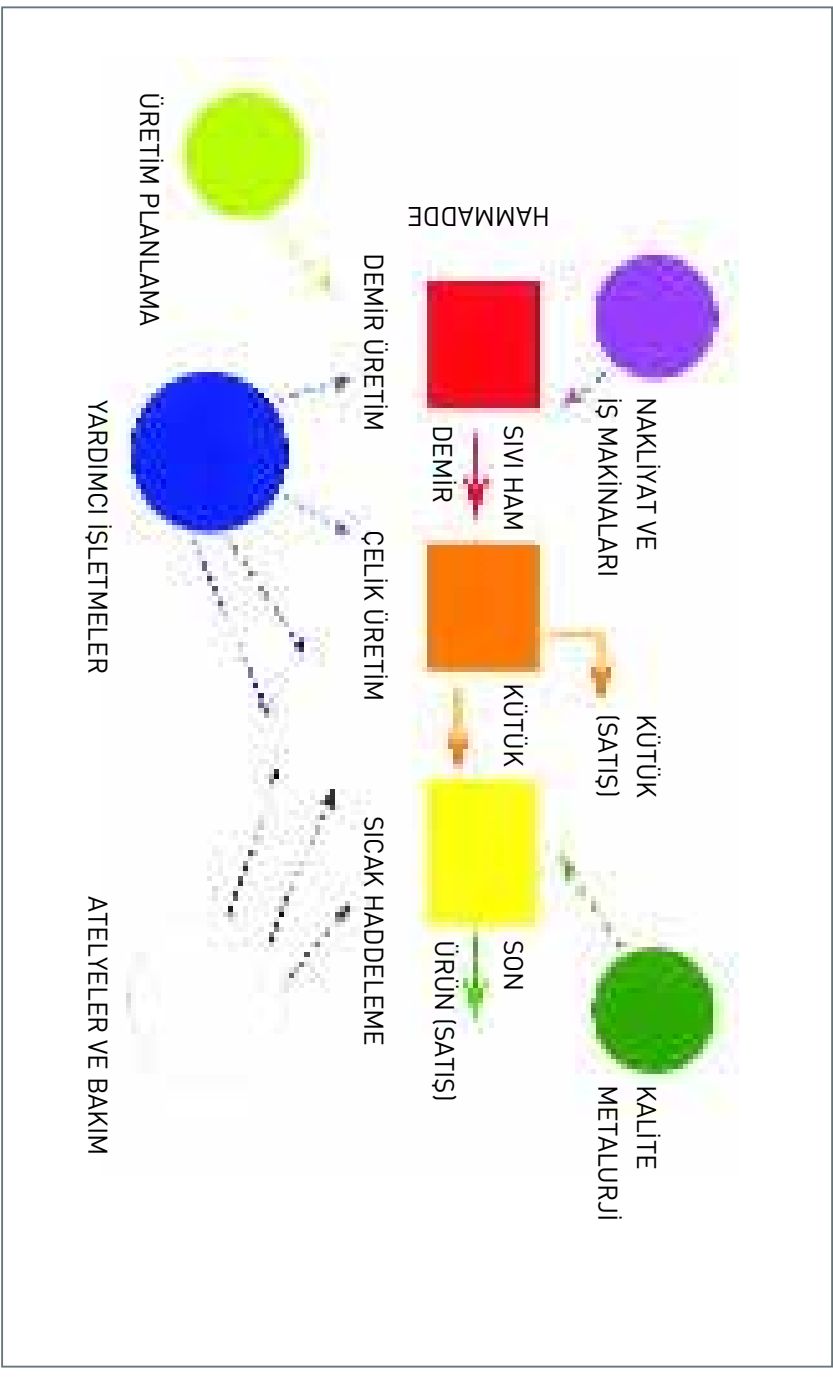
% Toplam nem Total Moisture	: 1 max.	[ASTM 3302-91 veya D2961-93]
% Sabit Karbon(kb) * Fixed Carbon	:84,0	min. [ASTM D3172-89]
% Kül(kb) Ash	:13,0	max. [ASTM D3174-93]
% Uçucu Maddeler(kb) Volatile Matters	:2,5	max. [ASTM D3175-89a]
% S(kb)	:0,70	max. [ASTM D4239-94]
% P(kb)	:0,055	max. [ASTM D4326-94]
% Külde K2O (in ash)	:2,00	max. [ASTM D4326-94]
% Külde Na2O (in ash)	: 1	max. [ASTM D4326-94]
Net kalorifik Değer Net Calorific Value	:6500 kcal/kg	min. [ASTM D2015-94]
* [kb:kuru baz]		
Üretim miktar Production capacity	: 10.000 ton / yıl [t/year]	



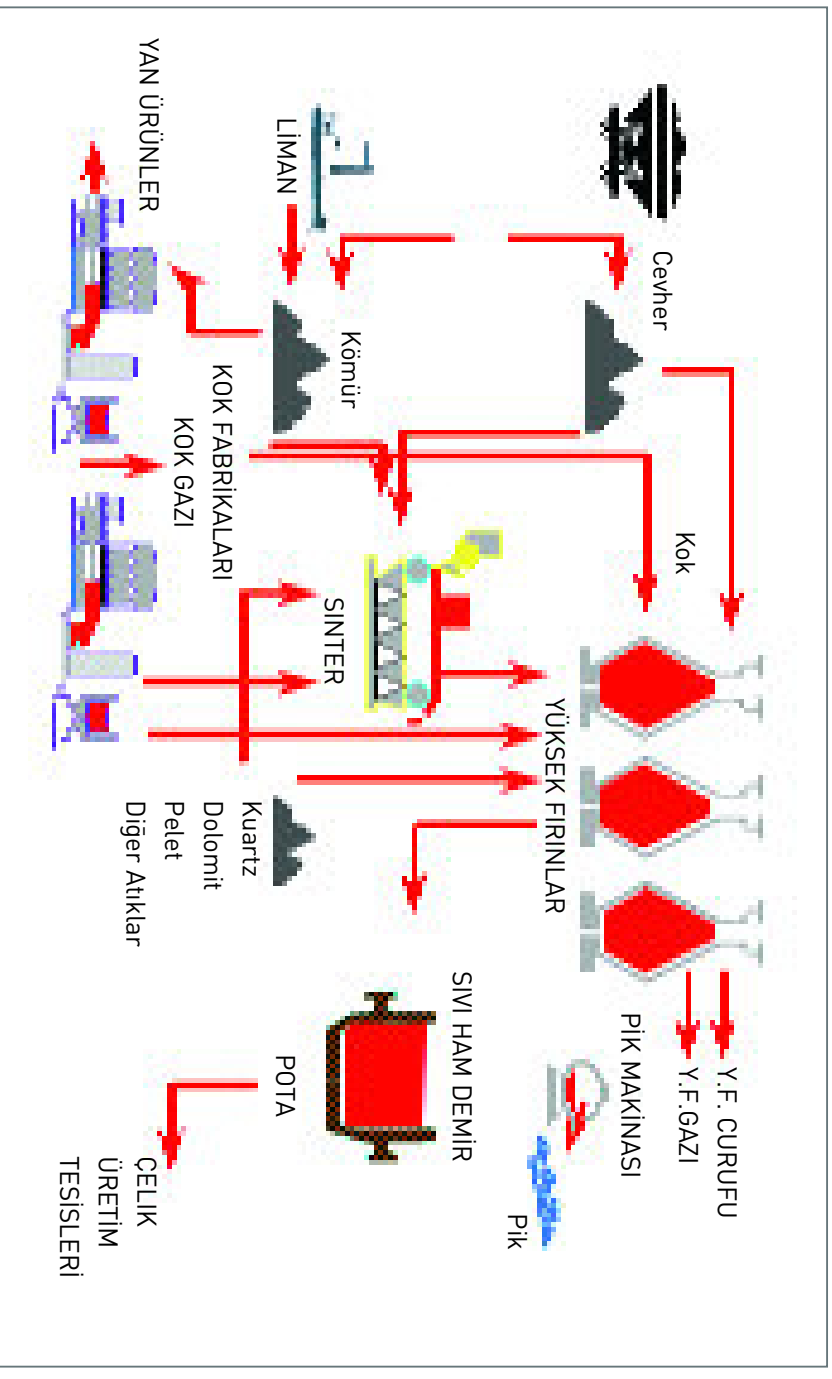
ÜRETİM SÜREÇLERİ

MANUFACTURING PROCESS

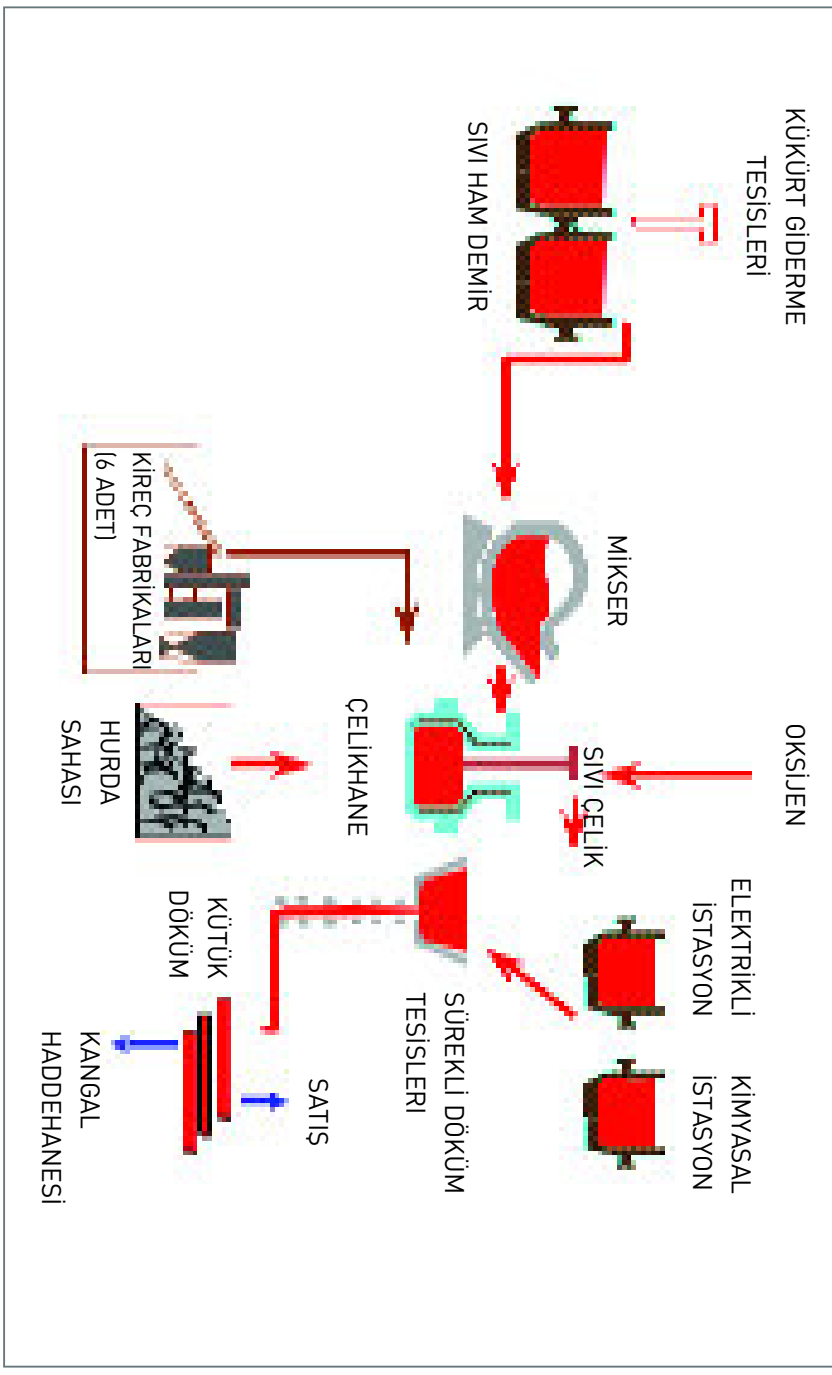
ÜRETİM SÜREÇLERİ MANUFACTURING PROCESS



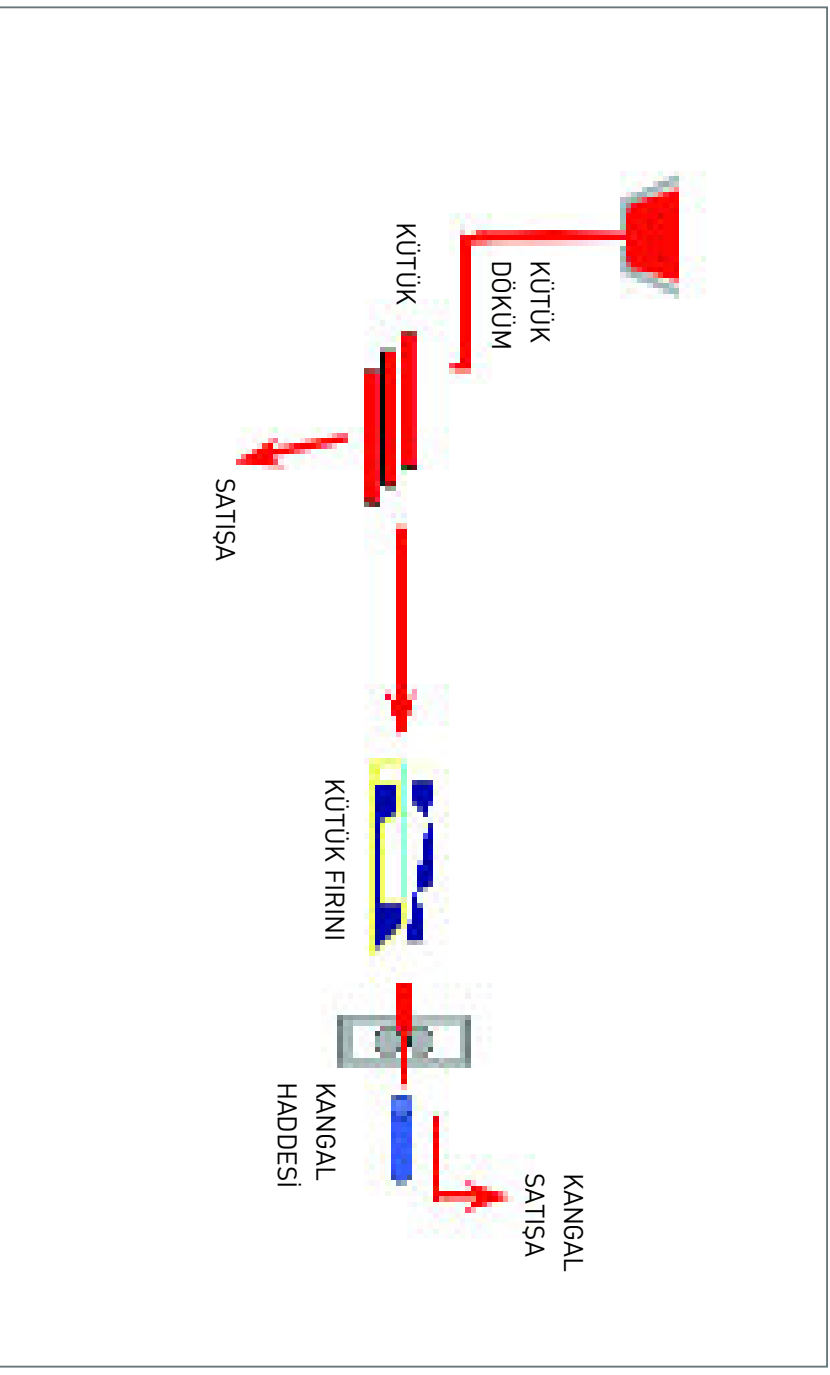
DEMİR ÜRETİM PROSES AKIM ŞEMASI IRON MANUFACTURING PROCESS



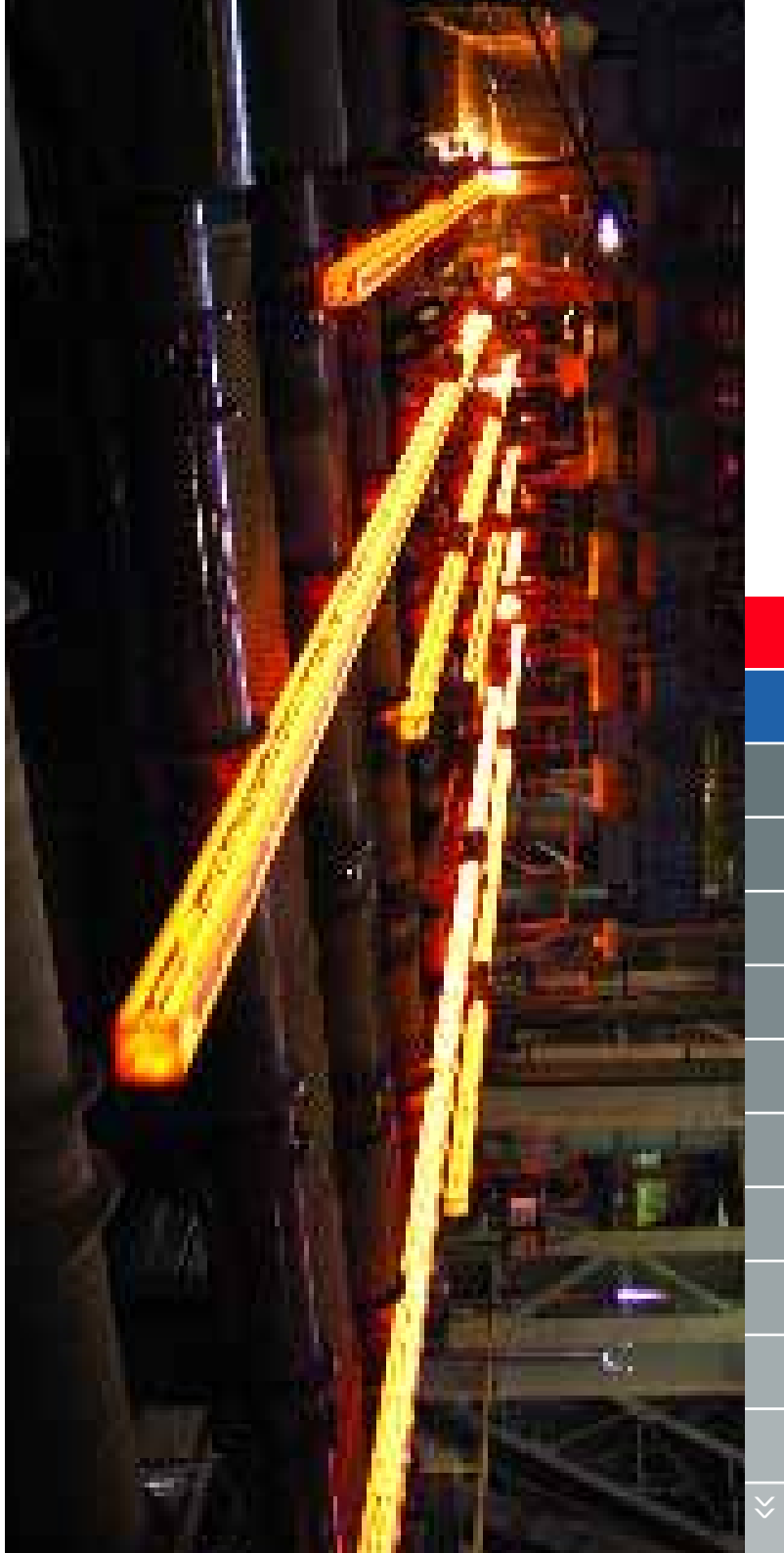
ÇELİK ÜRETİM PROSES AKIM ŞEMASI STEEL MANUFACTURING PROCESS



KANGAL HADDELEME PROSES AKIM ŞEMASI WIRE ROD MANUFACTURING PROCESS







YABANCI STANDARTLAR & ÇEVİRİM TABLOSU

FOREIGN STANDART & CONVERSION TABLE

YABANCI STANDARTLAR FOREIGN STANDARDS

ULUSAL STANDARTLAR VE İLGİLİ KURULUŞLAR NATIONAL STANDARDS AND RELATED BODIES

AA	The Aluminum Association	
ABS	American Bureau of Shipping	A.B.D
AEE	The Association of Energy Engineers	
AENOR	Asociacion Espanola de Normalizacion y Cetificacion	SPAIN
AFNOR	Association Française de Normalisation	FRANSA
AFS	American Foundrymen's Society	A.B.D
AISI	American Iron and Steel Institute	A.B.D
ALChE	American Institute of Chemical Engineers	A.B.D
ANSI	American National Standards Institute	A.B.D
API	American Petroleum Institute	A.B.D
ASM	ASM International - The Materials Information Society	
ASME	American Society of Mechanical Engineers	A.B.D
ASMI	American Society for Materials International	A.B.D
ASTM	American Society for Testing and Materials	A.B.D
ASNT	American Society for Nondestructive Testing	A.B.D
AWS	American Welding Society	A.B.D
BS	British Standards	İNGİLTERE
BSI	British Standards Institution	İNGİLTERE
CSA	Canadian Standards Association	KANADA
DIN	Deutsches Institut für Normung	ALMANYA
DS	Dansk Standard	DANİMARKA
ELOT	Hellenic Organization for Standardization	YUNANİSTAN
EN	European Standard	AVRUPA
EU	EURONORM	AVRUPA
FSA	Finnish Standards Association	FINLANDIYA
GOST	USSR State Standard	RUSYA
IBN	Institut Belge de Normalisation	BELÇİKA
ITRI	International Tin Research Institute	
ISO	International Organization for Standardization	ULUSLAR ARASI
JIS	Japanese Industrial Standard	JAPONYA
JSA	Japanese Standards Association	JAPONYA
LRS	Lloyd's Register of Shipping	İNGİLTERE
MIL	US Military Standards	A.B.D
NF	Norme Française	FRANSA
NNI	Netherlands Normalisatie Instituut	HOLLANDA
NSAI	National Standards Authority of Ireland	İRELAND
NSF	Norges Standardiseringsforbund	NORVEÇ
ON	Austrian Standards Institute	AVUSTURYA
SAE	Standards Australia	AUSTRALIA
SAE	Society of Automotive Engineers	A.B.D
SNV	Swiss Association for Standardization	İSVİÇRE
TSE	Türk Standardları Enstitüsü	TÜRKİYE
UNI	Ente Nazionale Italiano di Unificazione	İTALYA

ÇEVİRİM TABLOSU CONVERSION TABLE

BİRİM ADI UNITS TO CONVERT		DİĞER BİRİM KARŞILIKLARI UNIT EQUIVALENTS	
AĞIRLIK MASS			
1 ons [oz]	=	28.349523125 g	0.06250 lb
1 pound [lb]	=	453.59237 g	16 oz
1 kilogram [kg]	=	2.204622622 lb	35.27396195 oz
1 metrik ton [MT]	=	1000 kg	2204.622621849 lb
1 sort ton [ST]	=	907.18474 kg	2000 lb
1 long ton [LT]	=	1016.0469088 kg	1.12 ST
UZUNLUK LENGTH			
1 inç [in]	=	25.4 mm	0.0833333333 ft
1 mikroinç [min]	=	0.0254 mikron	0.0000254 mm
1 foot [ft]	=	30.48 cm	12 in
1 milimetre [mm]	=	0.0393700787 in	0.0032808399 ft
1 mikrometre [mikron]	=	0.001 mm	10000 angstrom
1 metre [m]	=	39.37007874 in	3.280839895 ft
1 yarda [yd]	=	91.44 cm	36 in
ALAN AREA			
1 inç²	=	6.4516 cm²	645.16 mm²
1 cm²	=	100 mm²	0.15500031 inç²
1 mm²	=	0.01 cm²	0.00155 inç²
1 ft²	=	92903.04 mm²	0.092290304 m²
HACİM-YOĞUNLUK VOLUME-DENSITY			
1 inç³	=	16.387064 cm³	16387.064 mm³
1 cm³	=	0.001 dm³	0.000001 m³
1 US galon [gal]	=	3.785411784 dm³	231 inç³
1 barel [bbl]	=	158.987294928 dm³	9702 inç³
1 kg/dm³	=	1 g/cm³	1000 kg/m³
1 gr/cm³	=	0.001 kg/cm³	0.03613 lbm/inç³
KUVVET FORCE			
1 kilogram - fors [kgf]	=	9.80665 N	2.204622622 lbf
1 Newton [N]	=	0.101971621 kgf	0.224808943 lbf
STRES-BASINÇ STRESS-PRESSURE			
1 kgf/mm²	=	9.80665 N/mm²	1422.3343307 psi
1 N/mm²	=	1 Mpa	0.1019716213 kgf/mm²
1 lbf/inç² [psi]	=	0.00070306958 kgf/mm²	0.00689475729 N/mm²
1 atmosfer [atm]	=	1.01325 bar	760 tor
1 bar	=	0.986923267 atm	0.1 N/mm²
ENERJİ ENERGY			
1 kgf.m	=	9.80665 J	2.343845602 kal
1 joule [J]	=	0.101971621 kgf.m	0.737562149 ft.lbf
1 kalori [kal]	=	4.1819 J	41819000 erg
1 Btu	=	107.585755851 kgf.m	1055.055852620 J
SICAKLIK TEMPERATURE			
° C [formül]	=	[°F-32] / 1.8	K-273.15
-20° C	=	-4° F	253.15 K
-10° C	=	14° F	263.15 K
-0° C	=	32° F	273.15 K
10° C	=	50° F	283.15 K
20° C	=	68° F	293.15 K

HATIRLATMA

Tablolarda gösterilen İSDEMİR kimyasal limitleri, referans değerlerdir ve sadece bilgi maksadı ile verilmiştir.

Aksi belirtilmedikçe, kesit "anma kesiti veya anma çapı" olarak kabul edilecektir. Anma çapı, müşterinin belirttiği tolerans aralığının ortasındaki değerdir.

Katalogda bulunmayan diğer ebatlar için lütfen ilişki kurduğunuz satış birimine sorunuz.

Çelik kaliteleri ve ürünlerimizin teknik spesifikasyonları hakkında daha fazla bilgi almak için lütfen Kalite Metalurji Müdürlüğü'nü arayınız.

REMARKS

Values of chemical compositions of steel grades which are specified as İSDEMİR are given for purpose of information only.

Nominal diameter is the meanvalue of the customer's request.

For other dimensions, connect your sales office.

If you have questions about our steel grades and technical specifications for the products or need more information, please contact to Department at Quality Metallurgy.



ADRESLER ADDRESS

İSKENDERUN DEMİR VE ÇELİK A.Ş. GENEL MÜDÜRLÜĞÜ İSKENDERUN IRON & STEEL WORKS CO.

31319 İSKENDERUN / TÜRKİY

Tel. :90 (326) 758 4040 (Santral-PBX)

Tel. :90 (326) 758 (İlgili Servis/Dept. İn charge)

Fax. :90 (326) 755 1184- 758 5351 -758 3838

http ://www.isdemir.com.tr

e-mail:info@isdemir.com.tr

GENEL MÜDÜRLÜK

HEAD OFFICE

Tel. :90 (326) 758 3100

Fax. :90 (326) 755 1184

PAZARLAMA ve İHRACAT MÜDÜRLÜĞÜ MARKETING & EXPORTS

Tel. :90 (326) 758 3092-758 4092

:90 (326) 758 4993-758 4212

Fax. :90 (326) 755 1943

SATIŞ MÜDÜRLÜĞÜ SALES DEPARTMENT

Tel. :90 (326) 758 3097-758 5497

:90 (326) 758 3297-758 3397-758 3597

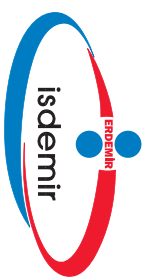
Fax. :90 (326) 758 4747

KALİTE METALURJİ MÜDÜRLÜĞÜ QUALITY METALLURGY MANAGEMENT

Tel. :90 (326) 758 3082-758 4582

Fax. :90 (326) 758 4883





İSKENDERUN DEMİR VE ÇELİK A.Ş. GENEL MÜDÜRLÜĞÜ
İSKENDERUN IRON & STEEL WORKS CO.
31319 İSKENDERUN / TÜRKİY
www.isdemir.com.tr