



## **Standard Specification for Centrifugally Cast Ferritic/Austenitic Stainless Steel Pipe for Corrosive Environments<sup>1</sup>**

This standard is issued under the fixed designation A 872; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### **1. Scope**

1.1 This specification covers centrifugally cast ferritic/austenitic steel pipe intended for general corrosive service. These steels are susceptible to embrittlement if used for prolonged periods at elevated temperatures.

1.2 Optional supplementary requirements are provided when additional testing may be required.

1.3 The values stated in inch-pound units are to be regarded as the standard.

### **2. Referenced Documents**

#### *2.1 ASTM Standards:*

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products<sup>2</sup>

A 488/A 488M Practice for Steel Castings, Welding, Qualification of Procedures and Personnel<sup>3</sup>

A 530/A 530M Specification for General Requirements for Specialized Carbon and Alloy Steel Pipe<sup>4</sup>

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications<sup>5</sup>

E 94 Guide for Radiographic Examination<sup>6</sup>

E 165 Test Method for Liquid Penetrant Examination<sup>6</sup>

E 186 Reference Radiographs for Heavy-Walled (2 to 4½-in. (51 to 114-mm)) Steel Castings<sup>6</sup>

E 280 Reference Radiographs for Heavy-Walled (4½ to 12-in. (114 to 305-mm)) Steel Castings<sup>6</sup>

E 340 Test Method for Macroetching Metals and Alloys<sup>7</sup>

E 426 Practice for Electromagnetic (Eddy-Current) Examination of Seamless and Welded Tubular Products, Austenitic Stainless Steel and Similar Alloys<sup>6</sup>

E 446 Reference Radiographs for Steel Castings up to 2 in. (51 mm) in Thickness<sup>6</sup>

#### *2.2 ASME Boiler and Pressure Vessel Code:*

#### Section IX Welding Qualifications<sup>8</sup>

#### 2.3 ASTM Adjuncts:

Adjunct E 186 Reference Radiographs—Transparencies in Ringbinders, 3 Volumes<sup>9</sup>

Adjunct E 280 Reference Radiographs—Transparencies in Ringbinders, 2 Volumes<sup>10</sup>

Adjunct E 446 Reference Radiographs—Transparencies in Ringbinders, 3 Volumes<sup>11</sup>

### **3. Ordering Information**

3.1 Orders for material to this specification shall include the following, as required, to describe the desired material adequately.

3.1.1 Quantity (feet (metres) or number of lengths),

3.1.2 Name of material (centrifugally cast ferritic/austenitic steel pipe),

3.1.3 Grade (Table 1),

3.1.4 Size (outside or inside diameter and minimum wall thickness in inches (millimetres),

3.1.5 Length (specific or random, Specification A 530/A 530M),

3.1.6 End finish of Specification A 530/A 530M,

3.1.7 Optional Requirements (S1 through S6),

3.1.8 Test report required (Section 12), and

3.1.9 Special requirements or additions to the specification.

### **4. General Requirements**

4.1 Material furnished under this specification shall conform to the applicable requirements of the current edition of Specification A 530/A 530M, unless otherwise provided herein.

### **5. Materials and Manufacture**

#### *5.1 Manufacture:*

5.1.1 The pipe shall be made by the centrifugal casting process.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.18 on Castings.

Current edition approved July 15, 1991. Published September 1991. Originally published as A 872 – 77. Last previous edition A 872 – 87.

<sup>2</sup> *Annual Book of ASTM Standards*, Vol 01.03.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 01.02.

<sup>4</sup> *Annual Book of ASTM Standards*, Vol 01.01.

<sup>5</sup> *Annual Book of ASTM Standards*, Vol 14.02.

<sup>6</sup> *Annual Book of ASTM Standards*, Vol 03.03.

<sup>7</sup> *Annual Book of ASTM Standards*, Vol 03.01.

<sup>8</sup> Available from American Society of Mechanical Engineers (ASME International), Three Park Ave., New York, NY 10016-5990.

<sup>9</sup> Available from ASTM International Headquarters. Request RRE018601 for Vol I, RRE018602 for Vol II, and RRE018603 for Vol III.

<sup>10</sup> Available from ASTM International Headquarters. Request for RRE028001 Vol I and RRE028002 for Vol II.

<sup>11</sup> Available from ASTM International Headquarters. Request for RRE044601 Vol I, RRE044602 for Vol II, and RRE044603 for Vol III.