SUGAR STEEL CORPORATION

DATA

BARS AND SHAPES

CHEMICAL COMPOSITION

ASTM A 36

THICKNESS OR DIAMETER	C MAX	Mn	P MAX	S MAX	Si MAX
ALL SHAPES	.26	--	.04	.05	.40
BARS to 3/4" incl.	.26	--	.04	.05	.40
BARS over 3/4" to 1-1/2" incl.	.27	.60/.90	.04	.05	.40
BARS over 1-1/2" to 4" incl.	.28	.60/.90	.04	.05	.40
BARS over 4"	.29	.60/.90	.04	.05	.40

MECHANICAL PROPERTIES

ASTM A 36

MECHANICAL PROPERTIES	BARS	SHAPES
YIELD POINT, MIN, KSI	36	36
TENSILE, KSI	58-80	58-80
ELONGATION IN 8 INCHES, MIN, %	20*	20*
ELONGATION IN 2 INCHES, MIN, %	23	21

CHEMICAL COMPOSITION

ASTM A 572 GRADE 50

STRUCTURAL SHAPE FLANGE OR LEG THICKNESS	C MAX	Mn MAX	P MAX	S MAX	Si MAX %	Si RANGE %
ALL SHAPES	.23	1.35	.04	.05	.40	.15 / .40

MECHANICAL PROPERTIES

ASTM A 572 GRADE 50

MECHANICAL PROPERTIES	BARS	SHAPES
YIELD POINT, MIN, KSI	50	50
TENSILE, KSI	65	65
ELONGATION IN 8 INCHES, MIN, %	18	18
ELONGATION IN 2 INCHES, MIN, %	21	21

W SHAPES

(% -- MAX. UNLESS RANGE IS SHOWN)

ASTM A 992		ASTM A 572 GRADE 50					ASTM A 709 GRADE 709			
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	.Sn	Other
.23	.50 / 1.35	.035	.045	.40	.60	.45	.35	.15	.02	Cb .005 / .11 or V .01 /.11 Cb + V = .02/.11 N+ .015 max

MECHANICAL PROPERTIES

YEILD POINT, KSI	50-65
TENSILE, MIN, KSI	65 MIN
YIELD TO TENSILE RATIO	.85 MAX
ELONGATION IN 8 INCHES %	18 MIN
ELONGATION IN 2 INCHES %	21 MIN

Description	Size Range Inches	COMPOSITION % (Maximum unless otherwise specified) C	Mn	p	S	Si	Other	Mechanical Tensile Strength ksi ***	Yield Strength ksi ***	Elongation * % in 8"	Elongation * % in 2"	Typical ** Rockwell Hardness
									min	min	min	
ASTM A 36	3/4 & Under	.25	- - -	.04	.05	.40	- - -	58 / 80	36	18	21	B76
	Over 3/4 - 1-1/2	.25	.80 / 1.20	.04	.05	.40	- - -	"	"	"	"	"
	Over 1-1/2 -- 2-1/2	.26	.80 / 1.20	.04	.05	.15 / .40	- - -	"	"	"	"	"
	Over 2-1/2 -- 4	.27	.85 / 1.20	.04	.05	.15 / .40	- - -	"	"	"	"	"
	Over 4 -- 8	.29	.85 / 1.20	.04	.05	.15 / .40	- - -	"	"	"	"	"
	Over 8 -- 10	.29	.85 / 1.20	.04	.05	.15 / .40	- - -	58 / 80	32	18	21	B76
ASTM A 572 Gr 50	3/8 & Under	.23	.50 / 1.35	.04	.05	.40	V .01/.15 or Cb .005/.05	65	50	16	19	B79
	Over 3/8 -- 1-1/2	.23	.80 / 1.35	.04	.05	.40	V .01/.15 or Cb .005/.05	"	"	"	"	"
	Over 1-1/2 -- 2-1/2	.23	.80 / 1.35	.04	.05	.15 / .40	V .01/.15 or Cb .005/.05	"	"	"	"	"

* Adjustments required for thickness under 5/16" and over 3-1/2"

** NOT GUARANTEED for REPORTED by producing mill

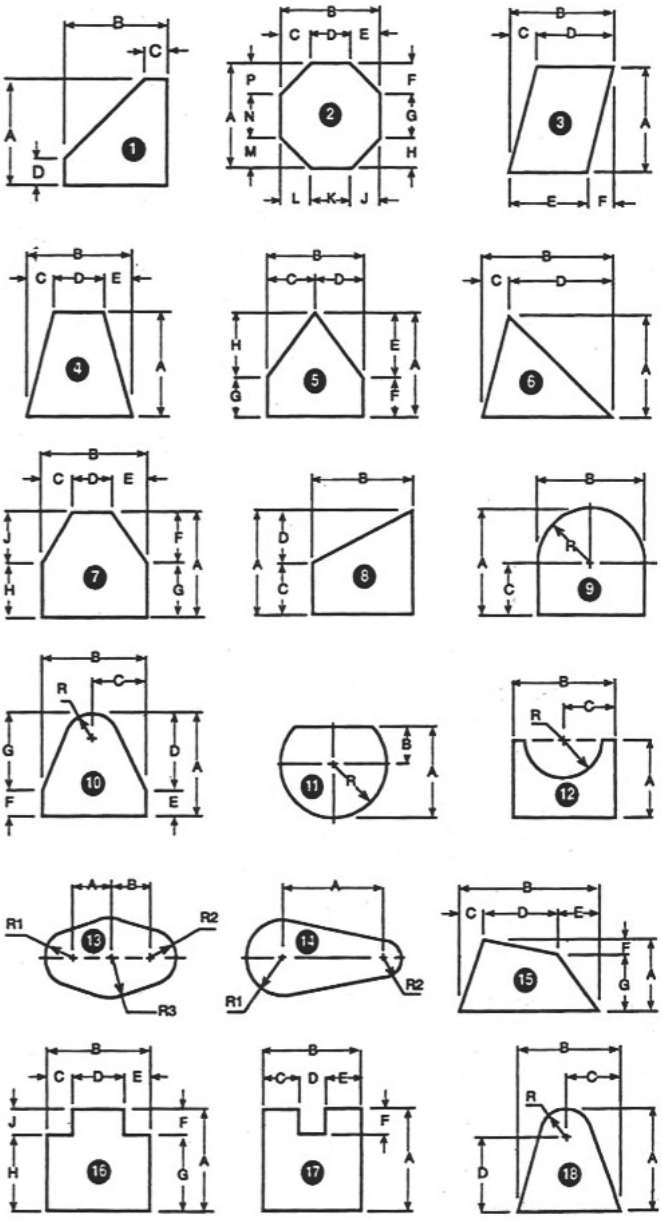
*** 1 ksi = 1000 psi

STANDARD GAGE FOR CARBON STEEL SHEETS

THICKNESS				WEIGHT	
MSG NUMBER	SHEET EQUIVALENT INCHES	ORDER LIMIT INCHES	LBS PER SQ FT	ORDER LIMIT LBS.	MSG NUMBER
4	.2242	.2299 to .2168	9.375	9.618 to 9.063	4
5	.2092	.2167 to .2018	8.750	9.062 to 8.438	5
6	.1943	.2017 to .1869	8.125	8.437 to 7.813	6
7	.1793	.1868 to .1719	7.500	7.812 to 7.188	7
8	.1644	.1718 to .1570	6.875	7.187 to 6.563	8
9	.1495	.1569 to .1420	6.250	6.562 to 5.938	9
10	.1345	.1419 to .1271	5.625	5.937 to 5.313	10
11	.1196	.1270 to .1121	5.000	5.312 to 4.688	11
12	.1046	.1120 to .0972	4.375	4.687 to 4.063	12
13	.0897	.0971 to .0822	3.750	4.062 to 3.438	13
14	.0747	.0821 to .0710	3.125	3.437 to 2.969	14
15	.0673	.0709 to .0636	2.812	2.968 to 2.657	15
16	.0598	.0635 to .0568	2.500	2.656 to 2.375	16
17	.0538	.0567 to .0509	2.250	2.374 to 2.125	17
18	.0478	.0508 to .0449	2.000	2.124 to 1.875	18
19	.0418	.0448 to .0389	1.750	1.874 to 1.625	19
20	.0359	.0388 to .0344	1.500	1.624 to 1.438	20
21	.0329	.0343 to .0314	1.375	1.437 to 1.313	21
22	.0299	.0313 to .0284	1.250	1.312 to 1.188	22
23	.0269	.0283 to .0255	1.125	1.187 to 1.063	23
24	.0239	.0254 to .0225	1.000	1.062 to .938	24
25	.0209	.0224 to .0195	.875	.937 to .813	25
26	.0179	.0194 to .0172	.750	.812 to .719	26
27	.0164	.0171 to .0157	.688	.718 to .657	27
28	.0149	.0156 to .0142	.625	.656 to .594	28
29	.0135	.0141 to .0128	.562	.593 to .532	29
30	.0120	.0127 to .0113	.500	.531 to .469	30

STANDARD PLATE SHAPES

SHEETS AND PLATES CAN BE BURNED TO THE FOLLOWING STANDARD SHAPES OR CUSTOM BURNED PER YOUR REQUIRED SKETCHES.



To Order, Specify:

*Sketch number and Dimensions (or furnish drawing)

*Material type and thickness

*Quanity required

*Special Requirements (tolerances, machining allowances, etc.)

	Decimals	Millimeters	Millimeters	Decimals	
1/64	.0156	0.3969	13.0969	0.5156	33/64
1/32 ------	.0312	0.7925	13.4925	.5312	------- 17/32
3/64	.0469	1.1906	13.8906	.5469	35/64
1/16 ----------	.0625	1.5875	14.2875	.5625	---------- 9/16
5/64	.0781	1.9844	14.6844	.5781	37/64
3/32 --------	.0938	2.3813	15.0813	.5938	-------- 19/32
7/64	.1094	2.7781	15.4781	.6094	39/64
1/8 ----------	.125	3.1750	15.8750	.625	---------- 5/8
9/64	.1406	3.5719	16.2719	.6406	41/64
5/32 -----	.1562	3.9675	16.6675	.6562	------ 21/32
11/64	.1719	4.3656	17.0656	.6719	43/64
3/16 ----------	.1875	4.7625	17.4625	.6875	----------11/16
13/64	.2031	5.1594	17.8594	.7031	45/64
7/32 --------	.2188	5.5563	18.2563	.7188	-------- 23/32
15/64	.2344	5.9531	18.6531	.7344	47/64
1/4 ----------	.250	6.3500	19.0500	.750	--------- 3/4
17/64	.2656	6.7469	19.4469	.7656	49/64
9/32 -------	.2812	7.1425	19.8425	.7812	------- 25/32
19/64	.2969	7.5406	20.2406	.7969	51/64
5/16 ----------	.3125	7.9375	20.6375	.8125	----------13/16
21/64	.3281	8.3344	21.0344	.8281	53/64
11/32 --------	.3438	8.7313	21.4313	.8438	-------- 27/32
23/64	.3594	9.1281	21.8291	.8594	55/64
3/8 ----------	.375	9.5250	22.2250	.875	---------- 7/8
25/64	.3906	9.9219	22.6219	.8906	57/64
13/32 --------	.4062	10.3175	23.0175	.9062	-------- 29/32
27/64	.4219	10.7156	23.4156	.9219	59/64
7/16 ----------	.4375	11.1125	23.8125	.9375	----------15/16
29/64	.4531	11.5094	24.2094	.9531	61/64
15/32 --------	.4688	11.9063	24.6063	.9688	-------- 31/32
31/64	.4844	12.3031	25.0031	.9844	63/64
1/2 ----------	.500	12.7000	25.4000	1.000	---------- 1