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A106 Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service

American Society for Testing of Materials (ASTM) A106 is a specification that covers only seamless carbon steel pipes. Though there are generally small additions of carbon, manganese, silicon, and possibly some microalloying, there will typically be no intentional additions of chromium, nickel, copper or molybdenum (which would generally referred to as alloy steel).

Though these pipes are joined together by butt joints (girth welds), there are no long-seam welds on these pipes. They are produced from solid bars that are hot-pierced by the Mannesmann process, followed by various pipe forming processes including pilger, hot rolling, cold drawing, hot expansion, MPM, PQF, and SRM techniques. The finished product nominal dimensions are to be in conformance with the pipe dimensions specification ASME B36.10. Pipes can be in the as-rolled condition or the annealed or normalized condition.

A106 includes three grades: A, B and C. It is very uncommon to request or produce Grade A, as this is relatively low strength steel. Grades B and C are both quite common. As this product is intended for higher temperature service, this specification has no requirements for impact testing.

A106 products are commonly used in process piping systems where the piping is either buried or inside a building (considered high-temperature service), or in regions where the temperatures are generally mild. The American Society of Mechanical Engineers (ASME) has included A106 products as usable in pressure vessel construction (i.e., referenced as ASME Boiler and Pressure Vessel Code (BPVC) Section IIA Specification SA106). Because of its inclusion in the ASME BPVC, these products can then be used in ASME B31.1 Power Piping applications and ASME B31.3 Process Piping applications. Manufacturers will generally dual certify their products as "ASTM/ASME A/SA106" so that the products can be used in any of these applications.



If you have questions about A106 products, please do not hesitate to contact Bri-Steel for assistance.

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