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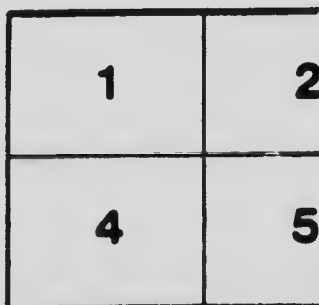
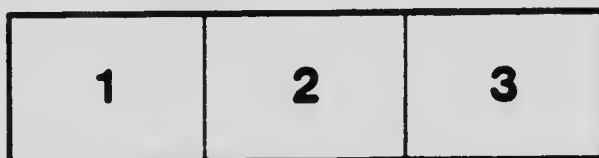
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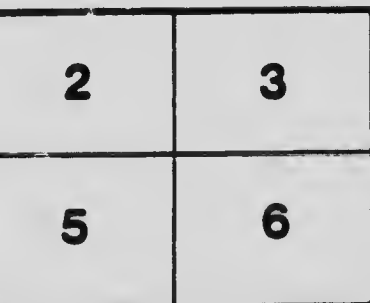
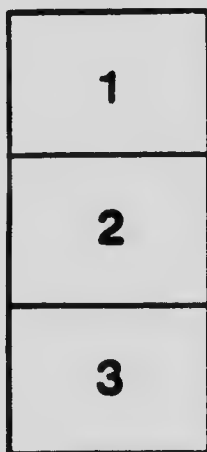
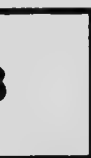
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Engineers, Contractors
and Manufacturers of

**Steel Bridges, Steel Buildings,
Roof Trusses, Turn Tables
Tanks, Towers and
Stand Pipes.**

WE CARRY A LARGE STOCK OF BEAMS,
ANGLES, TEES, CHANNELS AND PLATE,
ALL SIZES AND LENGTHS UP TO 80

THE CHATHAM BRIDGE CO., Limited

Safe loads in tons of 2000 lbs. uniformly distributed for Standard girder beams.

Span in feet	Depth 30"	Depth 28"	Depth 26"	Depth 24"	Depth 20"
	Weight 180 lbs	Weight 165 lbs	Weight 150 lbs	Weight 120 lbs	Weight 112 lbs
18	161.87	138.89	117.47	89.07	69.40
20	145.68	125.00	115.72	80.16	62.46
22	132.44	113.64	96.11	72.88	56.78
24	121.40	104.17	88.10	66.80	52.05
26	112.06	96.16	81.32	61.66	48.04
28	104.06	89.29	75.52	57.26	44.61
30	97.12	83.34	70.48	53.44	41.64
32	91.05	78.13	66.08	50.10	39.04
34	85.70	73.53	62.19	47.15	36.74
36	80.93	69.45	58.73	44.54	34.70
38	76.67	65.79	55.64	42.19	32.87
40	72.84	62.50	52.86	40.08	31.23
41	71.06	60.98	51.57		
42	69.37	59.53	50.34		
43	67.76	58.14	49.17		
44	66.22	56.82	48.06		
45	64.75	55.56	46.99		
46	63.34	54.35	45.97		
47	61.99	53.19	44.99		
48	60.70	52.09	44.05		
49	59.39	50.99			
50	58.00	49.13			

Safe center load is $\frac{3}{8}$ of the above load, stress figured at 16000 lbs. per sq. inch. Safety factor 4. Safe loads given include weight of girder beams

THE CHATHAM BRIDGE CO., Limited

Safe loads in tons uniformly distributed
for Standard **I** beams.

Span in feet	Depth	Depth	Depth	Depth	Depth
	30"	28"	26"	24"	20"
	Weight	Weight	Weight	Weight	Weight
	120 lbs	105 lbs	90 lbs	73 lbs	59 lbs
12				77.45	52.10
14				66.38	44.65
16				58.08	39.07
18	103.50	84.95	67.86	51.63	34.73
20	93.15	76.46	61.07	46.47	31.26
22	84.68	69.51	55.52	42.24	28.42
24	77.62	63.72	50.89	38.72	26.05
26	71.65	58.81	46.98	35.74	24.04
28	66.54	54.61	43.62	33.19	22.33
30	62.10	50.97	40.71	30.98	20.84
32	58.22	47.79	38.17	29.04	19.54
34	54.79	44.98	35.92	27.33	18.39
36	51.75	42.48	33.93	25.82	17.37
38	49.03	40.24	32.14	24.46	16.45
40	46.57	38.23	30.54	23.23	15.63
42	44.36	36.41	29.08		
44	42.34	34.75	27.76		
46	40.50	33.24	26.55		
48	38.81	31.86	25.45		
50	36.34	29.59	24.25		

Safe center load is $\frac{1}{2}$ of the above loads
stress figured at 16000 lbs. per sq. in.

Safety factor 4.

Safe load given include weight of beam.

THE CHATHAM BRIDGE CO., Limited

Safe loads in tons uniformly distributed for
Standard I beams.

Span in feet	Depth 18"	Depth 15"	Depth 12"	Depth 10"	Depth 9"
	Weight 48.5 lbs	Weight 38 lbs	Weight 28.5 lbs	Weight 23.5 lbs	Weight 20 lbs
6					16.81
8					12.61
10			19.22	13.11	10.09
12	39.42	26.23	16.02	10.92	8.41
14	33.79	22.48	13.73	9.36	7.21
16	29.56	19.67	12.01	8.19	6.31
18	26.28	17.49	10.68	7.28	5.61
20	23.65	15.74	9.61	6.55	5.04
22	25.50	14.31	8.74	5.96	4.59
24	19.71	13.11	8.01	5.46	4.20
26	18.19	12.11	7.39	5.04	3.88
28	16.89	11.24	6.86	4.68	
30	15.77	10.49	6.41		
32	14.78	9.84			
34	13.91	9.26			
36	13.14	8.74			
38	12.45				
40	11.83				

Safe center load is $\frac{1}{2}$ of the above loads
stress figured at 16000 lbs. per sq. in.

Safety factor 4.

Safe load given include weight of beam.

THE CHATHAM BRIDGE CO., Limited

Safe loads uniformly distributed for
Standard **I** beams in tons.

Span in feet	Depth 8"	Depth 7"	Depth 6"	Depth 5"	Depth 4"
	Weight 18 lbs	Weight 15 lbs	Weight 12.25 lbs	Weight 9.75 lbs	Weight 7.5 lbs
5	15.17	11.04	7.75	5.16	3.18
6	12.64	9.20	6.46	4.30	2.65
7	10.84	7.89	5.54	3.69	2.27
8	9.48	6.90	4.84	3.23	1.99
9	8.43	6.13	4.31	2.87	
10	7.59	5.52	3.88		
11	6.90	5.02	3.52		
12	6.32	4.60	3.23		
13	5.83	4.25			
14	5.42	3.94			
15	5.06	3.68			
16	4.74				
17	4.46				
18	4.21				
19	3.99				
20	3.79				
21	3.61				

Safe center load is $\frac{1}{2}$ of the above loads
stress figured at 16000 lbs. per sq. in.
Safety factor 4.

THE CHATHAM BRIDGE CO., Limited

**Safe Loads in Tons of 2000 lbs for
8 in. Rolled Steel H Columns.**

Weight of Section per ft.	Unsupported Length of Col. in Feet							
	8	9	10	11	12	13	14	15
32.0	59	59	58	56	55	53	52	50
34.5	66	66	64	63	61	59	58	56
39.0	74	74	73	71	69	67	65	64
43.5	83	83	81	79	77	75	73	71
48.0	92	92	90	88	86	83	81	79
53.0	101	101	99	97	94	92	89	87
57.5	109	109	108	105	103	100	97	95
62.0	118	118	117	114	111	108	105	102
67.0	127	127	126	123	120	117	114	111
71.5	136	136	135	132	129	125	122	119
76.5	146	146	144	141	137	134	131	127
81.0	154	154	153	149	146	142	138	135
85.5	163	163	163	159	155	151	147	143
90.5	173	173	172	168	164	160	156	152

THE CHATHAM BRIDGE CO., Limited

**Safe Loads in Tons of 2000 lbs for
10 in. Rolled Steel H Columns.**

Weight of Section per ft.	Unsupported Length of Col. in Feet							
	10	11	12	13	14	15	16	18
49.0	93	93	92	90	88	86	84	80
54.0	103	103	102	100	98	95	93	89
59.5	114	114	113	110	108	106	103	99
65.5	125	125	123	121	118	116	113	108
71.0	135	135	134	132	129	126	124	118
77.0	146	146	145	143	140	137	134	128
82.5	157	157	157	153	150	147	144	138
88.5	168	168	168	165	161	158	155	148
94.0	180	180	179	176	172	169	165	158
99.5	190	190	190	186	182	179	175	168
105.5	201	201	201	198	194	190	186	178
111.5	213	213	213	209	205	201	197	188
117.5	224	224	224	220	216	212	207	199
123.5	236	236	236	232	227	223	218	209

THE CHATHAM BRIDGE CO., Limited

Safe Loads in Tons of 2000 lbs for
12 in. Rolled Steel H Columns.

Weight of Section per ft.	Unsupported Length of Col. in Feet							
	10	12	14	16	18	20	22	24
64.5	123	123	122	118	114	109	105	101
71.5	136	136	135	130	126	121	117	112
78.0	149	149	148	143	138	133	128	123
84.5	162	162	161	155	150	145	139	134
91.5	175	175	174	168	162	156	151	145
98.5	188	188	187	181	175	169	162	156
105.0	201	201	201	194	187	181	174	167
112.0	214	214	214	207	200	193	186	178
118.5	226	226	226	219	212	204	197	189
125.5	239	239	239	232	224	217	209	201
132.5	253	253	253	246	237	229	221	213
139.5	266	266	266	259	250	242	233	224
146.5	280	280	280	272	263	254	245	236
153.5	293	293	293	286	276	267	257	248
161.0	307	307	307	299	289	280	270	260

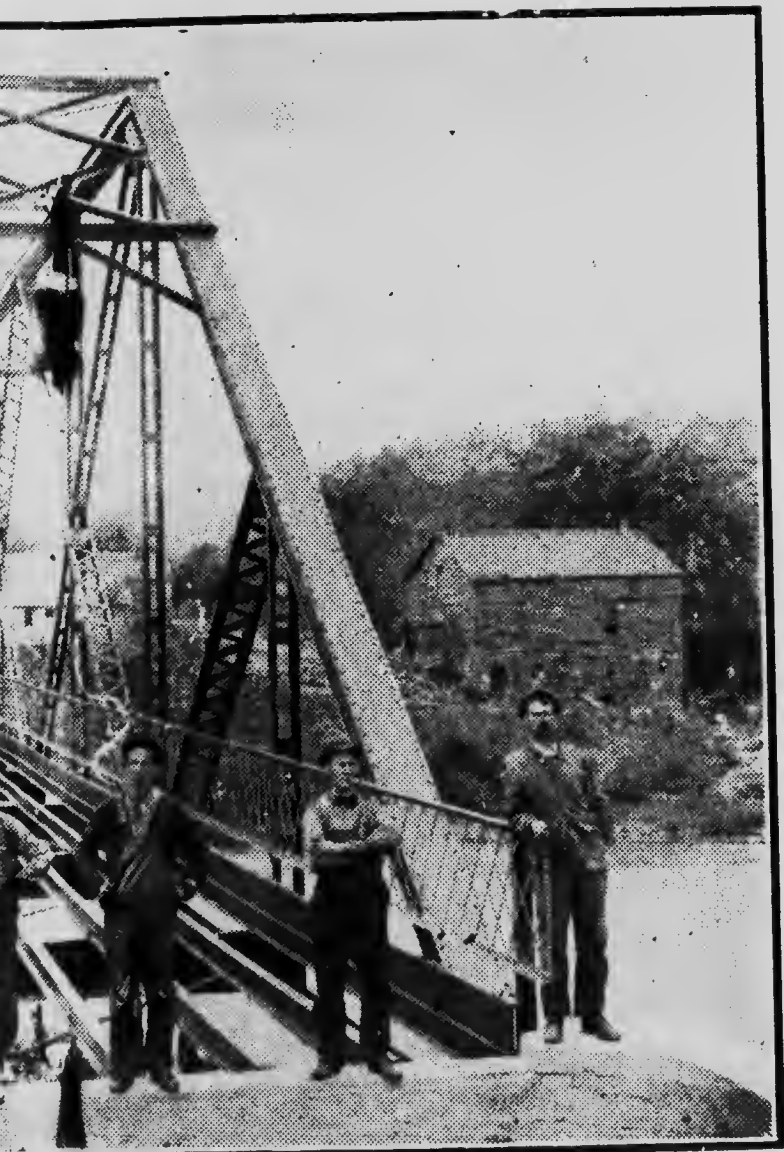
THE CHATHAM BRIDGE CO., Limited

Safe Loads in Tons of 2000 lbs for
Rolled Steel 14 in. H Columns.

Weight of Section per ft.	Unsupported Length of Col. in Feet							
	10	12	14	16	18	20	22	24
83.5	159	159	159	158	153	149	144	139
91.0	173	173	173	173	168	163	158	153
99.0	188	188	188	188	183	177	172	166
106.5	204	204	204	204	198	192	186	180
114.5	219	219	219	219	212	206	200	194
122.5	234	234	234	234	228	221	214	207
130.5	249	249	249	249	243	235	228	221
138.0	263	263	263	263	257	249	242	234
146.0	279	279	279	279	272	264	256	248
154.0	294	294	294	294	288	279	271	263
162.0	310	310	310	310	303	294	286	277
170.5	325	325	325	325	319	309	300	291
178.5	341	341	341	341	334	325	315	306
186.5	357	357	357	357	350	340	330	320
195.0	372	372	372	372	366	355	345	335
203.5	388	388	388	388	381	371	360	349
211.0	403	403	403	403	396	385	374	363
219.5	419	419	419	419	412	410	390	378
227.5	435	435	435	435	429	417	405	393
236.0	451	451	451	451	445	433	420	408
261.5	500	500	500	500	494	481	467	454
287.5	549	549	549	549	544	530	515	500



A SAMPLE OF
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Company, across the Thames River.

THE CHATHAM BRIDGE CO., Limited

Weights and Dimensions of Girder Beams

Section Number	Weight per ft.	Depth of Girder	Width of Flange
G 30 a	200	30"	15.00"
G 30	180.	30"	13.00"
G 28 a	180.	28"	14.35"
G 28	165.	28"	12.50"
G 26 a	160.	26"	13.60"
G 26	150.	26"	12.00"
G 24 a	140.	24"	13.00"
G 24	120.	24"	12.00"
G 20 a	140.	20"	12.50"
G 20	112.	20"	12.00"
G 18	92.	18"	11.50"
G 15 b	140.	15"	11.75"
G 15 a	104.	15"	11.25"
G 15	73	15"	10.50"
G 12 a	70.	12"	10.00"
G 12	55.	12"	9.75"
G 10	44.	10"	9.00"
G 9	38.	9"	8.50"
G 8	32.50	8"	8.00"

THE CHATHAM BRIDGE CO., Limited

Safe loads in tons of 2000 lbs. for hollow round cast iron columns.

Outside diameter Inches	Thickness of Metal Inches	Length of column in feet					
		8	10	12	14	16	18
		tons	tons	tons	tons	tons	tons
6	$\frac{1}{2}$	26	23	20	17	15	13
6	$\frac{3}{4}$	37	33	29	25	22	19
6	1	42	38	33	28	25	21
6	1	48	42	36	31	27	24
7	$\frac{3}{4}$	48	43	38	34	30	27
7	1	61	55	49	44	39	34
7	$1\frac{1}{8}$	67	61	54	49	43	38
8	$\frac{3}{4}$	58	53	49	44	40	36
8	1	75	69	62	57	51	46
8	$1\frac{1}{4}$	90	83	75	68	62	55
9	1	88	82	76	70	64	58
9	$1\frac{1}{2}$	123	115	107	98	90	82
10	1	101	96	90	83	77	72
10	$1\frac{1}{4}$	123	116	109	101	94	86
10	$1\frac{1}{2}$	143	135	127	118	109	101
12	$1\frac{1}{2}$	183	175	167	159	149	140
12	2	232	223	213	201	190	178
13	$1\frac{1}{2}$	203	195	187	179	170	161
13	2	258	249	239	228	217	205
14	$1\frac{1}{2}$	222	215	208	199	190	181
14	2	284	276	266	255	244	232

THE CHATHAM BRIDGE CO., Limited

Weights and Dimensions of Standard Γ Beams

Section Number	Weight per ft.	Depth of Beam	Width of Flange
B 1	100	24"	7.254"
B 1	80	24"	7.000"
B 2	100	20"	7.284"
B 2	80	20"	7.000"
B 3	65	20"	6 $\frac{1}{4}$ "
B 80	55	18"	6.0"
B 4	80	15"	6.4"
B 5	60	15"	6.5"
B 7	42	15"	5 $\frac{1}{2}$ "
B 8	40	12"	5 $\frac{1}{4}$ "
B 9	31 $\frac{1}{2}$	12"	5
B 11	40	10"	5.1
B 11	25	10"	4.66
B 13	35	9"	4.77
B 13	21	9"	4.33
B 15	25	8"	4.27
B 15	18	8"	4.0
B 17	20	7"	3.86
B 17	15	7"	3.66
B 19	12 $\frac{1}{4}$	6"	3.33
B 21	9 $\frac{3}{4}$	5"	3.0
B 23	7 $\frac{1}{2}$	4"	2.66
B 77	5 $\frac{1}{2}$	3"	2.33

THE CHATHAM BRIDGE CO., Limited

Amounts of cement, sand and stone required for concrete mixtures for various proportions.

Proportions of mixture required for 1 cu. yard

Cement	Sand	2½" stone crushed	Cement bbls	Sand c. yards	Stone c. yards
I	I	2	2.72	0.41	0.83
I	I	3	2.16	0.33	0.98
I	I½	3	1.96	0.45	0.89
I	2	3	1.78	0.54	0.81
I	2	3½	1.66	0.50	0.88
I	2	4	1.53	0.47	0.93
I	2½	4	1.42	0.54	0.87
I	2½	5	1.26	0.48	0.96
I	3	4	1.32	0.60	0.80
I	3	5	1.17	0.54	
Cement	Sand	Gravel	Cement bbls	Sand c. yards	Gravel c. yards
I	I	3	1.89	0.29	0.86
I	I	4	1.55	0.24	0.94
I	I½	4	1.46	0.33	0.88
I	2	3½	1.44	0.44	0.77
I	2	4	1.34	0.41	0.81
I	2	5	1.17	0.36	0.89
I	2½	4	1.24	0.47	0.75
I	2½	5	1.10	0.42	0.83
I	2½	6	0.98	0.37	0.89
I	3	5	1.03	0.47	0.78
I	3	6	0.92	0.42	0.84
I	3	7	0.84	0.38	0.89

AN INVITATION

When in Chatham call and see our large new works and see the class of work we turn out and be convinced that your orders will be well attended to if given to

The Chatham Bridge Co.,
LIMITED.

Chatham,

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