ASTM A536 80-55-06 Ductile Iron, SG Iron
Chemical Composition, Mechanical and Physical Properties

ASTM A536 80-55-06 is a special ductile cast iron grade. It has comparatively high tensile strength, and also high elongation. It is a good cast iron material.

Our Dandong foundry could produce this material, and herein, we share its chemical composition and mechanical properties.

1. Equivalent Material Grades of Ductile Iron ASTM A536 80-55-06

Actually, there is no equivalent grade with ASTM A536 80-55-06, this is because most of ductile iron grades will require tensile strength lower as 500 MPa, or require it higher as 600 MPa, so this material grade becomes special. However, you can adjust the chemical composition to make its elongation to 6%.

2. Chemical Composition of Ductile Iron ASTM A536 80-55-06

C: 3.00-3.60, Si: 2.30-2.90, Mn: 0.30-0.60, P: < 0.06, S: < 0.04, Mg: 0.030-0.055. However, this range can be used to guide production.


Tensile Strength ≥ 550 MPa (80,000 psi). Yield Strength ≥ 380 MPa (55,000 psi). There is no strict stipulation to the hardness of ASTM A536 100-70-03, however, normal hardness range should be (Brinell Hardness) without heat treatment.

4. Main Application of Ductile Iron ASTM A536 80-55-06

Because of the comparatively high tensile strength and elongation, this material grade has been used for producing manhole covers, many tractor iron parts, truck parts, cradle brackets of hydraulic cylinder, agricultural and automotive parts. The followings are some ductile iron parts made by our dandong foundry.