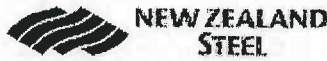


TEST CERTIFICATE



Certificate No: 462176

Created On: 15/04/2020

Document source: NZ Steel

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 : 1434552 Printed On : 15/04/2020
<p>All tests reported herein have been performed in accordance with the laboratory's scope of accreditation</p>	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: ASTMA1018(2018) 50 Product : 0.25" x 48" x Coil HOT ROLLED COIL	Inspection: Supplier Certification: Supplier

ITEMS COVERED BY THIS CERTIFICATE

Pack No	Heat No	Ordered Dimensions	Tested Unit
HHG6459300, HHG6459400 #61017	975778	0.25" x 48" x Coil	HHG6459300
HHG6459500, HHG6459700 #61019	975775	0.25" x 48" x Coil	HHG6459500

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
975775	L	20	2	93	13	14	14	15	20	1	80	2		31			50
975778	L	19	2	96	13	11	14	15	22	1	84	2		32			50

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

MECHANICAL TESTING

Tensile

Tested Unit	Heat No	ReL psi MPa	Yield point type	Rm psi	Lo	ELONG %
HHG6459300	975778	68000	ReL	84600		
HHG6459500	975775	65600	ReL	84300		

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 Transverse.

ReL = Lower Yield Stress.

ReL = Lower Yield Stress.

