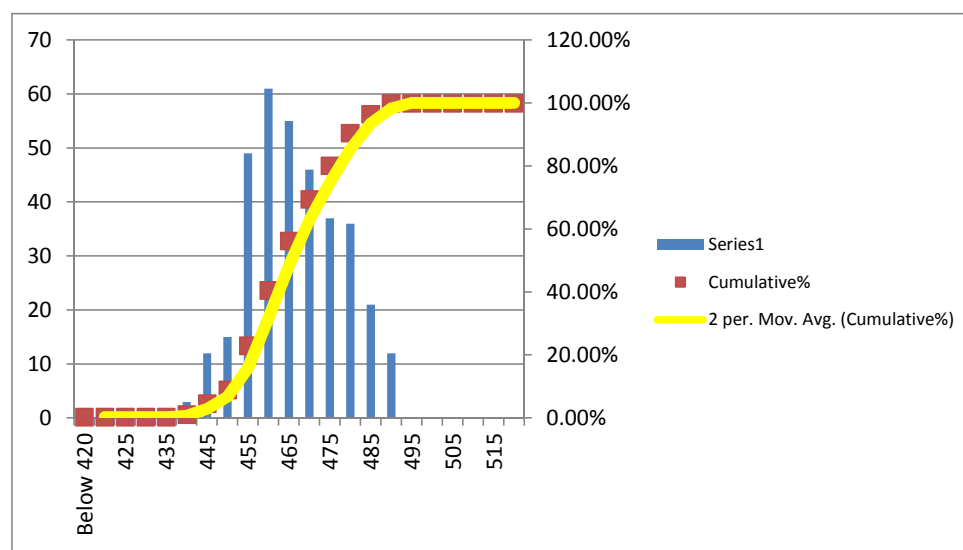


Campaign Length: 19.09.16 to 20.09.16  
 Total Production: 2011.666 MT  
 Billet Rolled: BIS-202  
 Product: G 420-DWR (4x10 mm)

YIELD STRENGTH	
Mean	466.365
Median	465
Mode	460
Std. Dev.	11.660
Min	415
Max	490
Count	348

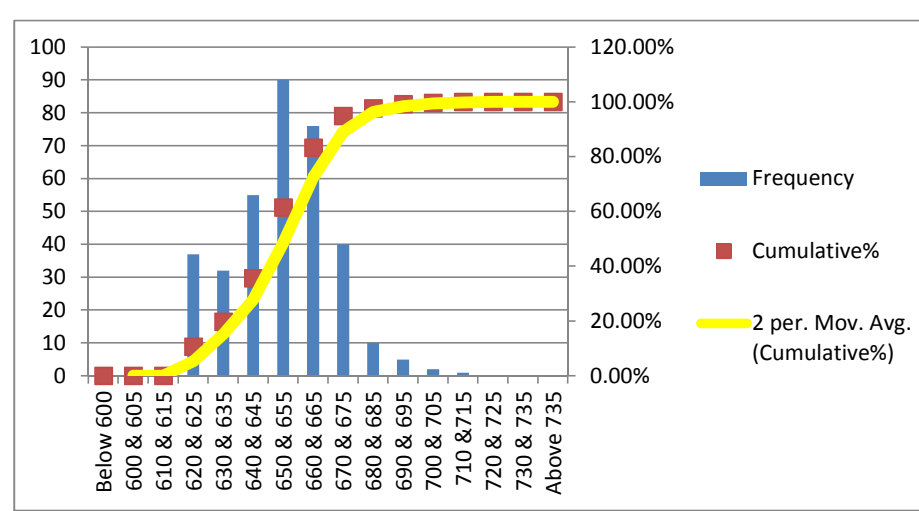
Bin	Frequency	%	Cumulative%
Below 420	1	0.29%	0.29%
420	0	0.00%	0.29%
425	0	0.00%	0.29%
430	0	0.00%	0.29%
435	0	0.00%	0.29%
440	3	0.86%	1.15%
445	12	3.45%	4.60%
450	15	4.31%	8.91%
455	49	14.08%	22.99%
460	61	17.53%	40.52%
465	55	15.80%	56.32%
470	46	13.22%	69.54%
475	37	10.63%	80.17%
480	36	10.34%	90.52%
485	21	6.03%	96.55%
490	12	3.45%	100.00%
495	0	0.00%	100.00%
500	0	0.00%	100.00%
505	0	0.00%	100.00%
510	0	0.00%	100.00%
515	0	0.00%	100.00%
520 & Above	0	0.00%	100.00%
Total	348		



**MINIMUM REQUIREMENTS**  
 As per ISO 6935-2: 420 Mpa  
 As per ASTM A-615: 420 Mpa

ULTIMATE STRENGTH	
Mean	651.925
Median	650
Mode	650
Std. Dev.	17.11
Min	620
Max	710
Count	348

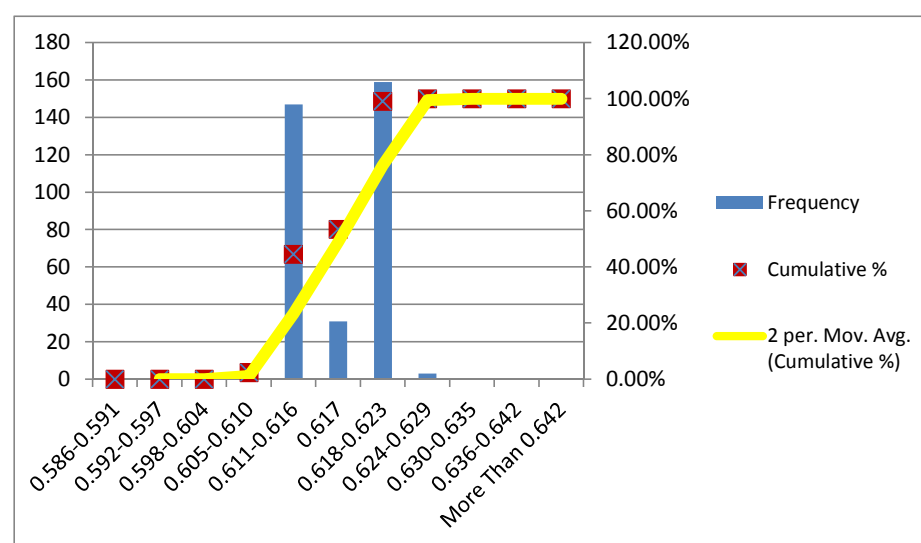
Bin	Frequency	%	Cumulative%
Below 600	0	0.00%	0.00%
600 & 605	0	0.00%	0.00%
610 & 615	0	0.00%	0.00%
620 & 625	37	10.63%	10.63%
630 & 635	32	9.20%	19.83%
640 & 645	55	15.80%	35.63%
650 & 655	90	25.86%	61.49%
660 & 665	76	21.84%	83.33%
670 & 675	40	11.49%	94.83%
680 & 685	10	2.87%	97.70%
690 & 695	5	1.44%	99.14%
700 & 705	2	0.57%	99.71%
710 & 715	1	0.29%	100.00%
720 & 725	0	0.00%	100.00%
730 & 735	0	0.00%	100.00%
Above 735	0	0.00%	100.00%
Total	348		



**MINIMUM REQUIREMENTS**  
 As per ISO 6935-2: 525 Mpa  
 As per ASTM A-615: 620 Mpa

UNIT WEIGHT	
Mean	0.617
Median	0.617
Mode	0.615
Std. Dev.	0.003
Min	0.608
Max	0.629
Count	348

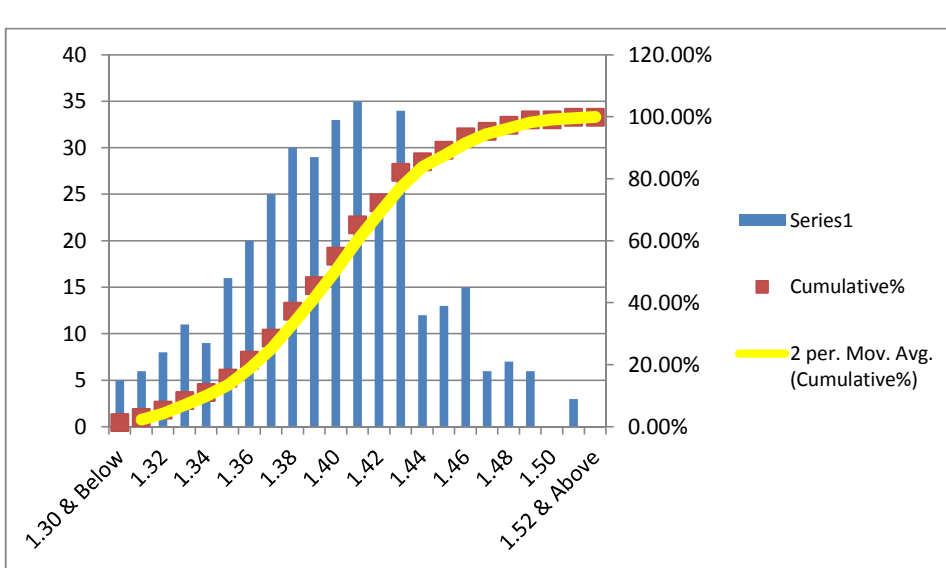
Bin	Frequency	%	Cumulative %
Less Than 0.586	0	0.00%	0.00%
0.586-0.591	0	0.00%	0.00%
0.592-0.597	0	0.00%	0.00%
0.598-0.604	0	0.00%	0.00%
0.605-0.610	8	2.30%	2.30%
0.611-0.616	147	42.24%	44.54%
0.617	31	8.91%	53.45%
0.618-0.623	159	45.69%	99.14%
0.624-0.629	3	0.86%	100.00%
0.630-0.635	0	0.00%	100.00%
0.636-0.642	0	0.00%	100.00%
More Than 0.642	0	0.00%	100.00%
Total	348		



**MINIMUM REQUIREMENTS**  
 As per ISO 6935-2: ± 5%  
 As per ASTM A-615: -6%

T/Y RATIO	
Mean	1.399
Median	1.40
Mode	1.43
Std. Dev.	0.044
Min	1.27
Max	1.51
Count	348

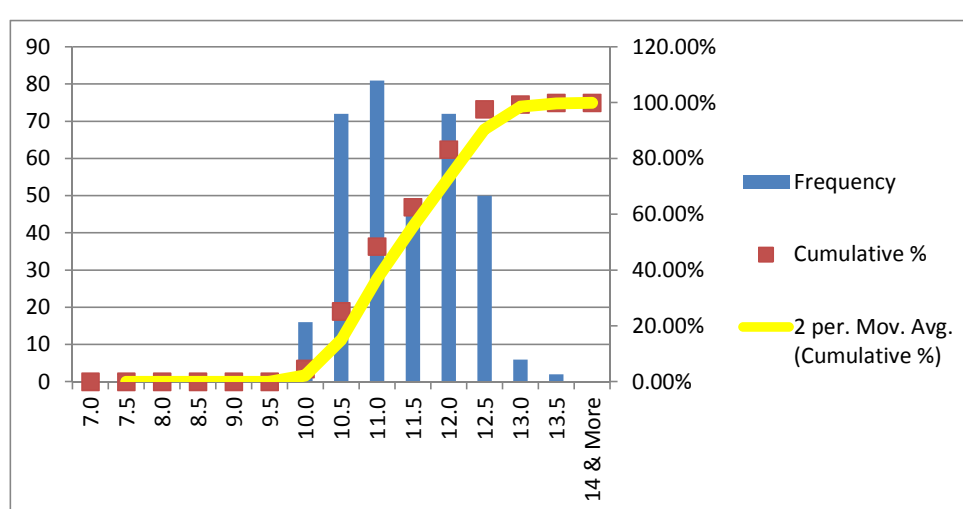
Bin	Frequency	%	Cumulative%
1.30 & Below	5	1.44%	1.44%
1.31	6	1.72%	3.16%
1.32	8	2.30%	5.46%
1.33	11	3.16%	8.62%
1.34	9	2.59%	11.21%
1.35	16	4.60%	15.80%
1.36	20	5.75%	21.55%
1.37	25	7.18%	28.74%
1.38	30	8.62%	37.36%
1.39	29	8.33%	45.69%
1.40	33	9.48%	55.17%
1.41	35	10.06%	65.23%
1.42	25	7.18%	72.41%
1.43	34	9.77%	82.18%
1.44	12	3.45%	85.63%
1.45	13	3.74%	89.37%
1.46	15	4.31%	93.68%
1.47	6	1.72%	95.40%
1.48	7	2.01%	97.41%
1.49	6	1.72%	99.14%
1.50	0	0.00%	99.14%
1.51	3	0.86%	100.00%
1.52 & Above	0	0.00%	100.00%
Total	348		



**MINIMUM REQUIREMENTS**  
 As per ISO 6935-2: T/Y: 1.25  
 As per ASTM A-615: Not Required

ELN. AT MAX. FORCE (Agt)(GL-200 mm)	
Mean	11.392
Median	11.5
Mode	11.0
Std. Dev.	0.785
Min	10.0
Max	13.5
Count	348

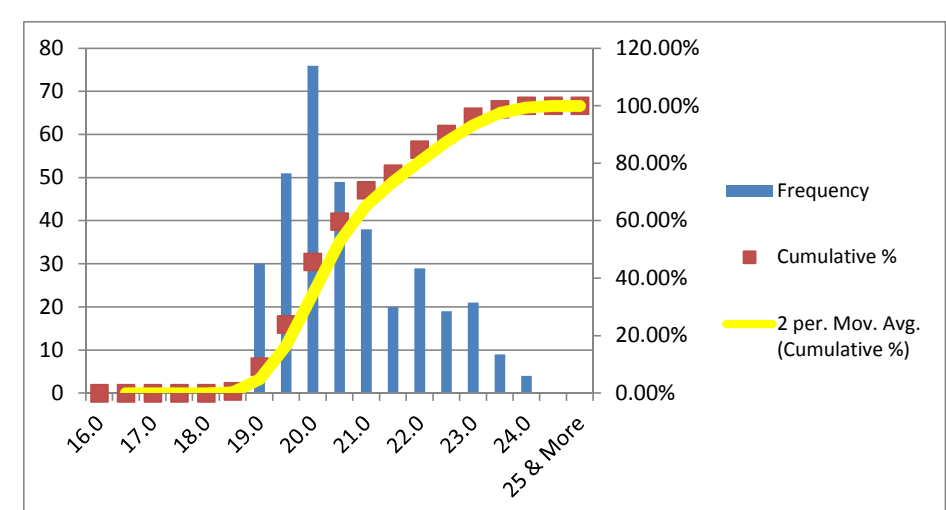
Bin	Frequency	%	Cumulative %
7.0	0	0.00%	0.00%
7.5	0	0.00%	0.00%
8.0	0	0.00%	0.00%
8.5	0	0.00%	0.00%
9.0	0	0.00%	0.00%
9.5	0	0.00%	0.00%
10.0	16	4.60%	4.60%
10.5	72	20.69%	25.29%
11.0	81	23.28%	48.56%
11.5	49	14.08%	62.64%
12.0	72	20.69%	83.33%
12.5	50	14.37%	97.70%
13.0	6	1.72%	99.43%
13.5	2	0.57%	100.00%
14 & More	0	0.00%	100.00%
Total	348		



**MINIMUM REQUIREMENTS**  
 As per ISO 6935-2: 8%  
 As per ASTM A-615: Not Required

ELN. AFTER FRACTURE (A5)(GL-5D)	
Mean	20.718
Median	20.5
Mode	20.0
Std. Dev.	1.271
Min	18.5
Max	24.0
Count	348

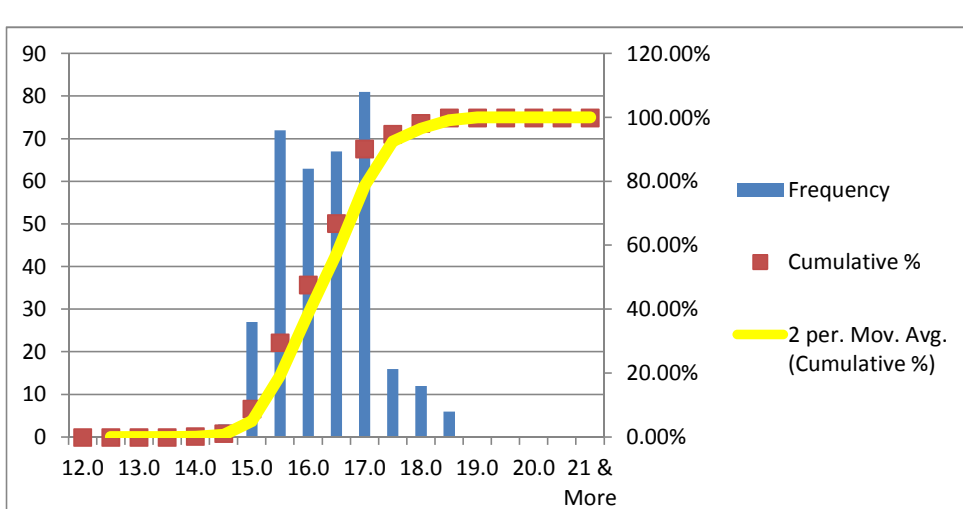
Bin	Frequency	%	Cumulative %
16.0	0	0.00%	0.00%
16.5	0	0.00%	0.00%
17.0	0	0.00%	0.00%
17.5	0	0.00%	0.00%
18.0	0	0.00%	0.00%
18.5	2	0.57%	0.57%
19.0	30	8.62%	9.20%
19.5	51	14.66%	23.85%
20.0	76	21.84%	45.69%
20.5	49	14.08%	59.77%
21.0	38	10.92%	70.69%
21.5	20	5.75%	76.44%
22.0	29	8.33%	84.77%
22.5	19	5.46%	90.23%
23.0	21	6.03%	96.26%
23.5	9	2.59%	98.85%
24.0	4	1.15%	100.00%
24.5	0	0.00%	100.00%
25 & More	0	0.00%	100.00%
Total	348		



**MINIMUM REQUIREMENTS**  
 As per ISO 6935-2: 16%

ELN. AFTER FRACTURE (A)(GL-203.2 mm)	
Mean	16.310
Median	16.5
Mode	17.0
Std. Dev.	0.834
Min	14.0
Max	18.5
Count	348

Bin	Frequency	%	Cumulative %
12.0	0	0.00%	0.00%
12.5	0	0.00%	0.00%
13.0	0	0.00%	0.00%
13.5	0	0.00%	0.00%
14.0	1	0.29%	0.29%
14.5	3	0.86%	1.15%
15.0	27	7.76%	8.91%
15.5	72	20.69%	29.60%
16.0	63	18.10%	47.70%
16.5	67	19.25%	66.95%
17.0	81	23.28%	90.23%
17.5	16	4.60%	94.83%
18.0	12	3.45%	98.28%
18.5	6	1.72%	100.00%
19.0	0	0.00%	100.00%
19.5	0	0.00%	100.00%
20.0	0	0.00%	100.00%
20.5	0	0.00%	100.00%
21 & More	0	0.00%	100.00%
Total	348		



**MINIMUM REQUIREMENTS**  
 As per ASTM A-615: 9%

**BEND TEST:**  
 ALL THE SAMPLES IN THIS CAMPAIGN PASSED THE BEND TEST MAINTAINING MANDREL DIA 3D

**MINIMUM REQUIREMENTS**  
 As per ISO 6935-2: 3D  
 As per ASTM A-615: 3.5D

**REBEND TEST:**  
 ALL THE SAMPLES IN THIS CAMPAIGN PASSED THE REBEND TEST MAINTAINING MANDREL DIA 4D

**MINIMUM REQUIREMENTS**  
 As per ISO 6935-2: 5D  
 As per ASTM A-615: Not Required

Nominal Diameter D	Unit Weight	Yield or Proof Strength R <sub>eH</sub>	Ultimate Tensile Strength R <sub>m</sub>	T/Y Ratio	% Total Elongation at Maximum Force A <sub>gt</sub>	% Elongation after Fracture A	% Elongation after Fracture A	Height of Transverse Rib	Height of Longitudinal Rib
(mm)	(Kg/m)	(MPa)	(MPa)		GL:200mm	GL: 203.2 mm	GL: 5D	mm	mm
10	0.617	470	620	1.32	11.00	16.0	22	0.80	0.75
10	0.622	475	620	1.31	11.50	17.5	22.5		
10	0.617	490	635	1.30	11.50	16.5	22		
10	0.619	415	620	1.49	12.00	18.0	23		
10	0.618	485	630	1.30	11.00	17.0	22.5		
10	0.620	490	620	1.27	11.00	16.0	22		
10	0.615	480	645	1.34	11.50	16.5	22.5		
10	0.616	450	620	1.38	12.50	18.0	23		
10	0.619	455	620	1.36	13.00	18.5	23.5		
10	0.622	450	620	1.38	12.00	17.5	23		
10	0.618	445	650	1.46	11.00	16.0	22		
10	0.618	445	620	1.39	11.50	18.0	23.5		
10	0.611	470	630	1.34	11.00	16.5	22.5		
10	0.616	465	635	1.37	11.00	16.0	22		
10	0.610	455	620	1.36	13.00	18.0	23		
10	0.614	440	620	1.41	12.50	17.0	22.5		
10	0.609	450	620	1.38	13.00	18.0	23		
10	0.612	450	620	1.38	12.50	17.5	23		
10	0.610	450	625	1.39	13.50	18.5	24		
10	0.611	440	620	1.41	12.50	18.0	23.5		
10	0.613	450	620	1.38	11.00	16.5	22.5		
10	0.616	445	620	1.39	12.00	17.5	23		
10	0.611	440	620	1.41	12.00	18.0	23.5		
10	0.612	470	620	1.32	11.50	16.0	22.5		
10	0.615	480	660	1.38	12.00	18.0	23		
10	0.618	475	620	1.31	12.50	18.5	23.5		
10	0.613	460	620	1.35	12.00	17.5	23		
10	0.614	455	630	1.38	12.00	18.5	23.5		
10	0.617	465	620	1.33	11.00	16.0	22		
10	0.619	455	635	1.40	11.50	16.5	22.5		
10	0.613	465	620	1.33	12.50	18.0	23.5		
10	0.615	460	645	1.40	13.00	18.5	24		
10	0.618	485	645	1.33	11.00	15.0	21.5		
10	0.620	480	650	1.35	11.00	15.5	22		
10	0.614	465	640	1.38	11.50	16.0	22		
10	0.615	480	650	1.35	12.50	17.0	23		
10	0.618	480	655	1.36	13.00	16.5	22.5		
10	0.621	485	670	1.38	13.50	18.0	24		
10	0.615	480	655	1.36	11.00	16.0	22		
10	0.616	480	655	1.36	11.00	15.5	21.5		
10	0.620	475	620	1.31	10.50	15.0	21		
10	0.621	480	650	1.35	11.50	16.5	22.5		
10	0.616	465	635	1.37	12.00	18.0	23		
10	0.617	465	635	1.37	11.00	17.0	22		
10	0.621	465	635	1.37	11.50	16.5	22		
10	0.623	480	640	1.33	12.00	18.0	23.5		
10	0.617	460	630	1.37	11.00	16.5	22		
10	0.619	465	625	1.34	13.00	18.5	24		
10	0.608	460	650	1.41	11.00	15.0	20		
10	0.612	460	660	1.43	12.00	16.0	21		
10	0.613	470	675	1.44	12.50	15.5	20		
10	0.612	455	650	1.43	12.50	16.0	20		
10	0.619	460	655	1.42	11.00	17.0	20		
10	0.615	465	655	1.41	12.00	17.5	20		
10	0.613	455	645	1.42	11.00	15.5	19.5		
10	0.611	480	655	1.36	12.00	16.0	20.5		
10	0.620	470	665	1.41	11.50	17.0	20		
10	0.614	470	650	1.38	11.50	17.5	20		
10	0.612	485	655	1.35	12.00	17.0	20.5		
10	0.613	480	665	1.39	10.50	16.5	20.5		
10	0.615	485	665	1.37	10.50	15.5	20		
10	0.619	470	655	1.39	11.00	16.5	19.5		
10	0.610	480	645	1.34	12.00	17.5	19.5		
10	0.612	475	645	1.36	11.00	17.0	20.5		
10	0.613	490	645	1.32	12.00	17.0	20		
10	0.615	470	640	1.36	10.50	16.5	20.5		
10	0.616	475	645	1.36	10.50	16.0	20.5		
10	0.611	460	625	1.36	11.00	15.5	19.5		
10	0.611	475	620	1.31	11.00	17.0	20.0		
10	0.613	465	620	1.33	12.00	16.0	20.5		
10	0.612	480	630	1.31	10.50	15.5	19.5		

0

10	0.616	485	640	1.32	11.50	16.0	19.0	0.88	0.65
10	0.618	490	645	1.32	12.50	17.0	19.0		
10	0.618	490	645	1.32	12.50	17.0	20.0		
10	0.612	470	645	1.37	10.50	17.0	19.5		
10	0.614	485	650	1.34	11.00	15.5	19.0		
10	0.619	470	675	1.44	12.50	16.5	20.0		
10	0.617	470	670	1.43	10.50	15.5	19.5		
10	0.612	455	655	1.44	12.50	17.0	18.5		
10	0.615	475	650	1.37	12.00	16.0	19.0		
10	0.613	460	660	1.43	10.50	17.0	20.0		
10	0.618	450	650	1.44	12.50	16.0	20.0		
10	0.619	455	645	1.42	11.00	15.5	19.5		
10	0.617	475	650	1.37	12.00	16.5	20.0		
10	0.615	460	620	1.35	11.50	17.0	20.0		
10	0.616	445	620	1.39	12.50	15.5	20.5		
10	0.620	480	625	1.30	10.50	16.5	20.0		
10	0.622	460	655	1.42	12.00	17.0	20.0		
10	0.616	470	655	1.39	11.50	15.5	20.0		
10	0.615	460	650	1.41	12.00	16.0	19.5		
10	0.620	455	645	1.42	11.00	17.0	20.0		
10	0.623	455	650	1.43	11.00	17.0	19.0		
10	0.618	470	645	1.37	12.00	15.5	20.0		
10	0.615	450	640	1.42	12.50	16.0	20.5		
10	0.613	460	650	1.41	11.50	15.5	19.5		
10	0.619	455	650	1.43	10.50	16.5	20.0		
10	0.620	480	675	1.41	12.00	17.0	19.5		
10	0.618	485	660	1.36	12.50	17.0	19.0		
10	0.619	470	655	1.39	11.00	15.5	20.0		
10	0.617	490	635	1.30	10.50	17.0	20.5		
10	0.622	490	660	1.35	12.00	16.5	20.5		
10	0.620	455	650	1.43	10.50	17.0	19.5		
10	0.621	470	635	1.35	12.00	16.5	19.5		
10	0.616	475	660	1.39	11.00	17.0	20.0		
10	0.619	480	660	1.38	12.00	15.5	19.5		
10	0.621	485	660	1.36	12.50	17.0	20.0		
10	0.623	485	665	1.37	12.50	15.5	20.0		
10	0.615	475	660	1.39	10.50	16.5	20.5		
10	0.620	480	680	1.42	11.00	17.0	19.5		
10	0.615	475	650	1.37	10.50	17.0	20.0		
10	0.614	475	645	1.36	11.50	15.5	20.5		
10	0.615	470	650	1.38	11.00	16.5	19.5		
10	0.613	480	645	1.34	10.50	17.0	19.0		
10	0.618	490	645	1.32	11.00	15.5	19.0		
10	0.620	490	645	1.32	12.00	17.0	20.0		
10	0.623	475	645	1.36	11.50	17.0	19.0		
10	0.621	490	700	1.43	10.50	15.5	18.5		
10	0.615	470	650	1.38	12.00	16.5	20.0		
10	0.619	460	655	1.42	12.50	17.0	19.5		
10	0.622	460	660	1.43	12.50	17.0	20.0		
10	0.622	455	650	1.43	10.50	15.5	19.5		
10	0.613	470	660	1.40	11.00	16.5	20.0		
10	0.622	485	690	1.42	12.00	17.0	20.0		
10	0.621	465	660	1.42	12.00	15.5	19.5		
10	0.623	460	660	1.43	11.00	17.0	19.0		
10	0.621	465	655	1.41	10.50	16.5	20.0		
10	0.620	475	670	1.41	12.00	17.0	20.0		
10	0.621	470	655	1.39	11.00	17.0	20.5		
10	0.615	475	635	1.34	12.00	15.5	19.5		
10	0.616	460	635	1.38	12.00	16.5	20.0		
10	0.614	490	650	1.33	10.50	17.0	19.5		
10	0.616	480	640	1.33	12.50	16.5	20.0		
10	0.615	475	640	1.35	11.00	17.0	20.0		
10	0.612	460	660	1.43	12.00	17.0	20.5		
10	0.615	460	655	1.42	10.50	15.5	19.5		
10	0.615	470	660	1.40	12.50	16.5	20.0		
10	0.619	455	650	1.43	11.00	17.0	20.0		
10	0.618	460	655	1.42	10.50	17.0	20.0		
10	0.616	455	650	1.43	12.50	15.5	19.5		
10	0.615	470	650	1.38	11.00	16.5	20.0		
10	0.611	470	650	1.38	12.00	16.5	20.5		
10	0.612	485	655	1.35	10.50	15.5	20.0		
10	0.613	480	665	1.39	12.50	17.0	20.5		
10	0.617	485	655	1.35	11.00	15.5	19.5		
10	0.618	470	645	1.37	10.50	17.0	19.0		
10	0.619	480	645	1.34	12.50	17.0	19.5		
10	0.622	475	640	1.35	11.00	15.5	20.0		

10	0.620	490	650	1.33	10.50	16.0	19.5	0.77	0.68
10	0.615	470	625	1.33	12.50	15.5	20.0		
10	0.613	475	620	1.31	11.00	17.0	19.5		
10	0.614	460	625	1.36	10.50	16.5	19.0		
10	0.616	465	640	1.38	12.00	17.0	20.0		
10	0.618	480	645	1.34	11.00	16.5	20.5		
10	0.623	485	645	1.33	12.00	17.0	20.0		
10	0.610	460	635	1.38	10.50	17.0	20.5		
10	0.610	450	630	1.40	12.00	15.5	19.5		
10	0.620	455	635	1.40	10.50	16.5	20.0		
10	0.619	460	625	1.36	11.00	17.0	19.5		
10	0.611	460	630	1.37	12.00	15.5	20.0		
10	0.612	455	630	1.38	11.50	16.5	20.5		
10	0.619	465	635	1.37	12.50	17.0	19.5		
10	0.620	470	625	1.33	11.00	15.5	19.0		
10	0.616	475	640	1.35	12.50	17.0	20.0		
10	0.620	460	630	1.37	12.50	15.5	20.5		
10	0.625	455	660	1.45	10.50	15.5	19.0		
10	0.629	455	665	1.46	11.00	16.5	20.0		
10	0.615	460	660	1.43	12.00	17.0	20.5		
10	0.619	455	650	1.43	10.50	16.0	19.5		
10	0.621	445	670	1.51	10.00	16.5	20.0		
10	0.623	445	670	1.51	12.00	17.0	20.5		
10	0.613	465	685	1.47	10.50	15.5	19.5		
10	0.616	455	675	1.48	12.50	17.0	21.0		
10	0.623	445	635	1.43	12.00	16.0	20.0		
10	0.619	460	650	1.41	10.50	16.5	20.5		
10	0.612	465	655	1.41	10.00	15.5	19.0		
10	0.613	455	640	1.41	12.50	16.5	21.0		
10	0.621	460	640	1.39	12.00	16.0	20.5		
10	0.618	460	645	1.40	11.00	15.5	20.0		
10	0.614	455	640	1.41	11.50	17.0	21.0		
10	0.615	465	650	1.40	10.50	15.5	19.5		
10	0.623	465	665	1.43	11.00	16.0	20.0		
10	0.620	465	660	1.42	10.50	16.5	20.5		
10	0.615	465	660	1.42	12.00	17.0	21.0		
10	0.617	455	655	1.44	10.00	15.0	19.5		
10	0.615	465	650	1.40	10.50	15.5	19.5		
10	0.613	465	675	1.45	11.00	16.0	20.0		
10	0.614	460	670	1.46	11.50	16.5	20.5		
10	0.612	445	665	1.49	12.50	17.0	21.0		
10	0.617	475	665	1.40	11.50	15.5	20.0		
10	0.616	480	670	1.40	10.50	15.0	19.0		
10	0.615	475	660	1.39	11.00	16.0	19.5		
10	0.613	470	695	1.48	10.50	15.5	19.0		
10	0.623	465	685	1.47	11.50	16.5	20.5		
10	0.620	470	685	1.46	11.00	16.0	20.0		
10	0.615	445	660	1.48	12.00	17.0	21.0		
10	0.617	465	690	1.48	10.50	16.0	20.0		
10	0.618	470	675	1.44	12.50	17.0	21.5		
10	0.616	455	670	1.47	12.00	16.5	21.0		
10	0.613	470	685	1.46	10.50	15.5	19.0		
10	0.614	465	680	1.46	11.00	16.0	20.0		
10	0.620	485	695	1.43	10.50	16.5	20.0		
10	0.618	485	700	1.44	10.00	15.5	19.0		
10	0.616	485	710	1.46	11.00	16.0	19.5		
10	0.615	480	695	1.45	10.50	15.0	19.0		
10	0.617	455	660	1.45	10.50	15.5	19.0		
10	0.621	455	665	1.46	10.50	16.5	20.0		
10	0.613	460	660	1.43	11.00	16.0	20.5		
10	0.616	455	650	1.43	10.50	15.5	19.5		
10	0.619	450	670	1.49	11.50	16.0	20.0		
10	0.622	445	670	1.51	12.00	17.0	20.5		
10	0.616	465	685	1.47	10.50	15.5	19.5		
10	0.615	455	675	1.48	12.00	17.0	21.0		
10	0.620	445	635	1.43	10.50	15.5	19.5		
10	0.623	460	650	1.41	11.50	16.5	20.5		
10	0.618	465	655	1.41	10.00	15.0	19.0		
10	0.616	455	640	1.41	12.50	17.0	21.0		
10	0.619	460	640	1.39	11.50	16.5	20.5		
10	0.621	460	645	1.40	10.50	16.0	20.0		
10	0.617	455	640	1.41	12.00	17.0	21.0		
10	0.615	465	650	1.40	10.00	15.0	19.5		
10	0.621	465	665	1.43	10.50	15.5	20.0		
10	0.622	470	670	1.43	10.50	15.0	19.5		
10	0.618	455	665	1.46	12.50	17.5	21.0		

10	0.616	455	665	1.46	12.00	16.0	20.5	0.78	0.75
10	0.621	465	665	1.43	11.00	15.5	20.0		
10	0.623	460	665	1.45	11.50	16.5	21.0		
10	0.618	465	670	1.44	12.00	16.0	20.0		
10	0.617	460	665	1.45	10.50	15.5	19.5		
10	0.618	460	630	1.37	12.00	15.0	19.5		
10	0.616	455	635	1.40	12.50	17.0	21.5		
10	0.617	460	640	1.39	10.50	16.5	20.5		
10	0.615	460	625	1.36	11.50	17.0	21.0		
10	0.620	460	640	1.39	12.00	15.0	19.0		
10	0.618	465	635	1.37	11.50	16.0	20.0		
10	0.619	460	635	1.38	10.50	15.5	19.0		
10	0.617	455	640	1.41	12.50	16.5	21.0		
10	0.620	465	665	1.43	11.50	16.0	20.0		
10	0.618	470	670	1.43	10.50	15.5	19.5		
10	0.617	455	665	1.46	12.50	17.0	21.0		
10	0.615	455	665	1.46	12.00	16.0	20.5		
10	0.619	465	665	1.43	10.50	16.0	20.0		
10	0.621	460	665	1.45	11.50	17.5	21.0		
10	0.618	465	670	1.44	10.50	16.0	20.0		
10	0.615	460	665	1.45	10.00	15.5	19.5		
10	0.621	460	630	1.37	12.50	17.0	21.5		
10	0.622	455	635	1.40	12.00	16.5	20.5		
10	0.619	460	640	1.39	12.50	16.0	21.0		
10	0.617	460	625	1.36	10.50	15.5	19.0		
10	0.620	460	640	1.39	11.50	16.0	20.5		
10	0.622	465	635	1.37	10.50	15.0	19.0		
10	0.617	460	635	1.38	12.00	17.5	21.0		
10	0.614	455	640	1.41	11.00	16.5	20.5		
10	0.620	465	665	1.43	10.50	16.0	20.0		
10	0.618	465	660	1.42	11.00000	16.5	20.5		
10	0.617	465	660	1.42	12.00000	17.0	21.0		
10	0.616	455	655	1.44	10.50000	15.5	19.5		
10	0.621	465	650	1.40	11.00000	16.0	19.5		
10	0.622	465	675	1.45	11.50000	16.5	20.0		
10	0.618	460	670	1.46	12.00000	17.0	20.5		
10	0.616	445	665	1.49	12.50000	17.0	21.0		
10	0.620	475	665	1.40	12.00000	16.0	20.0		
10	0.619	470	670	1.43	10.50000	15.5	19.0		
10	0.617	465	660	1.42	10.50000	15.0	19.5		
10	0.615	460	665	1.45	11.00000	15.5	19.0		
10	0.625	470	680	1.45	12.00000	16.5	20.5		
10	0.620	455	670	1.47	12.50000	16.5	21.0		
10	0.616	450	665	1.48	12.50000	17.0	21.5		
10	0.619	455	680	1.49	11.50000	17.0	21.0		
10	0.620	455	675	1.48	12.50000	17.5	21.5		
10	0.618	465	675	1.45	10.50000	15.5	19.5		
10	0.617	460	670	1.46	12.00000	16.0	20.0		
10	0.620	460	670	1.46	11.50000	16.5	20.5		
10	0.622	455	660	1.45	11.00000	17.0	21.0		
10	0.621	460	675	1.47	11.50000	17.5	21.5		
10	0.619	480	680	1.42	12.00000	16.5	21.0		
10	0.621	450	650	1.44	10.50000	16.0	20.5		
10	0.619	465	660	1.42	12.00000	17.5	21.5		
10	0.620	450	670	1.49	10.50000	15.0	19.0		
10	0.617	460	650	1.41	10.50000	16.0	20.5		
10	0.615	470	660	1.40	11.00000	16.5	20.0		
10	0.614	475	655	1.38	11.50000	16.0	20.5		
10	0.617	475	665	1.40	12.00000	15.5	20.0		
10	0.614	475	655	1.38	10.50000	15.5	19.5		
10	0.616	480	675	1.41	10.50000	15.0	19.0		
10	0.615	455	645	1.42	10.00000	16.0	22.0		
10	0.619	460	650	1.41	10.50000	15.5	21.5		
10	0.611	465	645	1.39	10.00000	15.0	21.0		
10	0.612	470	655	1.39	10.00000	16.5	22.5		
10	0.616	475	650	1.37	12.00000	17.0	23.0		
10	0.619	480	655	1.36	11.00000	16.0	22.0		
10	0.613	480	650	1.35	11.00000	16.5	22.0		
10	0.614	485	660	1.36	10.50000	15.5	21.5		
10	0.616	470	650	1.38	11.50000	17.0	23.0		
10	0.620	475	660	1.39	11.00000	15.0	20.5		
10	0.615	465	655	1.41	10.00000	15.0	21.0		
10	0.616	475	660	1.39	11.00000	15.5	21.5		
10	0.618	480	670	1.40	11.50000	16.0	22.0		
10	0.621	470	650	1.38	10.00000	17.5	23.0		
10	0.616	465	660	1.42	10.00000	16.5	22.5		

10	0.617	475	650	1.37	10.00000	15.0	21.0	0.89	0.65
10	0.620	470	650	1.38	11.00000	15.5	21.5		
10	0.622	470	665	1.41	11.00000	15.0	21.0		
10	0.617	465	650	1.40	11.00000	15.5	21.0		
10	0.618	470	645	1.37	11.50000	14.5	20.5		
10	0.620	480	665	1.39	11.50000	16.0	22.0		
10	0.623	480	650	1.35	11.00000	16.5	22.5		
10	0.619	475	650	1.37	11.00000	17.0	23.0		
10	0.620	475	660	1.39	12.00000	16.0	22.0		
10	0.621	470	650	1.38	11.00000	16.5	22.0		
10	0.623	460	650	1.41	11.00000	15.5	21.5		
10	0.619	475	660	1.39	11.50000	15.0	21.0		
10	0.621	480	660	1.38	11.50000	14.5	21.0		
10	0.620	475	665	1.40	12.50000	17.0	23.0		
10	0.620	480	670	1.40	11.00000	16.0	22.0		
10	0.613	455	650	1.43	10.50000	15.5	21.5		
10	0.615	465	655	1.41	10.00000	15.0	21.0		
10	0.620	450	645	1.43	11.00000	16.0	22.0		
10	0.622	450	650	1.44	11.50000	16.5	22.5		
10	0.614	475	670	1.41	12.50000	17.0	23.0		
10	0.617	460	655	1.42	11.00000	16.0	22.0		
10	0.612	475	670	1.41	11.00000	15.5	21.5		
10	0.614	470	660	1.40	10.50000	15.0	21.0		
10	0.609	465	650	1.40	11.00000	14.5	21.0		
10	0.611	470	665	1.41	12.50000	16.0	22.0		
10	0.613	465	655	1.41	11.50000	15.5	21.5		
10	0.616	475	670	1.41	10.00000	14.0	20.5		
10	0.611	465	650	1.40	11.00000	16.0	22.0		
10	0.612	460	655	1.42	11.50000	16.5	22.5		
10	0.615	470	660	1.40	12.00000	17.0	23.0		
10	0.617	470	665	1.41	12.50000	17.5	23.5		
10	0.612	475	660	1.39	11.00000	16.0	22.0		
10	0.614	465	650	1.40	12.00000	17.0	23.0		
10	0.616	460	645	1.40	12.50000	16.5	23.0		
10	0.619	480	650	1.35	11.50000	16.5	22.5		
10	0.614	460	640	1.39	11.00000	16.0	22.0		
10	0.615	455	640	1.41	12.00000	17.0	23.0		
10	0.618	470	660	1.40	12.00000	16.5	22.5		
10	0.620	460	655	1.42	11.00000	15.5	22.0		
10	0.615	455	650	1.43	11.50000	16.0	22.0		
10	0.617	480	665	1.39	11.00000	15.5	21.5		
10	0.619	460	660	1.43	12.00000	16.0	22.5		
10	0.622	480	670	1.40	11.00000	15.0	21.0		
10	0.617	485	665	1.37	11.50000	15.0	21.5		
10	0.618	485	670	1.38	12.00000	16.5	22.5		
10	0.620	465	650	1.40	12.00000	16.0	22.0		
10	0.623	465	650	1.40	11.50000	15.5	21.5		
10	0.618	485	670	1.38	11.00000	15.0	21.0		
10	0.620	455	645	1.42	10.50000	15.0	20.5		
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