

Section 857—Bronze Bushings, Bearings, and Expansion Plates

857.1 General Description

This section includes the requirements for the following:

- Bronze bearings and expansion plates
- Bronze bushings
- Self-lubricating bronze bearings, expansion plates, and bushings

857.1.01 Related References

A. Standard Specifications

General Provisions 101 through 150.

B. Referenced Documents

ANSI B 46.1

ASTM B 22, Alloy UNS91100

ASTM B 100, Alloy UNS 51000

ASTM B 584 Alloy UNS C86200

857.2 Materials

857.2.01 Bronze Bearings and Expansion Plates

A. Requirements

1. Type

Use bearings and expansion plates that meet the following requirements:

- a. Cast Bronze: ASTM B 22, Alloy UNS91100.
- b. Rolled Bronze: ASTM B 100, Alloy UNS 51000.

2. Certification

Furnish certification to the Engineer showing physical and chemical properties of the material and conformance to these Specifications.

B. Fabrication

Finish contact surfaces of plates in the direction of motion specified by ANSI B 46.1, No. 125 (No. 3.2 μm).

C. Acceptance

The Department will accept the material based on the certifications.

D. Materials Warranty

General Provisions 101 through 150.

857.2.02 Bronze Bushings

A. Requirements

1. Type

Use bronze bushings that meet ASTM B 584, Alloy UNS C86200 requirements.

2. Certification

Furnish a certification to the Engineer showing physical and chemical properties of the material and conformance to these Specifications.

B. Fabrication

Finish contact surfaces of bushings in the direction of motion specified by ANSI B 46.1, Nos. 63 to 125 (1.6 to 3.2 μm).

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C. Acceptance

The Department will accept the material based on the certifications.

D. Materials Warranty

General Provisions 101 through 150.

857.2.03 Self-lubricating Bronze Bearings, Expansion Plates, and Bushings

A. Requirements

1. Type

Use self-lubricating bronze bearings, expansion plates, and bushings that meet [Subsection 857.2.01](#) or [857.2.02](#).

- a. Ensure that the surfaces of self-lubricating bronze bearings, expansion plates, and bushings are bored in a geometric, recessed pattern. Use a lubricating material in the bearing areas that has a long service life.
- b. Lubricate approximately 25 percent of the bearing face.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

The Department will accept the material based on the certifications.

D. Materials Warranty

General Provisions 101 through 150.