



## Standard Practice for An Amusement Ride and Device Manufacturer Quality Assurance Program<sup>1</sup>

This standard is issued under the fixed designation F 1193; 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 reappraisal. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

### 1. Scope

1.1 This practice covers minimum requirements for a quality assurance program.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

### 2. Referenced Documents

2.1 *AWS Standards:*<sup>2</sup>

As applicable.

2.2 *ASME Standards:*<sup>3</sup>

As applicable.

### 3. Significance and Use

3.1 The purpose of this practice is to provide the minimum requirements necessary for the establishment of a written quality assurance program for an amusement ride and device manufacturer, or component supplier.

### 4. Drawing Control Procedure

4.1 A procedure shall be in effect so that appropriate manufacturing drawings, their engineering revisions, and related documents are utilized for each project.

### 5. Material and Component Control Procedure

5.1 A procedure shall be in effect so that materials, processes, and components, including raw materials, are in accordance with the engineering specifications.

5.1.1 This procedure shall provide the purchasing agent with all the information required to order appropriate material.

5.1.2 A receiving procedure shall be in effect so that incoming material and components are checked against the purchasing specifications.

5.1.3 A procedure shall be in effect so that material in stock can be properly identified for future use.

5.1.4 Documentation on any material, process, or components certified shall be filed for reference.

### 6. Inspection

6.1 A procedure shall be in effect so that appropriate inspections are made on manufactured parts and subassemblies, for conformance with engineering specifications.

6.2 A procedure shall be in effect so that appropriate inspections are made on purchased components.

6.3 A procedure shall be in effect so that completed units are inspected prior to delivery.

6.4 Nonconforming components shall be identified and evaluated for disposition as follows:

6.4.1 A component not suitable for use shall be altered or disposed of to avoid accidental use.

6.4.2 Reworked components shall be reinspected in accordance with 6.1, 6.2, or 6.3 of this practice prior to use.

6.4.3 In some cases a component may be determined to be “acceptable as is” or “as modified” after further evaluation. In such cases appropriate review, acceptance, and documentation shall be a requirement.

### 7. Welding

7.1 Welding and welding procedures shall be in accordance with the American Welding Society (ANSI/AWS D1.1) or the American Society of Mechanical Engineers, or other equivalent standard, and be performed by appropriately certified or qualified welders as required by the standard.

7.2 A procedure shall be in effect to maintain documentation on certification of welders.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee F24 on Amusement Rides and Devices and is the direct responsibility of Subcommittee F24.24 on Design and Manufacture.

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<sup>2</sup> Available from American Welding Society, 550 N. LeJeune Rd., Miami, FL 33126.

<sup>3</sup> Available from Society of Mechanical Engineers, 345 E. 47th St., New York, NY 10017.