

TEST REPORT -8703

Assured Testing Services

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CLIENT BILL TO

CLIENT SENT TO

ISO 17025 Certified

BILL TO: PARENO--0044	OurSupplier ID
Metalife Industries	
141 Mong Way	
P.O. Box 53	
Reno PA 16343	
USA	Supplier Code
Attn:	Ph: 800-327-9413

SENT TO: PARENO--0044	OurSupplier ID
Metalife Industries	
141 Mong Way	
P.O. Box 53	
Reno PA 16343	
USA	Supplier Code
Attn:	Ph: 800-327-9413

Test Report#: 8703 **Entry Date:** Tuesday, May 01, 2012

Contact: Andy Kockler

PO#: PUR368

Measurement of chrome plating thickness (2 locations) on bushing IAW ASTM B487.

Part Test Information										
PART NUMBER	LOT NUMBER	S#	SAMPLE DESCRIPTION							
TEST SPECIFICATION NAME			TEST PROCEDURE NAME				HOURS		CYCLES	
TEST RESULTS			INDATE	OUTDATE	TESTCNT	RETCNT	REQ	COMP	REQ	COMP
CMS21439-106-25			Bushing							
Unspecified			Thickness ASTM B487 Cross Section Examination							
			02-May-12	03-May-12	1	1				
<p><i>Results:</i> Coating Measurements on End Face – 0.00028, 0.00040, 0.00048, 0.00048, 0.00056 Average Coating Thickness – 0.00044</p> <p>Coating Measurements on Middle Outside Diameter – 0.00056, 0.00060, 0.00060, 0.00056, 0.00056 inches Average Coating Thickness – 0.00058 inches</p> <p><i>Notes:</i> 1. The coating measurements were taken at 1000X in the etched condition. Aluminum foil was used to preserve the coating during polishing. 2. The coating was uniform in thickness across the surface examined.</p>										

Michele Singer

Revision# 1.10 Date 12/16/10

End Of Report

Quality Assurance Administrator

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ISO 17025

CAGE
5HSJ7

Customer: Metalife Industries

PO: PUR368

Description: Evaluation of coating thickness of bushing.

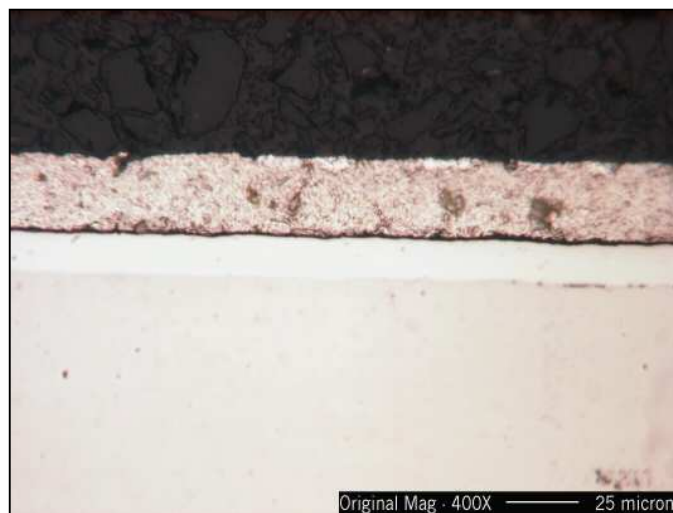
Results:

Coating Thickness (OD- Middle)

<u>Coating</u>	<u>Coating Measurements (inches)</u>	<u>Average Coating Thickness</u>
Chrome Layer	0.00056, 0.00060, 0.00060, 0.00056, 0.00056	0.00058

Notes:

1. The coating measurements were taken at 1000X in the un-etched condition.
2. Aluminum foil was used to preserve the coating during polishing.
3. Photomicrograph of the coating is shown below.
4. The measured coating thickness was uniform in thickness across the middle.



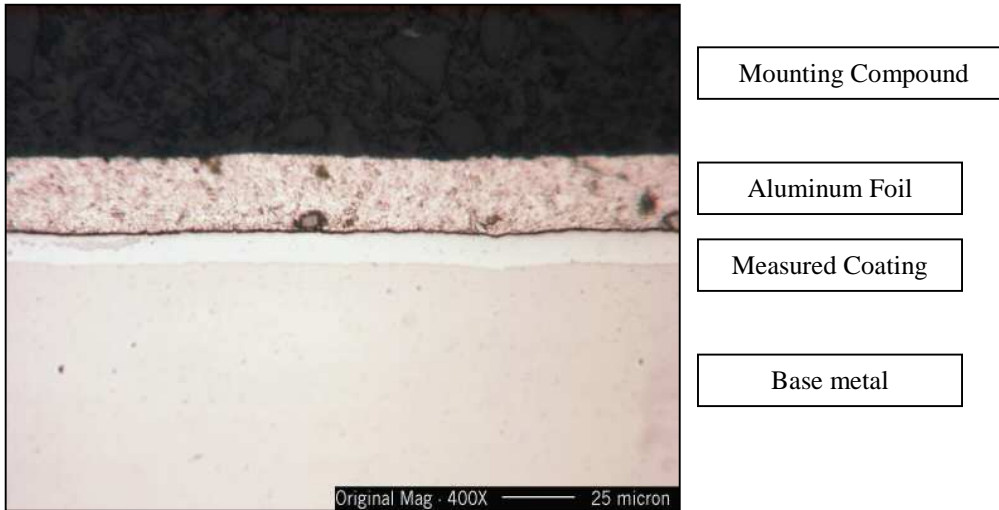
- Mounting Compound
- Aluminum Foil
- Measured Coating
- Base metal

Coating Thickness (End Face)

<u>Coating</u>	<u>Coating Measurements (inches)</u>	<u>Average Coating Thickness</u>
Chrome Layer	0.00028, 0.00040, 0.00048, 0.00048, 0.00056	0.00044

Notes:

1. The coating measurements were taken at 1000X in the un-etched condition.
2. Aluminum foil was used to preserve the coating during polishing.
3. Photomicrograph of the coating is shown below.
4. The measured coating thickness varied from ID (thinner) to OD (thicker).



Observations and Interpretations: None

Test Method(s) Used: ASTM B487, E883

END OF REPORT