

## TEST REPORT

February 24, 2021

IMR Report Number 2021019661

Malcolm MacDougall  
Servometer  
501 Little Falls Road  
Cedar Grove, NJ 07009

### SUMMARY

cc Joe Madonna

One sample was received for chemical analysis.

The results are below.

PO Number  
SVP210602

### CHEMISTRY

Date Received  
February 18, 2021

Description  
Standard Nickel  
Type 1

Reference Date  
February 2021

Element	Sample
Ni Alloy	99.94
Ni <sup>1</sup>	95.82
S <sup>2</sup>	0.014

<sup>1</sup>Determined by difference.

<sup>2</sup>Determined by combustion-infrared absorbance.

Results in weight percent unless otherwise indicated.

Method(s): CAP-017R (ICP-AES) and ASTM E 1019-18 (Comb./IGF)



Reviewed by



Jeremy Bean  
Chemist

Reviewed by

Pete Lockard  
Supervisor Chemistry Department

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## TEST REPORT

February 24, 2021

IMR Report Number 202101966A

Malcolm MacDougall  
Servometer  
501 Little Falls Road  
Cedar Grove, NJ 07009

### SUMMARY

cc Joe Madonna

Two samples were received for tensile testing.

The results are below.

PO Number  
SVP210602

### TENSILE PROPERTIES – ROOM TEMPERATURE<sup>1</sup>

Date Received  
February 18, 2021

	Tensile Strength (ksi)	Yield Strength (ksi)	Elongation (%)
Sample	185	142	2.0*

Description  
Standard Nickel  
Type 1

<sup>1</sup>Average of two replicates

Reference Date  
February 2021

\*Both replicates failed outside gauge

The width of the samples was 0.37 inches; gauge length was 2.00 inches.  
Yield strength was determined by the 0.2% offset method. Crosshead  
speed was 0.01 in./min. to yield and 0.1 in./min. to fracture.

Method(s): ASTM E 8-16a



Reviewed by



Molly Adams  
Engineer, Assoc.

Reviewed by

Matt LePage  
Operations Project Manager

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# IMR TEST LABS

A Curtiss-Wright Business Unit  
www.imrtest.com

131 Woodsedge Drive  
Lansing, NY 14882  
T: 1.607.533.7000 | F: 1.607.533.9210

February 24, 2021

Malcolm MacDougall  
Servometer  
501 Little Falls Road  
Cedar Grove, NJ 07009

cc Joe Madonna

PO Number  
SVP210602

Date Received  
February 18, 2021

Description  
Standard Nickel  
Type 1

Reference Date  
February 2021

## TEST REPORT

IMR Report Number 202101966E

### SUMMARY

One sample was received for micro-hardness testing.

The results are below.

### MICRO-HARDNESS

	HV <sub>100</sub> <sup>1</sup>
Sample	498

<sup>1</sup>Average of three readings.  
Method(s): ASTM E 384-17



Reviewed by



Cheryl Downey  
Senior Metallurgical Specialist

Reviewed by

Travis Willhard  
Metallurgical Engineer

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