



Standard Specification for Drawing Steel (DS), Sheet and Strip, Carbon, Hot-Rolled¹

This standard is issued under the fixed designation A 622/A 622M; 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 Department of Defense.

1. Scope

1.1 This specification covers hot-rolled carbon drawing steel (DS) sheet and strip in coils or cut lengths. This material is intended for use in fabricating identified parts where particularly severe drawing or forming may be involved and surface appearance is usually not of primary importance.

1.2 This specification is applicable for orders in either inch-pound units (as A 622) or SI units (as A 622M).

2. Referenced Documents

2.1 ASTM Standards:

A 568/A 568M Specification for Steel, Sheet, Carbon, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for²

A 621/A 621M Specification for Forming Steel (FS), Sheet and Strip, Carbon, Hot-Rolled²

A 749/A 749M Specification for Steel, Strip, Carbon and High-Strength, Low-Alloy, Hot-Rolled, General Requirements for²

3. Terminology

3.1 Definitions:

3.1.1 *drawing steel (DS)*—sheet manufactured from specially produced or selected killed steels (normally aluminum) specially processed to have good uniform drawing properties for use in fabricating an identified part having extremely severe deformations.

4. Ordering Information

4.1 It is the purchaser's responsibility to specify in the purchase order all ordering information necessary to purchase the needed material. Examples of such information include but are not limited to the following:

4.1.1 ASTM specification and year of issue,

4.1.2 Name of material (hot-rolled drawing steel (DS) sheet or hot-rolled drawing steel (DS) strip),

4.1.3 Type - When a type is not specified. Type B will be furnished,

4.1.4 Finish (indicate descaled, if required) (see 9.1),

4.1.5 Oiling (see 9.2),

4.1.6 Edges (see 9.3),

4.1.7 Dimensions (thickness, width, and whether cut lengths or coils),

4.1.8 Coil size (must include inside diameter, outside diameter, and maximum mass),

4.1.9 Quantity,

4.1.10 Application (show part identification and description),

4.1.11 Special requirements (if required), and

4.1.12 Cast or heat analysis report (request, if required).

NOTE 1—A typical ordering description is as follows:
“ASTM A 622-XX [or A 622M-XX], Hot-Rolled Drawing Steel (DS) Sheet, Type B, Pickled and Oiled, Cut Edge, 0.089 min by 48 in. [or 2.2 min by 1180 mm] Standard Thickness Tolerance, by coil, ID 24 in., OD 48 in., max., weight 15 000 lb. max., [or coil ID 600 mm, OD 1200 mm, max., weight 10 000 kg, max.], 100 000 lb. [or 45 000 kg] for compressor housing.”

5. Materials and Manufacture

5.1 *Melting Practice*—The sheet shall be produced from special-killed steel. It is normally produced from aluminum-killed steel but may be otherwise deoxidized provided the material is capable of meeting the specified requirements.

6. General Requirements General Requirements

6.1 Material furnished under this specification shall conform to the applicable requirements of the current edition of Specifications **A 568/A 568M** or **A 749/A 749M** unless otherwise provided herein.

7. Chemical Composition

7.1 The cast or heat analysis of the steel shall conform to the requirements as to chemical composition prescribed in **Table 1**.

7.1.1 Each of the elements listed in **Table 1** shall be included in the report of the heat analysis. When the amount of copper, nickel, chromium, or molybdenum is less than 0.02 %, the

¹ This specification is under the jurisdiction of ASTM Committee A-1 on Steel, Stainless Steel and Related Alloys, and is the direct responsibility of Subcommittee A01.19 on Steel Sheet and Strip.

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² *Annual Book of ASTM Standards*, Vol 01.03.