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Designation: A786/A786M – 05(Reapproved 2009)

Standard Specification for Hot-Rolled Carbon, Low-Alloy, High-Strength Low-Alloy, and Alloy Steel Floor Plates[1]

This standard is issued under the fixed designation A786/A786M; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification covers carbon, low-alloy, high-strength low-alloy, and alloy steel hot-rolled floor plates for flooring, stairways, transportation equipment, and general structural purposes. While it is generally provided in the as-rolled condition, floor plate also may be provided in the heat-treated condition, depending on the material specification. Rolled floor plates have raised figures at regular intervals on one surface of the plate.

1.2 Floor plate is available in dimensions that meet the classification size limits for sheet, heavy thickness sheet coil, or plate. Maximum thickness for product delivered under this specification is 1 in. [25 mm].

1.3 When the steel is to be welded, it is presupposed that a welding procedure suitable for the grade of steel and intended use or service will be utilized. See Appendix X3 of Specification A6/A6M for information on weldability.

1.4 The values stated in either inch-pound units or SI units are to be regarded separately as standard. The values stated in each system are not exact equivalents; therefore, each system is to be used independently of the other, without combining values.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A6/A6M Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
A36/A36M Specification for Carbon Structural Steel
A131/A131M Specification for Structural Steel for Ships
A242/A242M Specification for High-Strength Low-Alloy Structural Steel
A514/A514M Specification for High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding
A568/A568M Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for
A570/A570M Specification for Structural Steel, Sheet and Strip, Carbon, Hot-Rolled (Withdrawn 2000)[3]
A572/A572M Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
A573/A573M Specification for Structural Carbon Steel Plates of Improved Toughness
A588/A588M Specification for High-Strength Low-Alloy Structural Steel, up to 50 ksi [345 MPa] Minimum Yield Point, with Atmospheric Corrosion Resistance
A606/A606M Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance
A635/A635M Specification for Steel, Sheet and Strip, Heavy-Thickness Coils, Hot-Rolled, Alloy, Carbon, Structural, High-Strength Low-Alloy, and High-Strength Low-Alloy with Improved Formability, General Requirements for
A659/A659M Specification for Commercial Steel (CS), Sheet and Strip, Carbon (0.16 Maximum to 0.25 Maximum Percent), Hot-Rolled
A709/A709M Specification for Structural Steel for Bridges
A829/A829M Specification for Alloy Structural Steel Plates
A830/A830M Specification for Plates, Carbon Steel, Structural Quality, Furnished to Chemical Composition Requirements
A941 Terminology Relating to Steel, Stainless Steel, Related Alloys, and Ferroalloys
A1011/A1011M Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength
A1018/A1018M Specification for Steel, Sheet and Strip,

[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 Oct. 1, 2009. Published December 2009. Originally approved in 1981. Last previous edition approved in 2005 as A786/A786M – 05. DOI: 10.1520/A0786_A0786M-05R09.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] The last approved version of this historical standard is referenced on www.astm.org.

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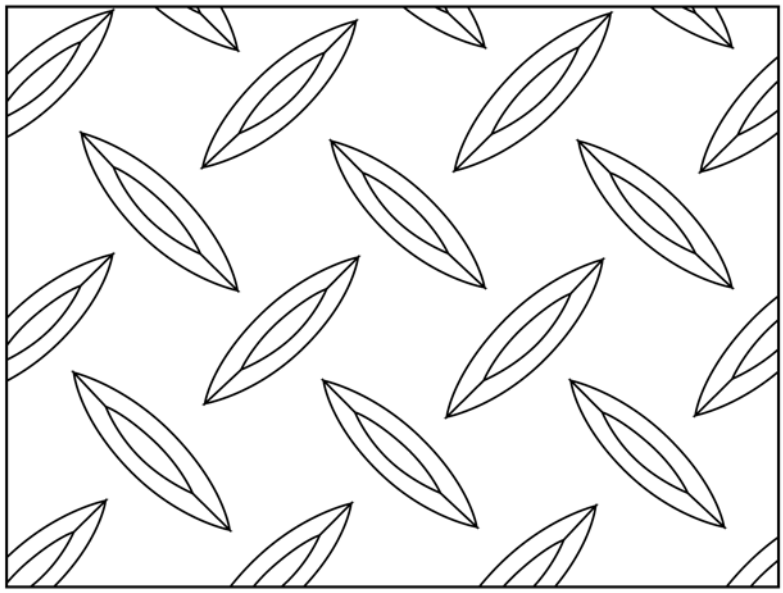
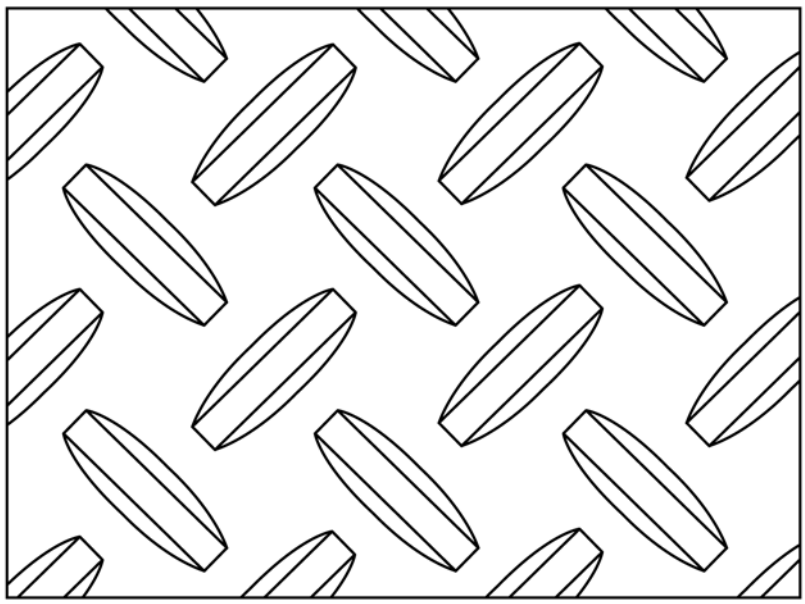


Pattern No. 2



Pattern No. 4

FIG. 1 Floor Plate Patterns (Full Scale)

Heavy-Thickness Coils, Hot-Rolled, Carbon, Commercial, Drawing, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology A941.

4. Surface Pattern

4.1 Individual floor plate patterns are unique to each manufacturer and are not identical in dimension or appearance to patterns manufactured by other manufacturers, although there may be a close resemblance. Typical patterns are shown in Fig. 1. Manufacturers generally produce only one of the patterns shown.

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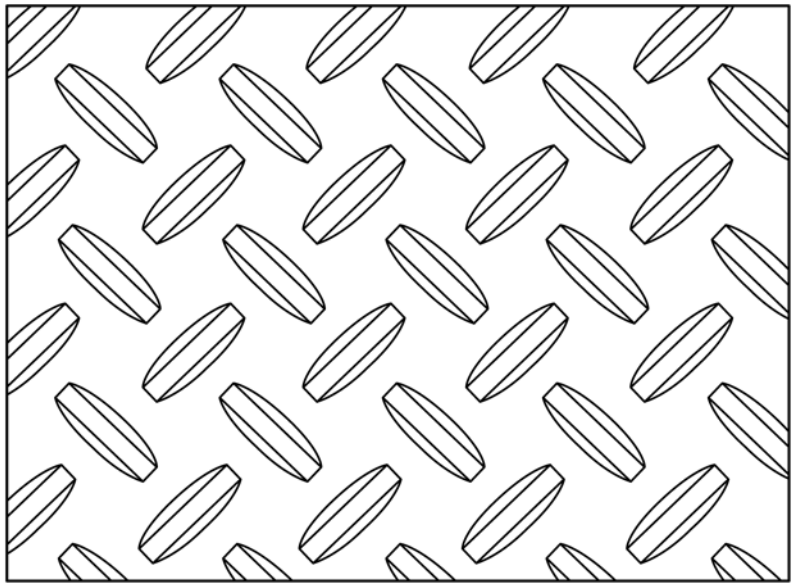

Pattern No. 5

FIG. 2

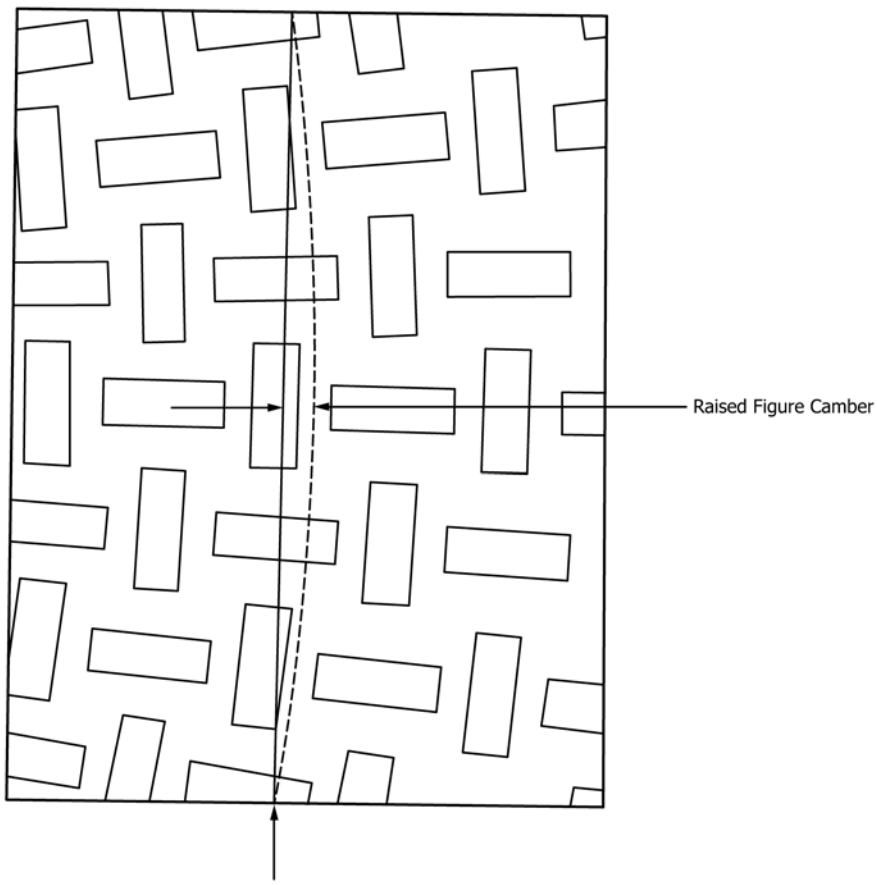

FIG. 3 Camber for Raised Figures for Floor Plates (see Table 4 or Table A1.3)

4.2 Pattern size, shape, and minimum pattern height are not addressed in this specification due to the differences in indi-

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