

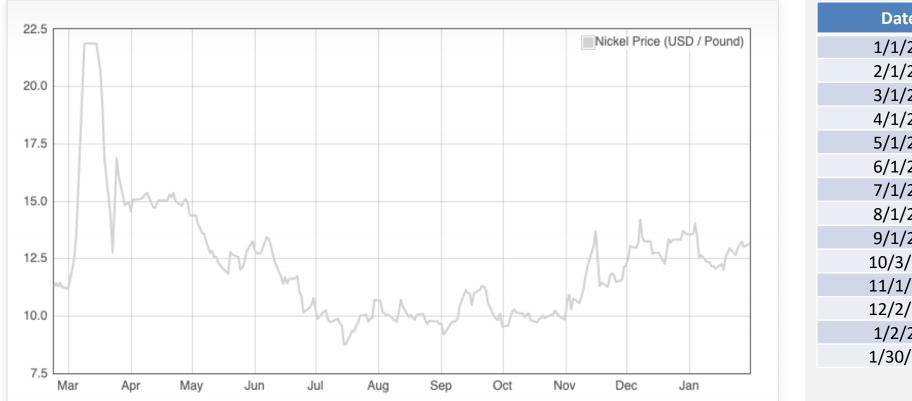
# PENN STAINLESS PRODUCTS, INC.

# STAINLESS PRICING UPDATE FEBRUARY 1, 2023



# NICKEL

## Nickel Prices for the Last Year



Date	USD/lb.
1/1/22	\$9.47
2/1/22	\$10.23
3/1/22	\$11.59
4/1/22	\$15.07
5/1/22	\$14.54
6/1/22	\$12.73
7/1/22	\$9.87
8/1/22	\$8.95
9/1/22	\$9.18
10/3/22	\$9.59
11/1/22	\$10.67
12/2/22	\$12.47
1/2/23	\$13.56
1/30/23	\$13.16



# **CHROME**

### \$2.50 European \$2.16 Ferrochrome Benchmark \$2.00 \$1.80 \$1.80 \$1.80 \$1.56 \$1.56 Q1 \$1.49 \$1.49 \$1.50 Q2 Q3 \$1.00 Q4 \$0.50 \$0.00

Q2 2021 Q3 2021 Q4 2021 Q1 2022 Q2 2022 Q3 2022 Q4 2022 Q1 2023

Chrome \$/lb

# **PSP**

Surcharge Month

Applied

February, March and

April

May, June and July

August, September and

October

November, December

and January

# **MOLYBDENUM**

## Molybdenum Prices for the Last Year





# **RAW MATERIAL SURCHARGES (304/304L)**



PENN STAINLESS PRODUCTS, INC.

# **ESP**

# RAW MATERIAL SURCHARGES (316/316L)



# LINE CARD

PSP



### INVENTORY OVERVIEW

### PLATE & DIAMOND PLATE

3/16" through 6" thick - 36"-120" wide stock plates - Mill Finish & #4 Polish Grades Available: 302 • 303 • 304 • 304/L • 304H • 304 #4 Polish • 309S • 310S • 316L • 317L • 317LMN 321/H · 347/H Duplex 2205 · 254SMO · 17-4PH · 405 · 410 · 416 · 420 · 440C

### SHEET PRODUCTS

28 through 7 Gauge - 36"-72" Wide - 2B Finish · #4 Finish · #8 Finish · Perforated · Expanded Metal Grades Available: 302 • 304 • 304/L • 304 #4 Polish • 304 #8 Mirror • 309S • 310S • 316L • 316L #4 Polish 321 • 347 • Duplex 2205 • 409 • 410 • 430 • 430BA • 17-4PH • 17-7PH • 3011/4 Hard • 3011/2 Hard • 301 Full Hard

BAR: ROUND · SQUARE · HEX · ROLLED FLAT · S/E FLAT BAR · HALF ROUNDS Size Range: Round 3/32" thru 20" - 12'-20' R/L - Accuracy & Bearing Quality Grades Available: 302 • 303 • 304/L • 309S • 310S • 316/L • 321 • 347 • Duplex 2205 • 410 • 410HT • 416 416HT • 420 • 430 • 440C • 17-4Ph • 17-4H1150 • Duplex 2205 • Alloy 20

STRUCTURAL: ANGLES · UNEVEN LEG ANGLES · CHANNEL · TEES · BEAMS Laser-fused & Hot-rolled Structurals · Ornamentals in Recs, Squares and Rounds Grades Available: 304 · 304/L · 316/L

#### TUBING: SEAMLESS & WELDED · HEAVY WALL HOLLOW BAR Size Range: 1/16" OD through 14" OD - Light gauge up to 2" thick wall Grades Available: 304/L • 304H • 309 • 310 • 316L • 321 • 347 • Duplex 2205 • Allov 20 • Nickel Allovs

PIPE: WELDED & SEAMLESS Size Range: 1/8" through 24" - Sch: 5 thru DXH Grades Available: 304/L • 304H • 309 • 310 • 316/L • 317/L • 321/H • 347/H • Duplex 2205 • Nickel Alloys

### PENNMET 2000 MACHINING BAR

Available in round, square and hex Improved machinability . Consistent performance from lot to lot . Longer tool life . Improved surface finish . Excellent availability

### MATERIAL PROCESSING

### SPECIALTY PIPE AND TUBE

Supply of non-standard tube, pipe and structural items with reduced lead times. Size range ¼" through 96" diameter, with wall thicknesses through 3" Grades Available: 300 Series • Duplex Grades • 6-Moly • Nickel Alloys

### PLATE PROCESSING

Waterjet cutting through 8-1/2" · Cutting envelope 10' x 20' (five waterjet stations) Laser plate cutting through 1-1/8" · Cutting envelope 13' x 60' Shear cutting . Plate saw cutting . Plasma / HQ Plasma cutting . Machine cut rings & discs . Processed flat bar

### BAR & LONG PRODUCT PROCESSING

Cutting through 26" diameter · Production cutting with precision tolerances through 4" diameter Tubular products, structurals and bar products can be cut to the exact length.

### 24-HOUR EMERGENCY SERVICE - CALL 267-374-6463

PENN STAINLESS PRODUCTS + 190 KELLY ROAD + QUAKERTOWN, PA 18951-9001 TOLL FREE: 1-800-222-6144 + PHONE: 215-536-3053 + WWW.PENNSTAINLESS.COM

F Tolera	nces	10000			Plu	8	Minus	Permitted Variations in Thickn	ess for Col	d-Rolled, Narro	w, Coll-Process	ed Produc	
1/8"	to	5/16*	{e:	xclusive)	0.00	1	0.001	Coils and Cut Lengths	_				
5/16"	to	1/2*	(exclusive)		0.0015		0.0015				ess Tolerances, for the Thickness and		
1/2"	to	to 1*		xclusive)	0.00	2	0.002	Specified Thickness, in.	Widths Given, Over and Under, in.				
1*	to	1-1/2	(ex	exclusive)	0.0025				Width (w), in.				
1-1/2	to to	4*	(inclusive)		0.003		0.003		=4	0 40<1	w≤50 5	0 < w \$84	
IF Tolera					Plu		Minus			Thicknes	is Tolerances		
Over 2		2-1/2		nclusive)	1/3		0.000	Over 0.012 to 0.015, incl.	0.00	15 0.0	015	-	
Over 2-1		3-1/2	P-1	(clusive)	3/6		0.000	Over 0.016 to 0.020, incl.	0.00	15 0.0	015	-	
Over 3-1		4-1/2*	- (**	clusive)	1/10	_	0.000	Over 0.020 to 0.024, incl.	0.00	12 0.1	002		
4-1/4		5-1/2		(clusive)	5/6	-	0.000	Over 0.025 to 0.032, incl.	0.00	12 0.1	002	-	
5-1/2	10	6-1/2*	. De	clusive)	1/8	-	0.000	Over 0.033 to 0.040, incl.	0.00	25 0.0	025	0.003	
6-1/2	10	8"	<u> </u>	(usive)	5/3	_	0.000	Over 0.041 to 0.047, incl.	0.00	a 0.1	003	0.003	
8*	10	12"		clusive)	3/1	_	0.000	Over 0.048 to 0.059, incl.	0.00		003	0.004	
12"	to	15*	<i>b</i>	(clusive)	7/3		0.000	Over 0.060 to 0.079, incl.	0.00		004	0.0045	
15"	10	25*		clusive)	1/4		0.000	Over 0.099 to 0.118, incl.	0.00		005	0.006	
10	10	20	- De	iciosive)	1.04		0.050	Over 0.119 to 0.157, incl.	0.00		007	0.007	
TAINL	ESS HO	T FINIS	HED F	LATS	ROLLE	DASE	AR	Over 0.158 to 0.197, incl.	0.00		007	0.0075	
ED AS	TM A4	79 / A	484					Over 0.198 to 0.236, incl.	-				
				Thickness Tolerance in									
			Thick	mess Tole	rance in I	nohes			0.00		208	0.009	
Width	Width Tolerance	1.27	over 1/2 - 1	over 1 - 2	over 2-4	over 4-6	over 6 - 8	Over 0.236 to 0.3125, incl. Note 1 — Thickness measure product, except on	0.00 ments are widths less	taken at least 3 s than 1 in. the I	009 V8 in. in from th	0.010 e edge of	
Width inches)		1/8 - 1/2 +0.008 -0.008 +0.012 -0.012 +0.015	over	over	over	over		Over 0.236 to 0.3125, incl. Note 1 — Thickness measure product except on taken at least 18 ir Note 2 — The loterances in 8 HOT ROLLED SHEE	0.00 ments are widths los: a from the his table in T / CC Permitted	17 0.1 taken at least 3 s than 1 in. the s product edge. clude crown tole DIL PER AS Variation, in. 0	109 It& in. in from If measurements mances STM A48 Wer and Unde	0.010 ne edge ol should be 0	
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Width inches) o 1 (incl) over 1 to 2 over 2 to 4 over	Tolerance +0.015 -0.015 +0.031 -0.031 +0.062 -0.031 +0.093	+0.008 -0.008 +0.012 -0.012 +0.015 -0.015 +0.015	over 1/2 - 1 +0.010 -0.010 +0.015 +0.020 -0.020 +0.020	+0.031 +0.031 +0.031 +0.031 +0.031 +0.031	+0.062 +0.031 +0.062	over 4-6		Over 0.236 to 0.3125, incl. Note 1 — Thickness measure naken at least 1.80 Note 2 — The lokerances in the HOT ROLLED SHEEP Specified Thickness*, in.	0.00 ments are widths less to from the this table in T / CC Permitted Indicated w	7 0.0 taken at least 3 s then 1 in. the s product edge. clude crown tole DIL PER AS Variation, in., 0 1 Otherwise, fo	109 Its in in from the measurements Indexes STM A48 Ver and Under Specified With W 2	0.010 re edge o should be 0 r, Except dth (w) in • 60	
Width inches) 0 1 (incl) 0 ver 1 to 2 0 ver 2 to 4 0 ver 4 to 6	Tolerance +0.015 -0.015 +0.031 -0.031 +0.062 -0.031 +0.093 -0.062	+0.008 -0.008 +0.012 -0.012 +0.015 -0.015 +0.015 -0.015	0ver 1/2 - 1 +0.010 -0.010 +0.015 +0.020 -0.020 +0.020 +0.020 -0.020	+0.031 +0.031 +0.031 +0.031 -0.031 +0.031 +0.031 -0.031	+0.062 -0.031 +0.062 -0.031	evver 4-6	6-8	Over 0.236 to 0.3125, incl. Note 1 — Trickmass measure product except on faith and the over t	0.00 ments are widths leas to from the his table in T / CC Permitted Indicated w -0.010	77 0.0 taken at least 3 s then 1 in. the s product edge. clude crown tole DL PER AS Variation, In., C 1 Otherwise, foi ≤ 60 0, +0.020	109 109 109 100 100 100 100 100	0.010 re edge ov should be 0 r, Except dth (w) in 60 +0.020	
Width inches) o 1 (incl) over 1 to 2 over 2 to 4 over 4 to 6 over	Tolerance +0.015 -0.015 +0.031 -0.031 +0.062 -0.031 +0.093 -0.062 +0.125	+0.008 -0.008 +0.012 -0.012 +0.015 -0.015 +0.015 -0.015 +0.016	0ver 1/2 - 1 +0.010 -0.010 +0.015 -0.015 +0.020 -0.020 +0.020 +0.020 +0.025	+0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031	+0.062 -0.031 +0.062 -0.031 +0.062 +0.031 +0.062	evver 4-6	6-8	Over 0.236 to 0.3125, incl. Note 1 — Trickmess measure product, except on taken at least T&B or Note 2 — The locarators in the HOT ROLLED SHEEE Specified Thickmess* in. 20.1875 to 0.250 20.250 to 0.3125	0.00 ments are widths lease to from the his table in T / CCC Permitted Indicates w -0.010 -0.010	77 0.0 taken at least 3 s then f in. the e product edge. Out PER AS Variation, in., C 9 Othermise, for ≤ 60 0, +0.020 0, +0.022	109 108 in. in from # measurements ances STM A48 Ster and Under 2 Specified Wi -0.010, -0.010,	0.010 we edge or should be 0 7, Except dth (w) in • 60 +0.020 +0.022	
Width inches) 0 1 (incl) 0 ver 1 to 2 0 ver 2 to 4 0 ver 2 to 4 0 ver 4 to 6 0 ver 6 to 8	Tolerance +0.015 -0.015 +0.031 +0.062 -0.031 +0.062 -0.082 +0.082 +0.125 -0.156	+0.008 -0.008 +0.012 -0.012 +0.015 -0.015 -0.015 +0.016 -0.016 -0.016	00000 1/2 - 1 +0.010 -0.010 +0.015 -0.020 -0.020 +0.020 -0.020 +0.025 -0.025 -0.025	+0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031	2-4 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031	+0.093 -0.062	6-8	Over 0.238 to 0.3125, incl.           Note 1 - 7hickness magazing for the magazing for the second second second second the second second second second the second second second second HOT ROLLEONER           Specified Thickness, Inc.           >0.1875 to 0.220 < 250 to 0.3125	0.00 mends are widths lease to from the his table in the table in the table in the table in the table in the table in the table in table in the table in ta	77 0.0 taken at least 3 s then f in. the e product edge. OLL PER AS Variation, in., C 9 Othermise, for 1 Othermis	209 18 in. in from # measurements ances 5TM A48 5TM A48 5TM A48 5TM A48 5TM A48 5TM A48 500 and Under 5 Specified Wi 0010, -0.010, -0.010, -0.010,	0.010 e edge o should be 0 f. Except dth (w) in 60 +0.020 +0.022 +0.030	
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Width nches) 1 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 4 to 6 over 6 to 8 over	Tolerance +0.015 -0.015 +0.031 +0.062 -0.031 +0.062 -0.082 +0.082 +0.125 -0.156	+0.008 -0.008 +0.012 -0.012 +0.015 -0.015 -0.015 +0.016 -0.016 -0.016	00000 1/2 - 1 +0.010 -0.010 +0.015 -0.020 -0.020 +0.020 -0.020 +0.025 -0.025 -0.025	+0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031	2-4 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031	+0.093 -0.062	6-8	Over 0.2305 to 0.3125, incl.           Note 1 – Thickness measure products (except on product (except on products)           Note 2 – The Inferences in 10           HOT ROLLED SHEET Thickness, I.a. >0.1875 to 0.250           >0.550 to 0.3125           >0.3125           >17bickness measurements an	0.00 ments are widths less to from the his table in the stable in the stable in the st	77         0.1           i takan at least 3         5 than 1 in. the 4           is than 1 in. the 4         6.           product edge.         clude crown tole           DL PER AS         Variation, In., 0           I Otherwise, for 3         60           0, +0.020         0, +0.020           0, +0.030         east 3/8 in. from	109 IS in, in from M measurements wrances STM A48 West and Under specified W -0.010,	0.010 e edge c should b 0 f Excep dth (w) +0.020 +0.022 +0.030	
Width inches) 0 1 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 6 to 8 over 8 to 10	Tolerance +0.015 -0.015 +0.031 +0.062 -0.031 +0.062 -0.081 +0.062 +0.125 -0.156 +0.156	+0.008 -0.008 +0.012 -0.015 -0.015 -0.015 -0.015 +0.015 -0.016 +0.016 +0.020 -0.020	00000 1/2 - 1 +0.010 -0.010 +0.015 -0.020 -0.020 +0.020 -0.020 +0.020 -0.020 +0.025 -0.025 +0.031 -0.031	+0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 -0.031	2-4 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031	4-6 4-6 	6-8	Over 0.238 to 0.3125, incl.           Note 1 - 7hickness magazing for the magazing for the second second second second the second second second second the second second second second HOT ROLLEONER           Specified Thickness, Inc.           >0.1875 to 0.220 < 250 to 0.3125	0.00 ments are widths lease to from the his table in T / CC Permitted Indicates w -0.010 -0.010 -0.010 -0.010 -0.010 -0.010 -0.010	17     0.0     7	109 108 in. in from M measurements FTM A48 FTM FTM FTM FTM FTM FTM FTM FTM FTM FTM	0.010 e edge c should b 0 r, Except dth (w) l +0.020 +0.022 +0.030 e sheet	
Width nches) 1 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 4 to 6 over 6 to 8 over 8 to 10 TAINL	Tolerance +0.015 +0.031 +0.031 +0.031 +0.062 -0.031 +0.062 +0.125 -0.156 +0.156 +0.187	+0.008 -0.008 +0.012 -0.012 +0.015 -0.015 +0.015 +0.016 -0.016 +0.020 -0.020	00000 1/2 - 1 +0.010 -0.010 +0.015 -0.020 +0.020 +0.020 +0.025 -0.025 +0.025 +0.031 -0.031 5 & WE	+0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 =0.031	2-4 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 STAND	4-6 4-6 	6-8	Over 0.228 (s) 0.312; mel           Notr 1 – Thickness measure facts measure the sear for the Note 2 – The Kreameet in the Note 2 – The Kreameet in the HOT ROLLED SHEEE           Specific 1           10,157 (s) 0.250           >0.3125           "Thickness measurements and 30.3125           "Thickness before before PLANE THECKNESS Telerance before apply to the 1 -7.4, Daples Grade Totements and The Constructions of the Streamers	0.00 ments are widths lease a from the tis table in tr / CC emitted indicates w -0.010 -0.010 -0.010 e taken at / PER A plowing all is listed we	77     0.0     72     73     74 Mar at least 3     5     74 Mar at least 3     5     74 Mar at least 3     75     7	109 109 in from # 109 in in from # manasuraments Indiaces STM A48 STM A48 STM A48 Ver and Unde * Specified Wi -0.010,	0.010 e edge c should b 0 f Except dth (w) f 60 +0.020 +0.022 +0.030 e sheet.	
Width nches) 1 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 4 to 6 over 6 to 8 over 8 to 10 TAINL	Tolerance +0.015 -0.015 +0.031 -0.031 +0.062 -0.031 +0.062 -0.058 +0.156 -0.187 ESS SE/	+0.008 -0.008 +0.012 -0.012 +0.015 -0.015 +0.015 +0.016 -0.016 +0.020 -0.020	00000 1/2 - 1 +0.010 -0.010 +0.015 -0.020 +0.020 +0.020 +0.025 -0.025 +0.025 +0.031 -0.031 5 & WE	+0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031	2-4 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 STAND	4-6 4-6 4-6 4-6 4-0 40.093 40.093 40.093 40.093 40.093 40.093 40.093	6-8 	Over 0.226 to 0.3126, well     Note 1 - 75:554me measure     product, except on     maken at least 7.8 i     Note 2 - The kitemanean in     Hotensee, in     Hotensee, in     Secilitat     Thokness, in     Joint 2025     Joint	0.00 ments are widths fease a, from the tis table in tr / CC emitted indicates w -0.010 -0.010 -0.010 e taken at / PER A plowing all is listed we	77     0.0     72     73     74 Mar at least 3     5     74 Mar at least 3     5     74 Mar at least 3     75     7	109 109 in from # 109 in in from # manasuraments Indiaces STM A48 STM A48 STM A48 Ver and Unde * Specified Wi -0.010,	0.010 e edge c should be 0 f Except dth (w) le 60 +0.020 +0.022 +0.030 e sheat stainles ference C	
Width nches) 1 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 4 to 6 over 8 to 10 TAINLER AS	Tolerance +0.015 -0.015 +0.031 -0.031 +0.062 -0.031 +0.062 -0.058 +0.156 -0.187 ESS SE/	+0.008 -0.008 +0.012 -0.012 +0.015 +0.015 +0.015 +0.016 -0.016 +0.020 -0.020	00000 1/2-1 +0.010 -0.015 +0.015 +0.020 -0.020 +0.020 +0.025 -0.025 +0.031 -0.031 5 & WE 999 /	+0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031	+0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 <b>STANIC</b> 6	4-6 4-6 4-6 4-6 4-0 40.093 40.093 40.093 40.093 40.093 40.093 40.093	6-8 	Over 0.228 (s) 0.312; mel           Notr 1 – Thickness measure facts measure the sear for the Note 2 – The Kreameet in the Note 2 – The Kreameet in the HOT ROLLED SHEEE           Specific 1           10,157 (s) 0.250           >0.3125           "Thickness measurements and 30.3125           "Thickness before before PLANE THECKNESS Telerance before apply to the 1 -7.4, Daples Grade Totements and The Constructions of the Streamers	0.00 ments are widths fease a, from the tis table in tr / CC emitted indicates w -0.010 -0.010 -0.010 e taken at / PER A plowing all is listed we	77         0.1           raken at least 3/e         atken at least 3/e           9         than 1/e         than 2/e           9         than 1/e         than 2/e           9         than 1/e         than 1/e	109 109 in from # 109 in in from # manasuraments Indiaces STM A48 STM A48 STM A48 Ver and Unde * Specified Wi -0.010,	0.010 e edge c should be 0 f Except dth (w) le 60 +0.020 +0.022 +0.030 e sheat stainles ference C	
Width inches) a 1 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 4 to 6 over 6 to 8 over 8 to 10 TAINLER AS	Tolerance +0.015 +0.015 +0.031 +0.081 +0.062 +0.156 -0.156 +0.156 +0.156 +0.158 +0.158 +0.158 +0.158 +0.158 +0.158 +0.158 +0.158 +0.158 +0.015 +0.015 +0.015 +0.015 +0.015 +0.015 +0.015 +0.015 +0.031 +0.045 +0.031 +0.031 +0.031 +0.031 +0.045 +0.031 +0.045 +0.055	+0.008 -0.008 +0.012 -0.012 +0.015 +0.015 +0.015 +0.016 -0.016 +0.020 -0.020	00000 1/2-1 +0.010 -0.015 +0.025 +0.020 +0.020 +0.025 -0.025 +0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031 -0.035 -0.025 -0.031	ever 1-2 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 Constant Const	+0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 5TANE 6	4-6 4-6 +0.093 -0.052 +0.093 -0.052 +0.093 -0.052 DARD E	6-8	Over 0.228 (s) 0.312; mel           Notr 1 – Thickness measure facts measure the sear for the Note 2 – The Kreameet in the Note 2 – The Kreameet in the HOT ROLLED SHEEE           Specific 1           10,157 (s) 0.250           >0.3125           "Thickness measurements and 30.3125           "Thickness before before PLANE THECKNESS Telerance before apply to the 1 -7.4, Daples Grade Totements and The Constructions of the Streamers	0.00 whents are widths lease is table in T / CC Permitted Indicates w -0.010 -0.010 e taken at / PER A oliowing all s listed we as of Hot-P	77         0.01           78         0.01           78         1.02           78         1.02           78         1.02           78         1.02           79         1.02           70         1.02           70         1.02           70         1.02           70         1.02           70         1.02           71         1.02           71         1.02           71         1.02           71         1.02           71         1.02           71         1.02           71         1.02           71         1.02           71         1.02           71         1.02           72         1.03           73         1.02           74         1.02           75         1.02           75         1.02           75         1.02           75         1.02           75         1.02           75         1.02           75         1.02           75         1.02           75	200     2	0.010 e edge o should be n Except dth (w) in 60 +0.020 +0.022 +0.030 e sheet sitainies ference C	
Width nches) 1 (incl) over 2 to 4 over 2 to 4 over 4 to 6 over 6 to 8 over 8 to 10 TAINLER AS Nomin	Tolerance +0.015 -0.015 -0.031 -0.031 +0.062 -0.056 +0.062 -0.056 +0.156 -0.156 -0.187 ESS SE/ STM A3 al Pipe Size	+0.008 -0.008 +0.012 -0.012 +0.015 -0.015 +0.015 +0.016 -0.016 +0.020 -0.020 MLESS 12 / A	00000 1/2 - 1 +0.010 -0.010 +0.015 -0.025 -0.020 +0.020 +0.020 +0.025 -0.020 +0.025 -0.020 +0.031 -0.031 5 & We 999 / A31 Plue	ever 1-2 +0.031 -0.031 +0.031 -0.031 -0.031 +0.031 -0.031 +0.031 -0.	40.062 -0.031 +0.062 -0.031 +0.082 -0.031 +0.082 -0.031 +0.082 -0.031 <b>STANIC</b> 6 Diameter 18	4-6 4-6 4-6 4-6 4-0 40.093 -0.052 +0.052 +00	6-8	Over 0284 50 0.3126, well     Nits 1 - 77.554 meeting management     Mits 2 - 716 offender management     Mote 2 - 716 offender     Mote 2 - 716 offender     Mote 2 - 716 offender     Mote 2	0.00 ments are widths lease this table in T / CC Permitted Indicates W -0.010 -0.010 e taken at / PER A olowing all ss insted we ss of Hot-R W s B4	77         0.01           78         0.01           74         1.04           74         1.04           74         1.04           74         1.04           74         1.04           74         1.04           74         1.04           75         1.04           76         1.04           77         1.04           78         1.04           79         1.04           79         1.04           79         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70         1.04           70	2009         Image: Second	0.010 e edge o should be 0 r, Except dth (w) = •0 •0.022 +0.020 e shout s Stainles Greence C ••••••••••••••••••••••••••••••••••••	
Width inches) > 1 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 4 to 6 over 6 to 8 over 8 to 10 TAINLE ER AS Nomin	Tolerance +0.015 -0.015 -0.031 -0.031 +0.062 -0.031 +0.062 -0.056 +0.156 -0.156 -0.156 -0.157 ESS SE/ 5TM A3 al Pipe Size S to 1-1/2 IP	+0.008 -0.008 +0.012 -0.015 -0.015 +0.015 +0.015 -0.015 -0.016 -0.016 -0.020 -0.020 MLESS 12 / A Inches S incl.	00000 1/2 - 1 +0.010 -0.010 +0.015 -0.020 +0.020 +0.020 +0.025 +0.025 +0.025 +0.031 -0.031 5 & WE 999 / A31 Plus .015	ever 1-2 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 +0.031 ELDED Y A101 Outside 2 Seamles Miles 0.031	000007 2-4 	4-6 4-6 4-6 4-6 4-0 40.093 -0.052 40.093 -0.052 40.093 -0.052 40.093 -0.052 700000000000000000000000000000000000	6-8	Over 02/26 §0 -0.326; weilty         Note 02/26 §0 -0.326; weilty           Note 1         -75 choices measure product, except on or taken the levent for	0.00 windts lass widths lass is table in this table in T / CC Permitted Indicates w -0.010 -	77         0.01           77         0.01           78         78.04           78.04         78.04           78.05         78.04           78.05         78.04           79.04         78.04           79.04         78.04           79.04         78.04           79.04         78.04           79.05         78.04           79.05         79.05           79.05	2009         Image: Second	0.010 e edge c should be 0 r, Except dth (w) +0.020 +0.022 +0.030 e sheet. s Stainles ference (	
Width notes) 11 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 3 to 8 over 8 to 8 over 8 to 10 TAINLE ERAS Nomin 108 IP >1-1/2	Tolerance +0.015 -0.015 +0.031 +0.031 +0.082 -0.031 +0.082 -0.031 +0.082 -0.055 -0.156 +0.156 -0.	+0.008 +0.008 +0.012 -0.012 +0.015 +0.015 +0.015 +0.016 +0.016 +0.020 MLESS 12 / A Inches S incl.	000000 122-1 +0.010 -0.010 +0.015 -0.020 -0.020 +0.025 +0.025 +0.025 +0.025 +0.025 +0.025 +0.025 +0.031 -0.031	over           1-2           +0.031           -0.051           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           0.031           +0.031           0.031           0.031           0.031           0.031           0.031           0.031           0.031           0.031           0.031           0.031           0.031           0.031	000000 2 - 4 	4-6 4-6 4-6 4-6 40.093 40.015 40.005 40.005 40.005 40.005 40.005 40.0050	6-8 40.125 40.125 40.125 40.156 40.125 40.156 PIPE PIPE elded Minus .031 .031	Over 02/26 50 -3126, well           NHs J - 75:55458           NHs J - 75:5545           Note 2 - The sidemates measure product, encorpt on taken at least 10 if the Note 2 - The sidemates in the <b>HOT ROLLED SHEEE</b> Signetified Thickness (In. -0.1875) to 0.250 -0.250 to 0.3125 -0.3135          Thickness measurements an <b>PLATE INCIDENT</b> Clearance below capty to the In Thermitted Variation an Trickness Specified Thickness (I), In. -1<-316	0.00 means are widths load, in from the test its table in T / CC Permitted Indicates ww -0.010 -0.010 e taken at / Pere A ollowing al is listed we as of Hot-F w ± 84 Tote 0.055	77     0.01     77     0.01     77     0.01     77     70	2009 Construction of the c	0.010 e edge o should be 0 r, Except dth (w) = •0 •0.022 +0.020 e shout s Stainles Greence C ••••••••••••••••••••••••••••••••••••	
Width nches) 1 (incl) over 1 to 2 over 2 to 4 over 2 to 4 over 6 to 8 over 8 to 10 <b>TAINLE</b> ER AS Nomin 1/8 IP >1-1/5 >4	Tolemines +0.015 -0.015 +0.015 +0.051 +0.062 +0.031 +0.093 -0.062 +0.156 +0.156 +0.187 ESS SE/ 5TM A.3 al Pipe Size 2 105 to 1-1/2 IP 2 105 to 6 IPS	+0.008 -0.008 +0.012 -0.015 -0.015 +0.015 +0.016 -0.016 +0.020 MLESS 12 / A Inches S incl. S incl.	000000 1/2 - 1 +0.010 -0.010 +0.020 -0.020 +0.020 +0.020 +0.025 -0.025 +0.025 +0.025 +0.025 +0.025 -0.025 +0.031 5 & WE 999 / A31 Plus -0.15 -0.15 -0.15 -0.010 -0.010 -0.010 -0.010 -0.010 -0.020 -0.020 -0.020 -0.020 -0.020 -0.025 -0.05	over           1-2           +0.031           -0.031           -0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           *0.031	+0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 +0.062 -0.031 500 -0.031 -0.03	4-6 4-6 4-6 4-6 40.093 40.0050	6-8 40.125 -0.156 40.125 40.125 -0.156 PIPE elded Minus .031 .031 .031	Over 02/26 50 -0.3126, weild Note 1 - 75:550 testere masure product, except on maken at the start 78 is Note 2 - The determines in the HOTENLED SHERE Specified This Notes 10:550 to 3125 >0.3250 to 3125           Note 7 - 10:0250 >0.3250 to 3125           Note 7 - 10:0250 >0.3250 to 3125           Note 7 - 10:0250 >0.3250 to 3125           Specified Thickness (t), In. 17:4, heplex Grade, Totenare Remitted Variation in Trickness Specified Thickness (t), In. 1<3/td>	0.00 ments are within loss a from the instable in T / CC ements indicates indicates we ement indicates indicates indicates we action PER A blowing all is listed we as of Hot-P within Total 0.065 0.045	77     0.07     77     0.07     77     0.07     77     0.07     77     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07	2009 Construction of the second secon	0.010 e odge z d should by f, Except tith (w) I e 60 e 0.020 +0.022 +0.030 e shoet. Stainles ferenze C stainles ferenze C 	
width (nches)           a1 (incl)           over           1 tb 2           over           2 tb 4           over           2 tb 4           over           2 tb 4           over           2 tb 4           over           6 tb 8           ower           5 tb 10           TAINLL           Nomin           1/8 IP           >1-1/2           >4           >8 II	Tolerance +0.015 -0.015 -0.031 +0.062 -0.031 +0.082 -0.031 +0.082 -0.031 +0.093 -0.092 +0.156 +0.156 +0.187 ESS SE/ 5TM A.3 al Pipe Size S to 1-1/2 IP S to 8 IPS PS to 8 IPS PS to 8 IPS	+0.008 +0.012 -0.012 +0.015 -0.015 +0.015 +0.016 +0.020 -0.020 -0.020 MLESS 12 / A Inches S incl. S incl.	000000 12 - 1 +0.010 -0.010 +0.020 +0.020 +0.020 +0.025 -0.025 +0.025 +0.025 +0.025 -0.025 -0.025 -0.025 -0.025 -0.025 -0.025 -0.015 -0.010 -0.010 -0.010 -0.010 -0.010 -0.010 -0.010 -0.010 -0.010 -0.010 -0.010 -0.010 -0.015 -0.015 -0.020 +0.020 -0.025 -0.031 -0.015	over           1-2           +0.031           -0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           -0.031           +0.031           -0.031           +0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031	000007 2 - 4 	4-6 4-6 4-6 4-6 40.093 40.093 40.093 40.093 40.092 40.093 40.092 40.093 40	6-8 	Over 02/04 50 -0.3126, met.           Note 1 - 77.554 there measure product, encorpt on them reaster for the sear for the search se	0.00 ments are widths lease. 1. form the table in the	77         0.01           77         0.01           78         Taken at kest 3           78         There 1 is the start 3           78         There 1 is the start 3           78         The start 3           78         The start 3           78         The start 3           79         The start 3           70         The start 3	2009         2009           108 in, in from it measurements         measurements           mances         STM A48           STM A48         Specified With           Version and Under         W 2           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.010,         -0.010,           -0.005,         -0.085	0.010 e edge c e edge c edge	
Width (nches)           a 1 (ncl)           over           1 to 2           over           2 to 4           over           2 to 4           over           over	Tolemines +0.015 -0.015 +0.015 +0.051 +0.062 +0.031 +0.093 -0.062 +0.156 +0.156 +0.187 ESS SE/ 5TM A.3 al Pipe Size 2 105 to 1-1/2 IP 2 105 to 6 IPS	+0.008 +0.012 -0.012 +0.015 -0.015 +0.015 +0.016 +0.020 -0.020 -0.020 MLESS 12 / A Inches S incl. S incl.	000000 1/2 - 1 +0.010 -0.010 +0.020 -0.020 +0.020 +0.020 +0.025 -0.025 +0.025 +0.025 +0.025 +0.025 -0.025 +0.031 5 & WE 999 / A31 Plus -0.15 -0.15 -0.15 -0.010 -0.010 -0.010 -0.010 -0.010 -0.020 -0.020 -0.020 -0.020 -0.020 -0.025 -0.05	over           1-2           +0.031           -0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           +0.031           -0.031           +0.031           -0.031           +0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031           -0.031	000007 2 - 4 	4-6 4-6 4-6 4-6 40.093 40.0050	6-8 40.125 -0.156 40.125 40.125 -0.156 PIPE elded Minus .031 .031 .031	Over 02/26 50 -0.3126, weild Note 1 - 75:550 testere masure product, except on maken at the start 78 is Note 2 - The determines in the HOTENLED SHERE Specified This Notes 10:550 to 3125 >0.3250 to 3125           Note 7 - 10:0250 >0.3250 to 3125           Note 7 - 10:0250 >0.3250 to 3125           Note 7 - 10:0250 >0.3250 to 3125           Specified Thickness (t), In. 17:4, heplex Grade, Totenare Remitted Variation in Trickness Specified Thickness (t), In. 1<3/td>	0.00 ments are within loss a from the instable in T / CC ements indicates indicates we ement indicates indicates indicates we action PER A blowing all is listed we as of Hot-P within Total 0.065 0.045	77     0.07     77     0.07     77     0.07     77     0.07     77     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07     0.07	2009         000           168 in, in from it measurements           measurements           mances           STM A48           Syna and Under specified with an under specified with	0.010 e edge d should b o r, Except edge d th (w) i e co +0.022 +0.030 e shoel. stainies ference ( stainies ference ( 	

-	mengin, renerances	107070 07070	10/0/0 0/0/0	1815.6	0.010	0.070	0.000	0.11		
_				2 mit < 3	0.125	0.150	0.175	0.20		
		ESS & WELDED		3 sit < 4	0.150	0.160	0.200	0.22		
STAN		PER ASTM A269		4 st<6	0.180	0.200	0.335	0.35		
Group	Size, Outside Diameter, in.	Permissible Variations in Outside Diameter, in.	Permissible Variations in Wall Thickness,%	6≤t<8	0.235	0.255	0.355	0.43		
1	Up to 1/2	±0.005	±15	8 ≤ t < 10	0.315	0.335	0.435	0.55		
2	1/2 to 1-1/2, excl	±0.005	±10	* Thickness is measured along the longitudinal edges of the plate at least 3/8 in, but not more than 3 in., from the edge.						
3	1-1/2 to 3-1/2, excl	.±0.010	±10	** For plates up to 10 in, excl. in thickness, the tolerance under the specified thick						
4	3-1/2 to 5-1/2, excl	±0.015	±10	is 0.010 in.						
5	5-1/2 to 8, excl	±0.030	±10	*** Flatness of plate mill plate is measured in any 36" area while the plate rests on						
6	B to 12, excl	+0.040	+10	surface with concavity of the curvature upward. Full plates only: There is no A: followers on out plate.						

±0.050

7 12 to 14, excl

### x plates up to 10 in, excl. in thickness, the tolerance under the specified thickness latness of plate mill plate is measured in any 36" area while the plate rests on fla rface with concavity of the curvature upward. Full plates only: There is no ASTM

0.125 0.150 0.175 0.200 0.150 0.160 0.200 0.225

0.180 0.200 0.335 0.355

0.235 0.255 0.355 0.435

0.315 0.335 0.435 0.550

tolerance on cut plate. ±10 \*\*Flatness of coll plate is measured on a flat surface with curvature upward and measuring the deviation from a horizontal flat surface.

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## THANK YOU.

