

Bauxite- Alumina- Aluminium



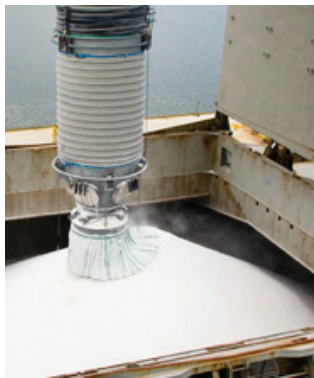
Metallic aluminium is most commonly used in a variety of applications that include transportation, packaging such as beverage cans, building supplies, electrical applications, chemicals and cement. Have you ever thought about 'how were these applications made of and come from?'

BAUXITE

It all begins with a sedimentary rock filled with minerals called bauxite. An interesting fact about bauxite is that the mineral components would change according to where you find it. Bauxite is the main ore for aluminium, it is found in lateritic areas at or near the surface of elevated terrain. It takes the most common form of pisolitic gravel or a hard outcropping surface layer.

ALUMINA

When bauxite goes through the process of transformation, water is extracted out of the ore in the rock, leaving a white powder called alumina. Alumina (aluminium oxide) is a white granular material produced from the refining of bauxite. Most alumina is smelted to produce aluminium metal. Around two tonnes of alumina is required to produce one tonne of aluminium.



ALUMINIUM

Once the transformation process is completed, aluminium metal is produced. Pure aluminium metal is a relatively soft, silvery white metal with a dull lustre that is caused by a thin coating of aluminium oxide. It is this coating, which forms almost instantly when the metal is exposed to air, that accounts for its resistance to oxidation. Aluminium's great versatility stems from its excellent properties.

Today, aluminium outstrips all other nonferrous metals in terms of volume used. Aluminium has numerous applications in the home and industry and is a familiar metal to nearly everyone. About 85% of all the bauxite mined worldwide is used to produce alumina for refining into aluminium metal. The remaining 15% is used in chemicals, abrasives, refractory products and materials, and aluminium compounds.

The lightness, strength and corrosion resistance of aluminium are important considerations in its application. Metallic aluminium is used in a variety of applications that include transportation, packaging such as beverage cans, building construction and electrical applications.

