



CASCADE STEEL ROLLING MILLS, INC.
 3200 N Highway 99W P.O. Box 687
 McMinnville, Oregon 97128-9399

January 1, 2018

CERTIFICATE OF COMPLIANCE – CSA G30.18

As indicated on the Mill Test Reports, I certify that all the manufacturing processes of Cascade Steel Rolling Mills, Inc. occurred in the United States of America. *1 Our reinforcing steel conforms to CSA G30.18-09 grade 400W, 400R, 500W, or 500R as indicated on test reports.

The steel shipped is in fact composed of the heats indicated on the Mill Test Report and is represented by results obtained on heat samples tested in accordance with CSA G30.18-09 grade 400W, 400R, 500W, or 500R specification for sampling, chemical analysis, physical testing and measuring. The average spacing and height of deformations have been measured and found to be in accordance with the requirements of CSA G30.18-09 grade 400W, 400R, 500W, or 500R.

CHEMICAL REQUIREMENTS by Grade, CSA G30.18					
Element		400R	500R	400W	500W
Carbon	Max %	N/A	N/A	0.30	0.30
Manganese	Max %	N/A	N/A	1.60	1.60
Phosphorus	Max %	0.05	0.05	0.035	0.035
Sulfur	Max %	N/A	N/A	0.045	0.045
Silicon	Max %	N/A	N/A	0.50	0.50
Carbon Equivalent	Max	N/A	N/A	0.55	0.55

TENSILE REQUIREMENTS by Grade, CSA G30.18					
	Bar Size	400R	500R	400W	500W
Tensile Strength, min, MPa	All	540	675	540*2	625*2
Yield Strength, min, MPa	All	400	500	400	500
Yield Strength, max, MPa	All	N/A	N/A	525	625
Elongation in 200 mm, min %	10M	10	9	13	13
	15M, 20M	10	9	13	13
	25M	9	8	13	13
	30M, 35M	8	7	12	12
	45M, 55M	7	6	12	12

*1 Certifications which do not indicated made in America are made from steel purchased outside the United States.

*2 Tensile Strength shall not be less than 1.15 times actual yield strength.

Jeff Kramer
 Manager, Quality Assurance
 Cascade Steel Rolling Mills, Inc.