### ALTERNATIVE SPECIAL PROCESSES DOCUMENT LIST

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<tr>
<th>Prepared by:</th>
<th>Component:</th>
<th>Date:</th>
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<tr>
<td><strong>John Fletcher</strong></td>
<td><strong>Engineering Standards</strong></td>
<td>8/28/12</td>
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<td>Concurred with by:</td>
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<td>8/28/12</td>
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<tr>
<td><strong>Jeff Johnson</strong></td>
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<td>Jeff Johnson</td>
<td><strong>Quality Assurance</strong></td>
<td>8/28/12</td>
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<tr>
<td><strong>Dave Thornhill</strong></td>
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| Dave Thornhill     | **Advance Manufacturing Engineering** | 8/28/12 | George Bosworth for John Veilleux
<p>| <strong>Anne-Marie Stanley</strong> | <strong>Contracts</strong>                         | 8/28/12   |
| Anne-Marie Stanley |                                   |           |
| <strong>Rhys Sueur</strong>     | <strong>Sourcing</strong>                       | 8/28/12   |
| Rhys Sueur         |                                   |           |</p>
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<thead>
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<td>Remove reference to AMS 2755 in Table I</td>
<td>J. Arcovitch, B. Batten, C. Borchers, T. Downs</td>
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</table>
**Table of Contents**

<table>
<thead>
<tr>
<th>Paragraph</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SCOPE</td>
<td>1</td>
</tr>
<tr>
<td>2. APPLICABLE DOCUMENTS</td>
<td>1</td>
</tr>
<tr>
<td>2.1 Government documents</td>
<td>1</td>
</tr>
<tr>
<td>2.2 Non-Government documents</td>
<td>2</td>
</tr>
<tr>
<td>2.3 Order of precedence</td>
<td>3</td>
</tr>
<tr>
<td>3. REQUIREMENTS</td>
<td>3</td>
</tr>
<tr>
<td>3.1 General</td>
<td>3</td>
</tr>
<tr>
<td>3.1.1 Usage</td>
<td>3</td>
</tr>
<tr>
<td>3.2 Revision identification</td>
<td>6</td>
</tr>
</tbody>
</table>

**List of Tables**

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table I. Alternative Special Process List</td>
<td>3</td>
</tr>
</tbody>
</table>
1. **SCOPE**

This specification establishes the criteria for using an alternative process than that specified in the drawing or specification.

2. **APPLICABLE DOCUMENTS**

2.1 **Government documents**

The following documents form a part of this specification to the extent specified herein. Unless a specific issue is specified, the latest revision shall apply. Documents referenced within the documents cited herein shall not be applicable to this specification unless the extent is specifically delineated in this specification.

**SPECIFICATIONS:**

Federal

- QQ-P-35 Passivation Treatments for Corrosion-Resistant Steel

Military

- MIL-C-6021 Castings, Classification and Inspection of
- MIL-H-6088 Heat Treatment of Aluminum Alloys
- MIL-I-6866 Penetrant Inspection, Method of
- MIL-I-6868 Magnetic Particle Inspection Process
- MIL-H-6875 Heat Treatment of Steel Raw Materials
- MIL-W-8604 Welding of Aluminum Alloys, Process for
- MIL-W-8611 Welding, Metal Arc and Gas, Steels, and Corrosion and Heat Resistant Alloys, Process for
- MIL-W-18326 Welding of Magnesium Alloys, Gas and Arc, Manual and Machine, Processes for
- MIL-I-25135 Penetrant Inspection Materials
- WS 33221 Nitriding, Liquid Salt Bath, Process Specification for
STANDARDS:

Military

MIL-STD-105  Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-453  Radiographic Inspection
MIL-STD-1595  Aerospace Welder Performance Qualification
MIL-STD-1949  Magnetic Particle Inspection
MIL-STD-2219  Fusion Welding for Aerospace Applications
MIL-STD-6866  Liquid Penetrant Inspection

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Department of Defense Single Stock Point (DODSSP), Defense Automated Printing Service, 700 Robbins Avenue, Building 4/Section D, Philadelphia, PA 19111-5098.)

2.2 Non-Government documents

The following documents form a part of this specification to the extent specified herein. Unless a specific issue is specified, the latest revision shall apply. Documents referenced within the documents cited herein shall not be applicable to this specification unless the extent is specifically delineated in this specification.

SPECIFICATIONS:

General Dynamics Ordnance and Tactical Systems

A10339  Arc & Gas Fusion Welds, Process Specification for
A10437  Nitriding, Liquid Salt Bath, Process Specification for
304A816  Weldments – General Specification for

Society of Automotive Engineers (SAE)

AMS-H-6088  Heat Treatment of Aluminum Alloys
AMS-H-6875  Heat Treatment of Steel Raw Materials
AMS-QQ-P-35  Passivation Treatments for Corrosion-Resistant Steel
2.3 Order of precedence

In the event of conflict between the text of this specification and the references cited herein, the text of this specification takes precedence. Nothing in this specification; however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General

This specification provides for alternative special processes that are approved for use in lieu of those specified on General Dynamics Ordnance and Tactical Systems (GD-OTS) technical drawings and specifications.

3.1.1 Usage

The processes listed in the “Approved Alternative” column of Table 1 may be used in lieu of those listed in the “Required Document” column.

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<tr>
<th>Required Document</th>
<th>Document Title</th>
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<td>SAE AMS 2175</td>
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<td>AMS 2771</td>
<td>Heat Treatment of Aluminum Alloy Castings</td>
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<td>AMS 2772</td>
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<td>ASTM E 1417</td>
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<td>AMS 2759</td>
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<td>AWS D17.1, Class A</td>
<td>Specification for Fusion Welding for Aerospace Applications</td>
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1 Existing welder qualification is acceptable in accordance with MIL-STD-1595, until such time as requalification testing is required, and then AWS D17.1, is required.
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<td>WS 33221</td>
<td>Nitriding, Liquid Salt Bath, Process Specification for</td>
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3.2 Revision identification

The margins of this document are marked with change bars to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and General Dynamics Ordnance and Tactical Systems assumes no liability whatsoever for any inaccuracies in these notations. Evaluation of the requirements of this document should be based on the entire content irrespective of the marginal notation and relationship to the last previous issue. In the event of extensive revision to the document, symbols will not be used to identify changes.