Designation: A 857/A 857M – 00a

Standard Specification for Steel Sheet Piling, Cold Formed, Light Gage[1]

This standard is issued under the fixed designation A 857/A 857M; 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 (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers cold-formed, light gage carbon steel sheet piling of structural quality for use in the construction of shore walls, trench shoring, wingwalls, bulkheads, and like applications.

1.2 The nominal thickness of material furnished under this specification shall be 0.25 in. [6.4 mm] or less.

1.3 When the sheet piling is to be welded, it is presupposed that a welding procedure suitable for the grade of steel and intended use or service will be used. See Appendix X3 of Specification A 6/A 6M for information on weldability.

1.4 The values stated in either inch-pound units or SI units are to be regarded as the standard. Within the text, the SI units are shown in brackets. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from the two systems may result in nonconformance with the specification.

2. Referenced Documents

2.1 *ASTM Standards:*

A 6/A6M Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling[2]

A 36/A36M Specification for Carbon Structural Steel[2]

A 307 Specification for Carbon Steel Bolts and Studs, 60 000 psi Tensile Strength[3]

A 325 Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength[3]

A 325M Specification for High-Strength Bolts for Structural Steel Joints [Metric][3]

A 502 Specification for Steel Structural Rivets[3]

A 563 Specification for Carbon and Alloy Steel Nuts[3]

A 563M Specification for Carbon and Alloy Steel Nuts [Metric][3]

A 570/A570M Specification for Steel, Sheet and Strip, Carbon, Hot-Rolled, Structural Quality[4]

3. General Requirements for Delivery

3.1 Material furnished under this specification shall conform to the requirements of the current edition of Specification A 6/A 6M, for the ordered material, unless a conflict exists in which case this specification shall prevail.

4. Appurtenant Materials

4.1 When components of a steel structure are identified with this ASTM designation but the product form is not listed in the scope of this specification, the material shall conform to one of the standards listed in Table 1 unless otherwise specified by the purchaser. Table 1 does not provide any specification requirements to a manufacturer or processor. Orders to a manufacturer or processor should describe the required ASTM designation for product forms not listed in the scope of this specification. Appurtenant materials delivered shall be compatible in strength, corrosion resistance, and weldability with materials purchased.

5. Materials and Manufacture

5.1 Sheet piling shall be produced using one of the following processes:

5.1.1 Decoiling coiled material and feeding it through a multi-stand roll-forming mill at ambient temperature, or

5.1.2 Forming cut lengths of material into piling on a press break.

6. Chemical Composition

6.1 The chemical composition of the steel on heat analysis shall conform to the requirements listed in Table 2.

7. Tension Test

7.1 The source material or the sheet piling as provided in 7.2 and 7.3, as represented by the test specimens, shall conform to the tensile requirements for the grade specified as listed in Table 3.

[1] This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.02 on Structural Steel for Bridges, Buildings, Rolling Stock, and Ships.

Current edition approved Sept. 10, 2000. Published October 2000. Originally published as A 857 – 86. Last previous edition A 857 – 00.

[2] *Annual Book of ASTM Standards*, Vol 01.04.

[3] *Annual Book of ASTM Standards*, Vol 15.08.

[4] *Annual Book of ASTM Standards*, Vol 01.03.