ONLY ITEMS DESCRIBED ON THIS DRAWING ARE APPROVED FOR USE IN THE APPLICATIONS SPECIFIED HEREON. A SUBSTITUTE ITEM SHALL NOT BE USED WITHOUT PRIOR APPROVAL OF THE QUALIFYING ACTIVITY.

Prepared in accordance with ASME Y14.100

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<th>SIZE</th>
<th>CAGE CODE</th>
<th>DWG. NO.</th>
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<td>N/A</td>
<td>William Carpenter</td>
<td>Brandon Vermilye</td>
<td>Abdonasser Abdouni</td>
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<td>037Z3</td>
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REV STATUS OF PAGES

REV PAGE

PREPARED BY

DLA LAND AND MARITIME
COLUMBUS, OHIO 43218-3990

CHECKED BY

ORIGINAL DATE OF DRAWING
6 August 2019

APPROVED BY

TITLE
ELBOW, FLARED TUBE, FLANGED, SWIVEL, 90 DEGREE PRODUCT VERIFICATION

AMSC N/A
4730-2019-M01
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.
MS20762 parts supplied to this drawing for various weapon systems platforms shall be inspected for the minimum wall thickness specified in MS20762.

REQUIREMENTS:

Parts that are forged or cast shall be computerized tomography (CT) scanned to verify the inner wall thickness of MS20762 for each individual dash number.

Responsibility for compliance. All items shall meet all requirements specified herein and MS20762. The inspection set forth in this specification shall become a part of the contractor’s overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

Lot records. Manufacturers shall keep lot records for 3 years after delivery of product. Manufacturers shall monitor for compliance to the prescribed procedures, and observe that satisfactory manufacturing conditions and records on lots are maintained for these elbow, flared tube, flanged, swivel, 90 degree. The records, including as a minimum, an attributes summary of all quality conformance inspections conducted on each lot, shall be available to review by customers at all times.

Inspection lot. An inspection lot shall consist of an elbow, flared tube, flanged, swivel, 90 degree of the same Part or Identifying Number (PIN) manufactured under identical conditions and assigned an identifying lot number for use, technical, manufacturing, production, and supply purposes.

CT scanning. The CT scanning requirement is prior to any sampling being instituted, and that the thickness requirement is all around (i.e. point measurements may be insufficient to detect nonconformance’s.

Wall thickness verification for new manufacturer’s. For Manufacturers, not currently listed as a source, for a particular PIN on this MS20762, the following details shall apply:

a. Manufacturers that are machining the inside radius 25 (twenty five) elbow, flared tube, flanged, swivel, 90 degree shall be inspected using a CT scanner or destructive analysis to verify the wall thickness of the fitting. After 25 parts have been manufactured and CT scanned and/or analyzed, with no failures the manufacturer shall forward the test report(s) to the address below.

b. Parts that are cast and no additional inside machining is required to achieve the inside radius, shall be CT scanned and/or destructive analysis five (5) parts to verify inner wall thickness, after 5 parts have been manufactured with no reported failures the manufacture shall forward the CT or destructive test report results to the address below.

Destructive testing may be used in conjunction with CT scanning, to obtain test report results.

Examples of failures. See figures 1 and 2 for examples of failures of the wall thickness requirement.

Acceptance of verification testing. Upon acceptance of the initial number of fittings, the manufacturer may use methods and sampling as defined in the ‘Inspection of product for delivery’ section.
Failures. One or more failures shall be cause for refusal of the lot and not to be listed as an approved supplier.

Inspection of product for delivery. Parts shall meet the requirements of MS20762 and additional inspection of product for delivery shall be the manufacturer’s in-house inspection for wall thickness. In case of dispute CT scanning shall be the referee method of inspection. Parts shall also be visually inspected for marking requirements as specified in MS20762.

Sampling plan of product for delivery. Once a Manufacturer has inspected 25 pieces and passed the CT scan and or destructive analysis and the manufacturer’s repeatability has been established, after which a Sampling Plan of Destructive Testing shall be in effect. The sampling plan for orders up to 99 pieces shall have the first 2 pieces manufactured and last 2 pieces manufactured tested destructively. The sampling plan for orders over 100 pieces the test samples shall be the first 2 produced, 1 sample in the middle, and 2 samples at end of the production run shall be destructively tested.

Failures of product for delivery. One failure shall will require the entire lot to be inspected for the wall thickness requirement. Parts that pass inspection shall be marked as specified herein and subsequently may be shipped on the contract or purchase order. The manufacturer shall perform 100 percent inspection until 50 units have passed without a single failure. The manufacture may at that time resort back to the sampling plan of product for delivery.

APPLICABLE DOCUMENTS:

DEPARTMENT OF DEFENSE SPECIFICATION

MS20762 - Elbow, Flared Tube, Flanged, Swivel, 90 Degree

(Copies of this document are available online at https://quicksearch.dla.mil.)

ASME INTERNATIONAL

ASME Y14.100 - Engineering Drawing and Related Documentation Practices

(Copies of this document are available online at https://www.asme.org.)
Comments on this drawing should be directed to DLA Land and Maritime (L&M) - VAI, Post Office Box 3990, Columbus, Ohio 43218-3990. Comments may be submitted by email to FluidFlow@dla.mil.

**MANUFACTURER ELIGIBILITY AND CERTIFICATE OF COMPLIANCE**

IDENTIFICATION OF THE APPROVED SOURCES OF SUPPLY HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY OF AS A SOURCE OF SUPPLY FOR THE ITEM DESCRIBED ON THE DRAWING.

APPROVED SOURCES OF SUPPLY. Approved sources of supply are listed herein. Additional sources will be added as they become available. The vendors listed herein have agreed to the contents of this drawing and a certificate of compliance has been submitted to DLA L&M - VAI.

<table>
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<tr>
<th>MS20762 PIN 1/</th>
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<td>MS20762-12</td>
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<td>B&amp;E Manufacturing Company</td>
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</table>

1/ CAUTION. Parts must be purchased to the DLA Land and Maritime CAGE Code and PIN to assure that all performance requirements and tests are met.

Vendor CAGE number: 59680
Vendor name: B&E Manufacturing Company
Address: 12151 Monarch Street, Garden Grove, CA 92841-2927