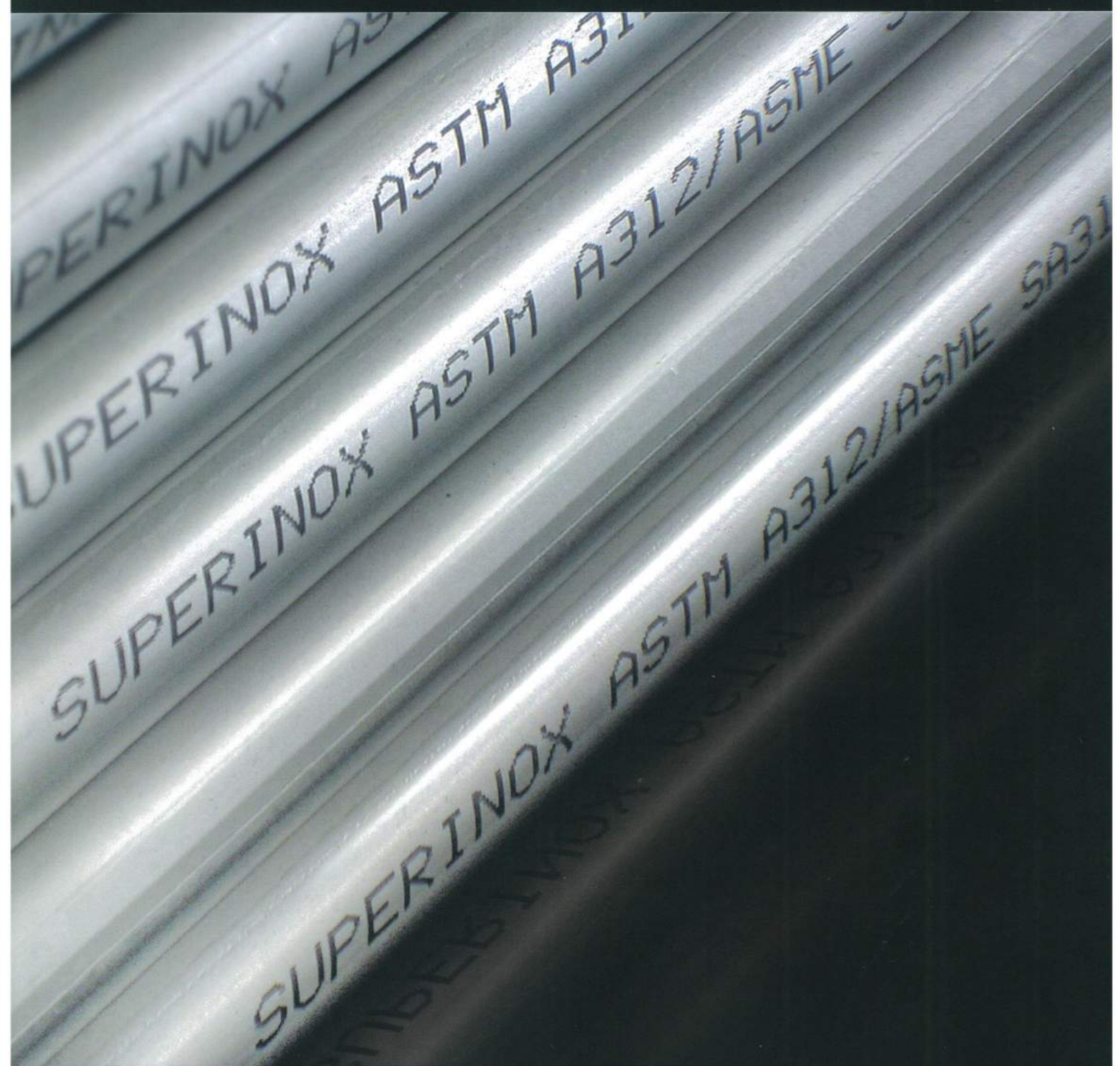




SUPERINOXTM
TUBES & PIPES & FITTINGS



Recognition of Quality

SUPERINOX pipes are of the utmost quality standards and have been accredited by various local and international accreditation bodies and authorities such as ISO 9001: 2008 Quality Management System, Quality-assurance System to DIN EN 10312: 2002 + A: 2005 and ISO/TS 29001: 2007 management systems for the petroleum, petrochemical and natural gas industries by **tüv Nord** of Germany.

SUPERINOX has also been awarded by the PED 97/23/EC Certificate by **tüv Nord**, Germany and Product Certificate by SIRIM QAS, IKRAM QAS, SPAN Malaysian Water Services Commission and all the Malaysian State Water-Works Authorities.



SPAN
Suruhanjaya Perkhidmatan Air Negara

MS
SIRIM
CERT. NO. : PT066501

ISO 9001
2008

TÜV NORD
ISO 9001
2008

TÜV NORD
ISO 9001
2008

TÜV NORD
ISO/TS 29001
2007

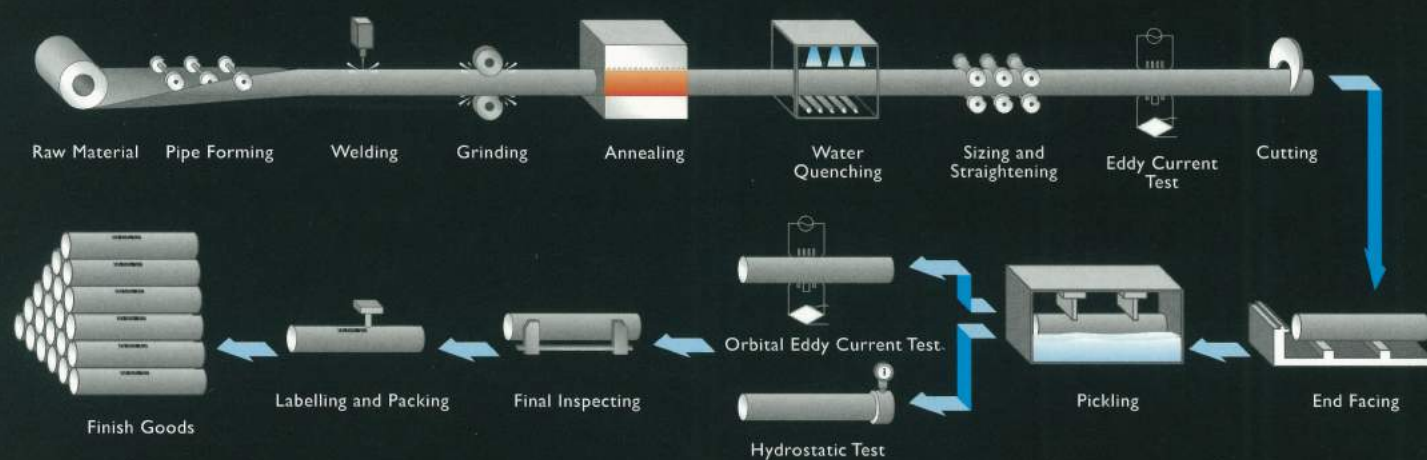
SUPER EXCELLENT BRAND
RECORDS

Manufacturing Process

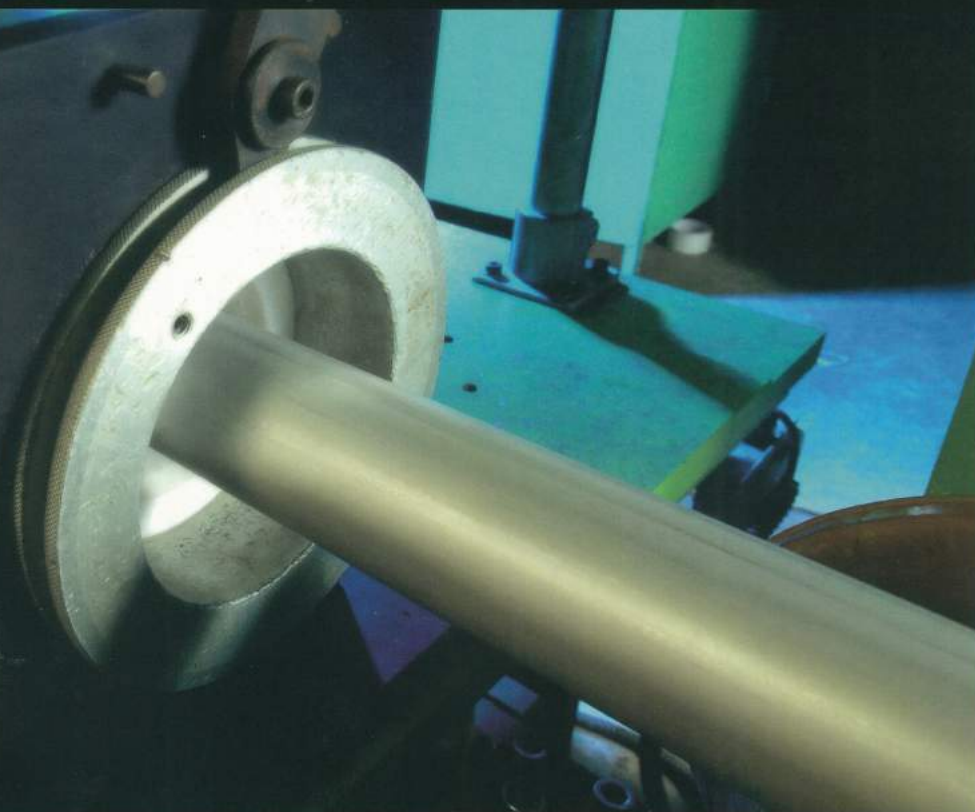
The manufacturing process utilizes the latest advance Tri-Cathode welding technology incorporating with Japanese designed on-line heat annealing furnace and on-line Eddy Current defect detector.



Production Process Flow Chart



The pipes are subjected to further 100% Orbital Eddy Current testing back up with hydrostatic testing as standard procedure.



Products Overview

Our Products are conform to ASTM A312, ASME SA312 and EN 10217-7 standard for Welded Austenitic Stainless Steel Pipes.

ASTM A312 / ASME SA312

Standard Dimensions and Weight

Nom. Pipe Size Outside Diameter		SCH 5S			SCH 10S			SCH 40S		
		Wall Thickness (mm)	Weight (kg/m)		Wall Thickness (mm)	Weight (kg/m)		Wall Thickness (mm)	Weight (kg/m)	
			304/L	316/L		304/L	316/L		304/L	316/L
3/8	17.15	-	-	-	1.65	0.64	0.65	2.31	0.85	0.86
1/2	21.34	1.65	0.81	0.82	2.11	1.01	1.02	2.77	1.28	1.29
3/4	26.67	1.65	1.03	1.04	2.11	1.29	1.30	2.87	1.70	1.71
1	33.40	1.65	1.31	1.32	2.77	2.11	2.13	3.38	2.53	2.54
1 1/4	42.16	1.65	1.67	1.68	2.77	2.72	2.74	3.56	3.42	3.45
1 1/2	48.26	1.65	1.92	1.93	2.77	3.14	3.16	3.68	4.09	4.11
2	60.33	1.65	2.41	2.43	2.77	3.97	4.00	3.91	5.50	5.53
2 1/2	73.03	2.11	3.73	3.75	3.05	5.32	5.35	5.16	8.72	8.78
3	88.90	2.11	4.58	4.61	3.05	6.52	6.56	5.49	11.41	11.48
3 1/2	101.60	2.11	5.25	5.28	3.05	7.49	7.54	5.74	13.71	13.79
4	114.30	2.11	5.92	5.96	3.05	8.45	8.51	6.02	16.24	16.34
5	141.30	2.77	9.59	9.65	3.40	11.68	11.75	6.55	21.99	22.13
6	168.28	2.77	11.46	11.53	3.40	13.96	14.05	7.11	28.55	28.73
8	219.08	2.77	14.98	15.08	3.76	20.17	20.30	8.18	42.97	43.25
10	273.05	3.40	22.92	23.07	4.19	28.06	28.24	9.27	60.91	61.30
12	323.85	3.96	31.67	31.87	4.57	36.35	36.58	9.52	74.54	75.02
14	355.60	3.96	34.81	35.03	4.78	41.92	42.19	9.52	82.37	82.89
16	406.40	4.19	42.13	42.40	4.78	47.99	48.30	9.52	94.46	95.06

Chemical Composition

Specifications / Type	Chemical Composition % (Maximum unless range is shown)							
ASTMA312	C	Si	Mn	P	S	Ni	Cr	Mo
TP304	0.080	1.00	2.00	0.045	0.030	8.00 - 11.00	18.00 - 20.00	-
TP304L	0.035	1.00	2.00	0.045	0.030	8.00 - 13.00	18.00 - 20.00	-
TP316	0.080	1.00	2.00	0.045	0.030	11.00 - 14.00	16.00 - 18.00	2.00 - 3.00
TP316L	0.035	1.00	2.00	0.045	0.030	10.00 - 14.00	16.00 - 18.00	2.00 - 3.00

EN 10217-7

Standard Dimensions

Thickness (mm) OD (mm)	1.2	1.6	2.0	2.3	2.6	2.9	3.2	3.6	4.0	4.5	5.0	5.6
13.5												
17.2												
21.3												
26.9												
33.7												
42.4												
48.3												
60.3												
76.1												
88.9												
101.6												
114.3												

Chemical Composition

Steel Grade		Chemical Composition % (Maximum unless range is shown)							
Symbol	Material Number	C	Si	Mn	P	S	ni	Cr	Mo
X5CrNi1810	1.4301	0.07	1.00	2.00	0.045	0.015	8.00-10.50	17.00-19.50	
X2CrNi18-9	1.4307	0.03	1.00	2.00	0.045	0.015	8.00-10.00	17.00-19.50	
X5CrNiMo17122	1.4401	0.07	1.00	2.00	0.045	0.015	10.00-13.00	16.50-18.50	2.00-2.50
X2CrNiMo17132	1.4404	0.03	1.00	2.00	0.045	0.015	10.00-13.00	16.50-18.50	2.00-2.50



Typical Applications

Stainless Steel Tubes and Pipes are most widely used in industries such as:

- Water Works & Treatment
- Palm Oil Refinery
- Sugar Refinery
- Biodiesel Plants
- Cement Plants
- Paper & Pulp
- Food Processing
- Petrol-Chemical
- Pharmaceutical
- Air-Conditioning
- Marine Engineering
- Oil & Gas... Etc.

Stainless Steel Welded Square Tube ASTM A554

Size		Wall Thickness (mm)						
mm	inch	1.25	1.65	2.11	2.77	3.05	4.57	6.35
12.70 × 12.70	1/2 × 1/2							
19.05 × 19.05	3/4 × 3/4							
25.40 × 25.40	1 × 1							
31.75 × 31.75	1 1/4 × 1 1/4							
38.10 × 38.10	1 1/2 × 1 1/2							
50.80 × 50.80	2 × 2							
63.50 × 63.50	2 1/2 × 2 1/2							
76.20 × 76.20	3 × 3							
101.60 × 101.60	4 × 4							
127.00 × 127.00	5 × 5							
152.40 × 152.40	6 × 6							

Stainless Steel Welded Rectangular Tube ASTM A554

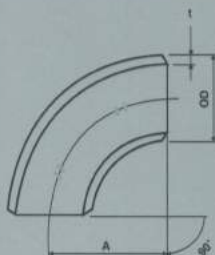
Size		Wall Thickness (mm)						
mm	inch	1.25	1.65	2.11	2.77	3.05	4.57	6.35
12.70 × 25.40	1/2 × 1							
12.70 × 38.10	1/2 × 1 1/2							
19.05 × 38.10	3/4 × 1 1/2							
25.40 × 38.10	1 × 1 1/2							
25.40 × 50.80	1 × 2							
25.40 × 76.20	1 × 3							
38.10 × 50.80	1 1/2 × 2							
38.10 × 76.20	1 1/2 × 3							
50.80 × 76.20	2 × 3							
50.80 × 101.60	2 × 4							
50.80 × 152.40	2 × 6							
63.50 × 127.00	2 1/2 × 5							
76.20 × 101.60	3 × 4							
76.20 × 127.00	3 × 5							
76.20 × 152.40	3 × 6							
101.60 × 152.40	4 × 6							

We can also produce other thickness as per requirement.

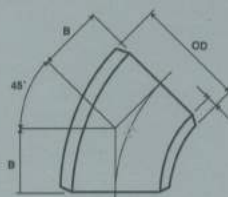
Surface Finish:

1. Mill finish
2. HL (grid 80/120/180)

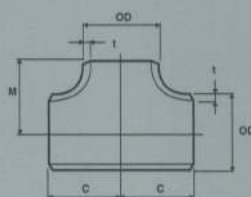
Stainless Steel Butt-Weld Pipe Fittings



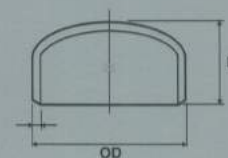
90° LONG
RADIUS ELBOW



45° LONG
RADIUS ELBOW



STRAIGHT TEE



END CAP

Stainless Steel Butt-Weld Pipe Fittings

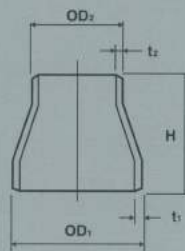
Dimension Tolerance

Nominal Pipe Size (inch)	ASTM A403		
	Outside Diameter (mm)	Nominal Wall Thickness (mm)	
		10S	40S
1/2	21.3	2.11	2.77
3/4	26.7	2.11	2.87
1	33.4	2.77	3.38
1 1/4	42.2	2.77	3.56
1 1/2	48.3	2.77	3.68
2	60.3	2.77	3.91
2 1/2	73.0	3.05	5.16
3	88.9	3.05	5.49
4	114.3	3.05	6.02
5	141.3	3.40	6.55
6	168.3	3.40	7.11
8	219.1	3.76	8.18
10	273.1	4.19	9.27
12	323.9	4.57	9.52
14	355.6	4.78	9.53
16	406.4	4.78	9.53

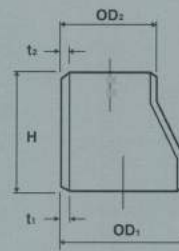
Weights

(unit: kg)

Nominal Pipe Size (inch)	SCH 10S				SCH 40S			
	90° Long Radius Elbow	45° Long Radius Elbow	Straight Tee	Cap	90° Long Radius Elbow	45° Long Radius Elbow	Straight Tee	Cap
1/2	0.061	0.030	0.090	0.040	0.078	0.039	0.181	0.046
3/4	0.078	0.039	0.129	0.052	0.103	0.052	0.258	0.059
1	0.128	0.064	0.223	0.090	0.154	0.077	0.262	0.109
1 1/4	0.206	0.103	0.356	0.113	0.260	0.130	0.463	0.145
1 1/2	0.283	0.142	0.497	0.130	0.368	0.184	0.648	0.171
2	0.478	0.239	0.681	0.168	0.652	0.326	0.893	0.234
2 1/2	0.812	0.406	1.200	0.242	1.370	0.683	1.980	0.420
3	1.140	0.571	1.570	0.362	2.040	1.020	2.610	0.664
4	1.970	0.985	2.460	0.585	3.840	1.920	4.760	1.170
5	3.420	1.710	4.040	0.978	6.480	3.240	7.840	1.900
6	4.870	2.430	5.500	1.350	9.940	4.970	9.540	2.830
8	10.000	5.010	11.070	2.490	20.100	10.100	19.560	5.110
10	15.500	7.770	19.870	3.840	35.400	17.700	32.610	8.920
12	25.900	12.500	27.860	6.150	56.200	28.100	56.650	14.100



CONCENTRIC REDUCER



ECCENTRIC REDUCER

Weights

(unit: kg)

Concentric Reducer and Eccentric Reducer			Concentric Reducer and Eccentric Reducer		
Nominal Pipe Size (inch)	SCH 10S	SCH 40S	Nominal Pipe Size (inch)	SCH 10S	SCH 40S
3/4 X 1/2	0.090	0.105	3 X 2	0.478	0.846
1 X 1/2	0.090	0.105	3 X 2 1/2	0.548	0.983
1 X 3/4	0.098	0.116	4 X 1 1/2	0.630	1.241
1 1/4 X 1/2	0.112	0.120	4 X 2	0.656	1.270
1 1/4 X 3/4	0.117	0.126	4 X 2 1/2	0.706	1.370
1 1/4 X 1	0.125	0.157	4 X 3	0.748	1.450
1 1/2 X 1/2	0.154	0.204	5 X 2	1.050	2.230
1 1/2 X 3/4	0.156	0.210	5 X 2 1/2	1.180	2.250
1 1/2 X 1	0.170	0.219	5 X 3	1.200	2.270
1 1/2 X 1 1/4	0.195	0.263	5 X 4	1.320	2.500
2 X 3/4	0.214	0.298	6 X 2 1/2	1.350	2.740
2 X 1	0.237	0.322	6 X 3	1.500	3.040
2 X 1 1/4	0.258	0.352	6 X 4	1.620	3.300
2 X 1 1/2	0.273	0.372	6 X 5	1.750	3.570
2 1/2 X 1	0.349	0.630	8 X 4	2.560	5.100
2 1/2 X 1 1/4	0.394	0.640	8 X 5	2.700	5.400
2 1/2 X 1 1/2	0.396	0.661	8 X 6	2.850	5.710
2 1/2 X 2	0.432	0.680	10 X 5	3.300	8.210
3 X 1	0.408	0.716	10 X 6	3.870	8.780
3 X 1 1/4	0.430	0.775	10 X 8	4.210	9.580
3 X 1 1/2	0.444	0.783	12 X 6	5.730	12.400