



**New Zealand Steel Limited**

**Client Number 39**

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**Telephone** 09 375-8111

**www.nzsteel.co.nz**

**Authorised Representative**

Mr Schalk Bester  
Principal Metallurgist

**Programme**

Chemical Testing Laboratory

**Accreditation Number** 101

**Initial Accreditation Date** 18 July 1978

**Conformance Standard**

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories

**Laboratory Services Summary**

2.01	Metals and Alloys
2.04	Ores and Minerals
2.41	Waters
2.81	Other Specified Inorganic Material

**Key Technical Personnel**

Ms Jannie Doevendans	2.41
Mr Ravi Rama	2.04, 2.81
Mr Paul Tupe	2.01

Operations Manager  
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## 2.01 Metals and Alloys

### (a) Ferrous materials

### (h) Other metals and alloys

#### Carbon and low alloy steels

The following elements by optical emission vacuum spectrometric analysis in accordance with ASTM E415-21, and JIS G 1253

Aluminium	Boron	Carbon	Chromium
Cobalt	Copper	Lead	Manganese
Molybdenum	Nitrogen	Niobium	Nickel
Phosphorus	Silicon	Sulphur	Tin
Titanium	Tungsten	Vanadium	Zirconium

#### White irons

The following elements by optical emission vacuum spectrometric analysis.

Aluminium	Boron	Carbon	Chromium
Copper	Lead	Magnesium	Manganese
Molybdenum	Niobium	Nickel	Phosphorus
Silicon	Sulphur	Tin	Titanium
Vanadium			

#### Stainless and weathering steel

The following elements by optical emission vacuum spectrometric analysis in accordance with ASTM E415-21 (modified)

Aluminium	Boron	Carbon	Chromium
Cobalt	Copper	Lead	Manganese
Molybdenum	Nitrogen	Niobium	Nickel
Phosphorus	Silicon	Sulphur	Tin
Titanium	Tungsten	Vanadium	Zirconium

## 2.04 Ores and Minerals

### (a) Ferrous ores

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The following elements by X Ray Fluorescence spectrophotometric analysis based on In-house methods (TA 3210.003)

Aluminium	Calcium	Chromium	Copper
Iron	Manganese	Magnesium	Phosphorus
Potassium	Silicon	Sodium	Titanium
Vanadium	Zinc		

## 2.41 Waters

### (b) Non-potable waters (ground waters)

The following tests are in accordance with APHA "Standard Methods for the Examination of Water and Wastewater" (23<sup>rd</sup> Edition)

The following elements by inductively coupled plasma optical emission spectroscopy (ICP-OES) in accordance with APHA 3120 A and 3120 B.

Boron	Cadmium	Chromium	Cobalt
Copper	Lead	Manganese	Molybdenum
Nickel	Phosphorus	Vanadium	Zinc

### (d) Effluents and trade wastes

The following tests are in accordance with APHA Standard Methods for the Examination of Water and Wastewater (23<sup>rd</sup> Edition) except where otherwise indicated.

Dissolved oxygen	4500-O C
Oil and grease	In-house by non-dispersive Infra Red Spectroscopy
pH	4500-H+ B
Temperature (0-140 °C)	In-house by digital thermometer
Total suspended solids	2540 D

The following elements by inductively coupled plasma optical emission spectroscopy (ICP-OES) in accordance with APHA 3120 A and 3120 B.

Cadmium	Chromium (total)	Cobalt	Copper
Iron	Lead	Manganese	Nickel
Zinc			

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## 2.81 Other Specified Inorganic Material

### (a) Steel making slags

The following elements by XRF spectrophotometric analysis in accordance with in-house methods

Aluminium	Calcium	Iron	Manganese
Magnesium	Phosphorus	Potassium	Sodium
Silicon	Titanium	Vanadium	

### References:

APHA	American Public Health Association
ASTM	American Society for Testing and Materials
JIS	Japanese Industrial Standard

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