



# TAM International Incorporated

## Engineering Specification

### Outside Vendor Coating of Parts

Approval of QMS Document ES-7.3-20,

Signature	<u><i>M.P. Coronado</i></u>	<u>7/18/16</u>
	Marty Coronado – Engineering Director	Date

 <b>TAM INTERNATIONAL</b>	<b>Document Title</b>	<b>SPECIFICATION FOR OUTSIDE VENDOR COATING OF PARTS</b>				
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**1.0 Purpose**

- 1.1 The purpose of this document is to define the requirements for surface coating of parts and/or components.

**2.0 Scope**

- 2.1 This specification covers all parts and/or components used in TAM products.

**3.0 References**

- ASTM B733-97
- QWI-8.2.4-07 Receiving Inspection of Outside Processed Parts

**4.0 General Requirements**


- 4.1 Vendor processes and Quality Control requirements shall be approved by the Engineering Manager or designee prior to shipment of parts for coating application.
- 4.2 All surfaces of the parts shall be coated unless otherwise specifically defined by the Engineering drawing.

**5.0 Preparation Prior to Shipment to Vendor**

- 5.1 All parts shall be inspected prior to shipment.
- 5.2 Parts shall be inspected for suitability of coating, including proper de-burring of edges.
- 5.3 Parts shall be shipped in a manner to assure that parts remain dry and movement between parts is minimized to prevent damage to the parts.

**6.0 Vendor Requirements**

- 6.1 All parts shall be inspected by the Vendor for suitability of coating prior to preparation for coating.
- 6.2 Preparation of the parts for coating shall be performed to assure that NO DAMAGE occurs to finished surfaces of the part.
- 6.3 Vendor shall ensure that traceability of the parts is maintained throughout the processes.
- 6.4 Parts shall be returned to TAM in the container and packaged as received by the Vendor.

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**7.0 Inspection of Parts/Components Returned After Processing (Coating)**

7.1 All parts shall be inspected as per QWI-8.2.4-07 Receiving Inspection of Outside Processed Parts

**8.0 Parts/Components requiring Electroless Nickel Plating**

8.1 Plate surfaces as per ASTM B733-97. (Note: Vendor "S&S" in house Spec.24 acceptable)

8.1.1 Mask all threads and plug tapped holes prior to Nickel application as to prohibit plating from entering or building in these areas unless otherwise specified.

8.1.2 **(Unless otherwise stated on the print)** SC3, Moderate Service Thickness. (.0008 Min. - .0010 Max.)

8.1.3 Step 8.1.4 (Post Heat Treatment) must be done within 4 hours of the plating process.

8.1.4 Type 4, Class 3, Post Heat Treatment. (Minimum 1 hour of metal temperature held at 350° Fahrenheit)


**9.0 Parts/Components requiring Phosphate Coating**

9.1 Zinc Phosphate per the vendor specification is the preferred phosphate coating process.


**10.0 Documentation Requirements**

10.1 At a minimum the following applies:

- Certificate of Conformance - A document certifying the product conforms to the TAM purchase order, drawing and specification requirements.
- **(Type 4, Class 3, Post Heat Treatment – Only)** Subsequent charts showing time and temperature measurements.

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Rev	Date	Description	Prepared By:	Reviewed By / Approved By	Date
E	10/06/08	No Documents in Synergy	--	--	11/5/08
F	6/18/09	No Documents in Synergy	--	--	7/7/09
G	5/15/14	Add section 8.2	Mark Wyatt	M. Wyatt, T. Young, G. Fletcher	5/20/14
H	6/30/2016	Remove section 8.2	Jeff Dinkel	M. Coronado, J. Dinkel, G. Fletcher, T. Young	7/18/16

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