


Created by QA Engineer	 New Zealand Tube Mills	Technical Information	
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NZTM-Q05F:- Semi Bright (NZ Steel TUBE300) Coil Specs {Hot Rolled , Pickled & Oiled}			
This specification covers Hot Rolled Semi-bright Coil (medium strength) sourced from New Zealand Steel and used by NZ Tube Mills for the manufacture of Tube used in Rolled Cage and other medium strength applications.			

When forming steel strip into tubular sections, the mechanical properties are affected. The extent of this effect depends on the specific dimensions of tube being produced and particularly the tube diameter to thickness ratio. In general during tube forming, the yield stress will be substantially increased, the tensile strength slightly increased and elongation reduced.

As an example on 38.1 diameter by 2.5 wall thickness round tube, when processing the steel strip into tube, the yield stress increased by 24% (from 306 to 380 MPa), the tensile stress increased by 13% (378 to 425 MPa), and the elongation reduced by 8% (24 to 22%).

SPECIFIED MINIMUM MECHANICAL PROPERTIES OF STRIP

YIELD STRESS	250 MPa (min.)
TENSILE STRESS	350 MPa (min.)
ELONGATION	18% (min.)

NORMAL RANGE OF MECHANICAL PROPERTIES OF STRIP

YIELD STRESS	290 - 347 MPa
TENSILE STRESS	371 - 422 MPa
ELONGATION	21 - 29%

TYPICAL CHEMICAL COMPOSITION - (LADLE ANALYSIS)

CARBON	C	0.08%	max
SILICON	Si	0.03%	max
MANGANESE	Mn	0.40%	max
PHOSPHORUS	P	0.03%	max
SULPHUR	S	0.03%	max
ALUMINUM	Al	0.10%	max

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