


TEST CERTIFICATE



Certificate No: 462170

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Customer: MACSTEEL INTERNATIONAL Customer Order No: 113275 EndUser Reference: 168349	Supplier: New Zealand Steel Limited A BlueScope Company 131 Mission Bush Road, Glenbrook, South Auckland Postal: Private Bag 92121, Auckland 1142, New Zealand Telephone: (09) 375 8111 Auckland Fax: (09) 375 8959 Sales Order No : 1429916 Printed On : 15/04/2020
 All tests reported herein have been performed in accordance with the laboratory's scope of accreditation	I certify that the original records of the company show that the Item(s) referred to on this certificate conform to the specifications as stated. S. BESTER - NEW ZEALAND STEEL APPROVED SIGNATORY Mechanical LAB 965 D. GRANGER - NEW ZEALAND STEEL APPROVED KTP Chemical LAB 101
Specification: ASTMA1011(2018) CS Type B Product : 0.1047" x 48" x Coil HOT ROLLED COIL	Inspection: Supplier Certification: Supplier

ITEMS COVERED BY THIS CERTIFICATE

	Heat No	Ordered Dimensions	Tested Unit
HNG6326401 #60997	976343	0.1047" x 48" x Coil	HNG6326001
HNG6326501, HNG6326601, HNG6326701 #61012 +61006 #61034	976413	0.1047" x 48" x Coil	HNG6326001

CHEMICAL ANALYSIS

Percentage of element by mass (L=Cast, P=Product, S=Soluble, -T=Total, CEV = Carbon Equivalent Value)

Heat No	L/P	x100			x1000							x10000	x100				
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al-T	B	N	CEV
976343	L	4	TR	18	10	17	13	16	21	1	7	4	1	37			40
976413	L	6	TR	19	11	15	13	17	19	TR	8	4	TR	63			60

TR composition: Si (TR) < 0.01%, Mo/Nb/Ti (TR) < 0.001%, B (TR) < 0.0001%

COMMENTS

Steel produced through the basic oxygen steelmaking process by New Zealand Steel. Steel is fine grained, fully killed, continuously cast. - Heat analysed from ladle - Results relate to test on a representative sample of the items covered in this test certificate. - This certificate may not be reproduced except in full. - NZ Steel, Chemical Laboratory IANZ Accreditation Number 101, KTP Mr David Granger. - NZ Steel, Mechanical Laboratory IANZ Accreditation Number 965, Approved Signatory Mr Schalk Bester. NZ Steel Laboratories are accredited by, International Accreditation New Zealand (IANZ), a signatory to the International Laboratory Accreditation Cooperation mutual Recognition Agreement.

Test methods for chemical analysis were, ASTM E415: 2017 & JIS G1253: 2002.

New Zealand Steel operate a quality management system conforming to AS/NZS ISO 9001: 2015 as assessed by Telarc Ltd Registration Number: 82.

MECHANICAL COMMENTS

Test methods for Mechanical analysis were, ASTM A370

Test Direction **Longitudinal**.

