

TEST CERTIFICATE



NEW ZEALAND
STEEL

Certificate No: 482044

Created On: 10/02/2021

Document source: NZ Steel

Customer: United Steel Ltd (Chch) Customer Order No: 408084	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 Sales Order No : 1503811 Printed On : 10/02/2021
 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 : AS/NZS1594(2002) HA300 Product : 6mm x 1220mm x 2400mm LIGHT PLATE	Inspection: Supplier Certification: Supplier

ITEMS COVERED BY THIS CERTIFICATE

Pack No	Heat No	Ordered Dimensions	Tested Unit
HZG9262601, HZG9262602	983242	6mm x 1220mm x 2400mm	HHG9262600

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
983242	L	17	1	111	20	10	14	17	22	TR	10	TR	1	40	TR	50	37

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

CEV = C + (Mn/6) + ((Cr+V+Mo)/5) + ((Cu+Ni)/15)

MECHANICAL TESTING

Tensile

Tested Unit	Heat No	Yield stress MPa	Yield point type	Rm MPa	Lo	ELONG %
HHG9262600	983242	348	ReL	502	A	22

MECHANICAL COMMENTS

Test methods for Mechanical analysis were, AS1391, AS2505

Gauge Length Lo(A) = 200mm.

Test Direction Longitudinal.

ReL = Lower Yield Stress.

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 D. Granger. - NZ Steel, Mechanical Laboratory IANZ Accreditation Number 965, Approved Signatory Mr Schalk Bester. - NZ Steel, Mechanical Laboratory IANZ Accreditation Number 965, Approved Signatory Mr S. 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.

TEST CERTIFICATE



Certificate No: 4917221
Created On: 30/06/2021

Document source: NZ Steel

Customer: United Steel Ltd (Chch) Customer Order No: 410135		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	
Specication: AS/NZS1594(2002) HA300 Product: 10mm x 1220mm x 2400mm LIGHT PLATE		Inspection: Supplier Certification: Supplier	
TESTING LABORATORY 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	
Sales Order No : 1548424 Printed On : 30/06/2021			

ITEMS COVERED BY THIS CERTIFICATE

Pack No	Heat No	Ordered Dimensions	Tested Unit
HZH0387506, HZH0387506	987789	10mm x 1220mm x 2400mm	HHH0387500
HZH0387604, HZH0387605	987788	10mm x 1220mm x 2400mm	HHH0387600

CHEMICAL ANALYSIS

Percentage of element by mass												
(L=Cast, P=Product, S=Soluble, T=Total, CEV = Carbon Equivalent Value)												
Heat No	L/P	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb
987788	L	16	TR	116	20	9	12	15	19	1	22	TR
987789	L	17	1	112	15	8	12	15	15	1	20	TR
TR composition: Si (TR) < 0.01%, Mo/Nb/Ti (TR) < 0.004%, B (TR) < 0.0001%												
CEV = C + (Mn/5) + ((Cr+V+Mo)/5) + ((Cu+Ni)/15)												

MECHANICAL TESTING

Tensile	Yield stress	Yield point	Rm MPa	Lo	ELONG %
Tested Unit	Heat No	MPa	Yield point		
HHH0387500	987789	332	R10.5	A	21
HHH0387600	987788	337	REL	A	20

MECHANICAL COMMENTS

Test methods for Mechanical analysis were, AS1391, AS2505
 Gauge Length Lo(A) = 200mm.
 Test Direction Longitudinal.
 Rel = Lower Yield Stress.
 R10.5 = Proof Strength, Total Extension, 0.5% prescribed percentage

COMMENTS

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



NEW ZEALAND
STEEL

Certificate No: 478665

Created On: 05/12/2020

Document source: NZ Steel

Customer: United Steel Ltd (Chch) Customer Order No: 407686	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 Sales Order No : 1494255 Printed On : 05/12/2020
 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 : AS/NZS1594(2002) HA300 Product : 12mm x 1220mm x 2400mm LIGHT PLATE	
Inspection: Supplier Certification: Supplier	

ITEMS COVERED BY THIS CERTIFICATE

Pack No	Heat No	Ordered Dimensions	Tested Unit
HZG8794501, HZG8794502, HZG8794503, HZG8794504, HZG8794505	982781	12mm x 1220mm x 2400mm	HHG8794500

CHEMICAL ANALYSIS

Percentage of element by mass

(L=Cast, P=Product, -S=Soluble, -T=Total, CEV = Carbon Equivalent Value)

Heat No	L/P	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al-T	B	N	CEV
982781	L	16	2	123	15	9	12	16	28	TR	14	1	1	35	TR	50	38

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

CEV = C + (Mn/8) + ((Cr+V+Mo)/5) + ((Cu+Ni)/15)

MECHANICAL TESTING

Tensile

Tested Unit	Heat No	Yield stress MPa	Yield point type	Rm MPa	Lo	ELONG %
HHG8794500	982781	331	ReL	491	A	27

MECHANICAL COMMENTS

Test methods for Mechanical analysis were, AS1391, AS2505
 Gauge Length Lo(A) = 200mm.
 Test Direction Longitudinal.
 ReL = Lower Yield Stress.

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