ASTM A 802 Standard Practice for Steel Castings, Iron Castings, Surface Acceptance

The object of this standard is to facilitate cooperation between founder and casting purchaser in determining the surface quality level required.

It should assist in avoiding misunderstanding arising from imprecise descriptions at the order stage and should also enable the surface that is amendable to a particular technique of non-destructive testing. The use of the comparators is superior to the traditional method of using photographs which can introduce uncertainties concerning interpretation, particularly with regards to the irregularities.

The casting designer and purchasers can denote the level one to four on the drawings as the requirements of surface appearance. The founder, Dandong Foundry, will check the photos, and learn about the requirements. The comparison will facilitate the quality inspection.

Visual Inspection Acceptance Criteria

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A. **Surface Texture** - the natural surface of the casting after shot blasting.

B. **Non-Metallic Inclusions** - Non-metallic material trapped on the surface of castings.

C. **Gas Porosity** - Indications of gas on the casing surface.

D. **Fusion Discontinuities** - surface irregularities giving a wrinkled appearance.

E. **Expansion Discontinuities** - slightly raised surface irregularities.
F. Inserts - indications of chaplets (sand core supports) or internal chills.

G. Metal Removal Marks (Thermal Dressing) - surface remaining after using oxy-ga metal removal.

H. Metal Removal Marks (Mechanical Dressing) - surface remaining after using a mechanical means of surface or a previously thermally dressed surface.

J. Metal Removal Marks (Welds) - indications of welds fully or partially removed by theri

Comparators for the Definition of Surface Quality of Iron and Si
NON-METALLIC INCLUSIONS - B3
METAL REMOVAL MARKS - THERMAL DRESSING - G1

METAL REMOVAL MARKS - THERMAL DRESSING - G1
METAL REMOVAL MARKS (THERMAL DRESSING) - G3

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METAL REMOVAL MARKS (MECHANICAL DRESSING) - H4

METAL REMOVAL MARK
METAL REMOVAL MARKS (WELDS) - J1

METAL REMOVAL MARKS (WELDS) - J1

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METAL REMOVAL MARKS (WELDS) - J3

METAL REMOVAL MARKS (WELDS) - J3