

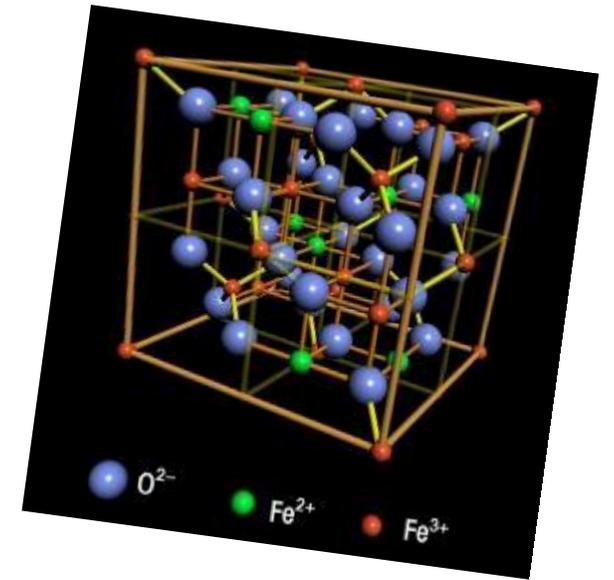
Steam treatment

Principle

Steam treating is a controlled oxidation process (temperature 450-590°C) that produces a thin layer of a beneficial oxide on the surface of a ferrous component.

The ferrous component.

Fe3O4



示意圖schematic diagram

The process of Steam treatment

Step 1. Before



Step 2. After



Color:

Before



After

Step 3. Cooling



The Benefits

Steam treating is a controlled-oxidation process that produces a thin layer of a beneficial oxide on the surface of a ferrous component.

The process yields a layer of magnetite (Fe_3O_4). The magnetite on the surface is a blue-gray to dark-blue color and is extremely hard. The benefits of the magnetite layer can include: improved surface wear resistance; sealing of open porosity in powder-metal components; improving apparent hardness and mechanical properties in powder-metal components.

