

QQ-I-652C

May 20, 1970

~~SUPERSEDING~~

Fed. Spec. QQ-I-652B

February 17, 1964

FEDERAL SPECIFICATION

IRON CASTINGS, GRAY

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers gray iron castings for general purpose use (see 6.1).

1.2 Classification. Gray iron castings are classified as follows (see 6.2):

Classes

20  
25  
30  
35  
40  
45  
50  
55  
60

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

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Federal Standards:

Fed. Std. No. 123 - Marking for Domestic Shipment (Civilian Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Wash, D.C. 20402.

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, D.C., Atlanta, Chicago, Kansas City, Mo., Fort Worth, Denver, San Francisco, Los Angeles and Seattle, Washington.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications, and Standards from the established distribution points in their agencies.)

Military Standards:

MIL-STD-129 - Marking for Shipment and Storage.

MIL-STD-163 - Steel Mill Products Preparation for Shipment and Storage.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

American Society for Testing and Materials (ASTM) Standards:

A 48 - Gray Iron Castings

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103.)

Uniform Classification Committee

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, 202 Union Station, Chicago, Illinois 60606.)

National Classification Board:National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Association, Attn: Tariff Order Section 1616 P St., N.W. Wash. D.C. 20036.)

3. REQUIREMENTS

3.1 The gray iron castings shall meet all the requirements of ASTM A 48.

3.2 Repair of defects. Unless otherwise agreed upon between the contractor and the procuring activity, castings shall not be repaired, plugged, or welded (see 6.2).

3.3 Identification marking. Unless otherwise specified, each casting purchased by the Defense Supply Agency shall be marked with the manufacturer's name or trade mark, the specification number, and class. The markings shall be legible and resist effacement by contact incident to normal handling during shipment and storage.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 Sampling, inspection, and test procedures for castings shall be in accordance with ASTM A 48.

4.3 Examination for preparation for delivery. Prior to shipment, examination shall be made to determine compliance with section 5.

5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging. Preservation and packaging shall be level A or C as specified (see 6.2).

5.1.1 Level A. Cleaning, drying, preservation, and packaging shall be in accordance with MIL-STD-163.

5.1.2 Level C. Cleaning, drying, preservation, and packaging shall be in accordance with manufacturer's commercial practice.

5.2 Packing. Packing shall be level A or level C as specified (see 6.2).

5.2.1 Level A. Packing shall be in accordance with MIL-STD-163.

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5.2.2 Level C. The castings shall be packed in a manner which will insure arrival at destination in satisfactory condition and be acceptable to the carrier at lowest rates. Containers and packing shall comply with Uniform Freight Classification rules or National Motor Freight Classification rules.

### 5.3 Marking.

5.3.1 Civil agencies. In addition to any special marking specified in the contract or order, marking for shipment shall be in accordance with Fed. Std. No. 123.

5.3.2 Military activities. In addition to any special marking required by the contract or order, shipments shall be marked in accordance with the requirements of MIL-STD-129.

## 6. NOTES

### 6.1 Intended use.

6.1.1 Classes 20, 25, 30, 35. Gray iron castings in these classes are characterized by excellent machineability, high damping capacity, low modulus of elasticity, and comparative ease of manufacture.

6.1.2 Classes 40, 45, 50, 55, 60. Castings in these classes are usually more difficult to machine, have lower damping capacity, and a higher modulus of elasticity.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Class of casting (see 1.2).
- (c) Whether patterns are to be supplied by the Government or the contractor.
- (d) That all patterns furnished by the Government are properly cared for by the contractor.
- (e) When repair of casting defects is permissible (see 3.2).
- (f) Preparation for delivery requirements (see Section 5).

6.3 Relationship to commercial specifications. This specification is similar to ASTM A 48.

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MILITARY CUSTODIANS

Army - MR  
Navy - YD  
Air Force - 84

Preparing activity:

Army - MR

CIVIL AGENCY INTEREST:

GSA  
DC

Review activities:

Army - ME, MU, MI

DSA-IS

User activities:

Army - AT, WC

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Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price 10 cents each.

## SPECIFICATION ANALYSIS SHEET

Form Approved Budget Bureau No. 119-R004

## INSTRUCTIONS

This sheet is to be filled out by personnel either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity.

## SPECIFICATION

QQ-I-652C, Iron Castings, Gray

## ORGANIZATION

## CITY AND STATE

## CONTRACT NO.

## QUANTITY OF ITEMS PROCURED

## DOLLAR AMOUNT

\$

## MATERIAL PROCURED UNDER A

 DIRECT GOVERNMENT CONTRACT SUBCONTRACT

## 1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES.

## 2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

## 3. IS THE SPECIFICATION RESTRICTIVE?

 YES NO

IF "YES", IN WHAT WAY?

## 4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)

SUBMITTED BY (Printed or typed name and activity)

DATE