

# 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

**Original Date**  
January 22, 2020

**Revision Date**  
January 24, 2020

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

cc: Joe Madonna

**PO Number**  
SVP200445

**Date Received**  
January 13, 2020

**Description**  
Low Sulfur Nickel

**Reference Date**  
January 2020

## TEST REPORT

**IMR Report Number 202000612B – Revision 1 (Remeasured Thickness)**

### SUMMARY

Two samples were received for tensile testing.

The results are below.

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

	Tensile Strength (ksi)	Yield Strength (ksi)	Elongation (%)
Sample	199	147	4

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

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

*Lisa M Wackowicz*

Reviewed by

*Jim Andrews*



Lisa Wackowicz  
Technical Operations Coordinator

Jim Andrews, CWI  
Manager, Mechanical & Machine Shop

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January 22, 2020

## TEST REPORT

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

**IMR Report Number 202000612F**

cc: Joe Madonna

### SUMMARY

One sample was received for hardness testing.

**PO Number**  
SVP200445

The results are below.

**Date Received**  
January 13, 2020

### HARDNESS

**Description**  
Low Sulfur Nickel

	HV <sub>100</sub> <sup>1</sup>
Sample	440

**Reference Date**  
January 2020

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



Reviewed by



Cheryl Downey  
Senior Metallurgical Specialist

Reviewed by

Jim Andrews, CWI  
Manager, Mechanical & Machine Shop

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## TEST REPORT

**IMR Report Number 202000612K**

**January 22, 2020**

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

cc: Joe Madonna

**PO Number**  
SVP200445

**Date Received**  
January 13, 2020

**Description**  
Low Sulfur Nickel

**Reference Date**  
January 2020

### SUMMARY

One sample was received for chemical analysis.

The results are below.

### CHEMISTRY

Element	Sample
Ni Alloy	99.86
Ni <sup>1</sup>	95.99
S <sup>2</sup>	0.010

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

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

Results in weight percent unless otherwise indicated.

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



Reviewed by

*Lisa M Wackowicz*

Reviewed by

*Mike St. Phillips*



Lisa Wackowicz  
Technical Operations Coordinator

Mike St. Phillips  
Staff Chemist

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