



MATERIAL TEST REPORT

Steel & O'Brien Manufacturing

Certificate Date:
3/28/2013

DUAL 316/316L

Part Size & Description:

Sold To: GVC

2" X .25" OAL - 16AMP SOLID END CAP

SOB Part Number: ABD02000i - 316

Order Number: 31256

Part Number:

HEAT #	Material	Material Standards
1111435	DUAL 316/316L	ASME SA479, EN 10204 3.1B

Chemical Properties

HEAT #	Carbon	Manganese	Phosphorus	Sulfur	Silicon	Chromium	Nickel	Nitrogen	Molybdenum
1111435	0.025%	1.21%	0.038%	0.003%	0.42%	16.05%	10.05%	NA	2.02%

Physical Test Results

HEAT #	Yield 0.2		Tensile		Hardness HB	Elongation %	Reduction %
	N/(mm sq)	PSI	N/(mm sq)	PSI			
1111435	246	35679	620	89923	N/A	61%	69%

2" TRICLAMP FITTING

Finish Code	ID Finish (microinch)	OD Finish (microinch)	ASME BPE SF Code
PC	20 Ra Max Mechanical Polish	Unpolished	SF1
PL	20 Ra Max Mechanical Polish	32 Ra	SF1
PD	15 Ra Max Electropolish	Unpolished	SF4
PM	15 Ra Max Electropolish	32 Ra	SF4

ISO
CERTIFIED
9001:2008

Steel & O'Brien certifies that the information is a true representation of the data that has been furnished by our suppliers. We have no knowledge of mercury or radioactive material used in the melting or processing of steel used in products sold by Steel & O'Brien. This certificate was made by use of a computer system and is valid without signature.

Approved by:
Tami Sawicki
Certification Specialist

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Phone: (585) 492-5800 7196 Route 98 Arcade, NY 14009



TEST REPORT



P.O BOX 460 PH: (610) 279-7700
 BRIDGEPORT, PA, 19405 FAX: (610) 277-2005

TMI Mill# 44844	TMI Lot# 51195	Customer P.O # TP52304	Quantity 1050.
Sold To: Tel-Tru Manufacturing C 408 St. Paul Street Rochester, NY, 14605		Type & Grade 316-L Welded & Drawn	Size 0.3750" +/- 0.0010" OD 0.3200" +/- 0.0010" ID
Specifications Part# 97-0005-13 Rev. 3/4 Hard, Elong 10% min, TENSILE 130-145 KSI, CLEAN & BRIGHT, C of C Required			

Chemical Analysis

HEAT#: 0430631				Melt Source / Analysis: MARCEGAGLIA-USA					
C	Mn	P	S	Si	Cr	Ni	Mo	N	
.021	.960	.0202	.0020	.415	16.801	10.698	2.049	.0484	

Mechanical Properties

Tensile Strength	0.2% Offset Yield Strength	% Elongation	Hardness
139,000 PSI	125,000 PSI	16	
<i>3/8" TUBING FOR 2" TRICLAMP</i>			

Visual Passed Dimensional Passed
 Eddy Current PASSED 10% Notch Level

Nicholas A. Ricci

I certify that this report is correct and conforms to above specifications. Nicholas Ricci, Plant Metallurgist 03/28/2013
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