

A. Smelters, or reduction plants, transform white alumina powder into molten aluminum. First, the powder is dissolved in a hot liquid salt solution in a “pot”, then an electric current flows into the pot, causing aluminum to settle to the bottom where it is removed. This process takes a large amount of energy.

B. Can ends are fed through a high precision process where rivet making, scoring, and tabbing occur in consecutive operations.

C. Bauxite, the mineral from which aluminum is made, is mined from open pits called strip mines. Trees and other plants, rocks, and soil are first cleared away. Then the bauxite ore is extracted from the earth and taken to processing plants.

D. Cans are spun as a cutting tool trims the rough shell from the inside.

E. A “neck” is made at the top of the can to reduce the diameter, and then flanged out so that it will be the right size and shape for the can end.

F. The aluminum is prepared for turning into products. For beverage cans and other products like foil and airplanes, huge slabs of aluminum are rolled into sheets of varying thickness. For other products like tea kettles or car parts, ingots are melted and poured into molds.

G. After crushers mash bauxite ore into small bits, the ore is heated to remove as much water as possible. At this stage a waste product called bauxite residue (red mud) is left behind.

H. The cans and lids go to a bottling plant. There, the cans are filled with the beverage and the lids are secured onto the cans.

I. A coiled sheet of aluminum is fed through a press that punches out shallow cups, which will form the bottom and sides of the can.

J. Molten aluminum is usually alloyed (mixed with other metals and elements) to make it stronger. Then it is poured into molds to form ingots. Ingots may be long rods, huge slabs weighing 20 tons (18,144 kg), or small bricks weighing only 4 pounds (1.8 kg).

K. Cups are fed into an ironing press where successive rings pull and iron the sides of the cup, reducing the sidewall thickness to get a full length can. The bottom is domed for strength.

L. Ends are stamped out of a pre-coated aluminum coiled sheet. A compound is added to assure a perfect seal between the can and the end when they are attached

M. The crushed bauxite goes through a series of chemical reactions in a refinery, turning it into a fine white powder called alumina. The refining process creates large volumes of bauxite residue (red mud), which is made of silica, iron oxides, and other impurities from the bauxite ore.