



**SIVACO**  
ONTARIO  
A HEICO COMPANY

ISO 9001:2008, ISO 14001:2004 AND OHSAS 18001:2007 REGISTERED

**SIVACO Ontario**  
a Division of SIVACO Wire Group L.P.

330 Thomas Street  
PO Box 220  
Ingersoll, Ontario CANADA  
N5C 3K5

(519) 485-4150 Fax (519) 485-3039

# Physical Test Report

WORK ORDER  
**079556**

HEAT NUMBER  
**W31819**

SALES ORDER / RLS  
**050278 / 6**

CERT ID / REV  
**00040843 / 01**

SOLD TO

**Windsor Machine & Stamping (US) Ltd**  
**26655 NorthLine Road**  
**Taylor, MI 48180**  
**United States**  
**Attn: Quality Assurance**

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	COILS	LADING NO	SHIPMENT DATE					
	<b>IROQUIOS</b>	<b>8,086 lbs</b>	<b>4</b>	<b>00055155</b>	<b>12/17/2012</b>					
SPECIFICATION <b>PIQ1018130-16</b>										
<b>13.00mm (0.5118") 1018 IQ, Clean/Coat, Clean/Phos/Polymer, Windsor Machine &amp; Stamping Ltd, 7213.91.6000</b>										
<b>Hot Rolled Rods Dia.&lt;14.0mm (0.551"),Further Processed,Carbon &lt; 0.60%</b>										
CUSTOMER REQUIREMENTS										
<b>Chemical (value of 9 = n/a)</b>										
<b>C</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Si</b>	<b>Cu</b>	<b>Ni</b>	<b>Cr</b>	<b>Mo</b>	<b>Sn</b>	<b>Al</b>
.1600	.7400	.0050	.0100	.1700	.0400	.0500	.0400	.0070	.0030	.0010
<b>B</b>	<b>V</b>	<b>N</b>								
.0002	.0020	.0043								
<b>Mechanical - Summary</b>										
<u>TEST</u>	<u>UNITS</u>	<u>HIGH</u>	<u>LOW</u>	<u>AVERAGE</u>						
<b>Diameter (inch)</b>	<b>in</b>	<b>.513</b>	<b>.511</b>	<b>0.512</b>						
<b>Tensile (psi)</b>	<b>psi</b>	<b>69666</b>	<b>68215</b>	<b>69039</b>						
End of Certification										

I attest that the results are a true and correct copy of the records prepared and maintained by SIVACO Ontario in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier. This test report cannot be reproduced or distributed, except in full, without the written permission of SIVACO Ontario.

Authorized by: Gary Allard, QA Manager