



Designation: **A 521—96 (Reapproved 2001) 521 – 03**

Standard Specification for Steel, Closed-Impression Die Forgings for General Industrial Use¹

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1. Scope*

1.1 This specification covers untreated and heat-treated steel, closed-impression die forgings (Note 1) for general industrial use.

NOTE 1—For the definition of a forging, refer to ~~Definition A 509—General Requirements Specification A 788.~~

1.2 The ~~classes~~ Grades of forgings are as follows, the choice depending on design and stress or service to be imposed:

1.2.1 ~~Class~~Grade CA—Untreated, carbon steel forgings,

1.2.2 ~~Classes~~Grades CC, CC1, and CE—Annealed, normalized and tempered, carbon steel forgings,

1.2.3 ~~Class~~Grade CF—Normalized and tempered carbon steel forgings,

1.2.4 ~~Class~~Grade CF1—Double normalized and tempered carbon steel forgings,

1.2.5 ~~Class~~Grade CG—Quenched and tempered, or normalized, quenched and tempered carbon steel forgings,

1.2.6 ~~Class~~Grade AA—Annealed, normalized, or normalized and tempered alloy steel forgings,

1.2.7 ~~Classes~~Grades AB and AC—Normalized and tempered alloy steel forgings, and

1.2.8 ~~Classes~~Grades AD, AE, AF, AG, and AH—Normalized, quenched, and tempered alloy steel forgings. ~~Note 2—The appendix tables list recommended tolerances for a number of materials other than those covered by the above classes. The tables are for information only and the purchaser must define the condition in which he desires forgings made from materials not described above.~~

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

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 A01.06 on Steel Forgings and Billets.

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