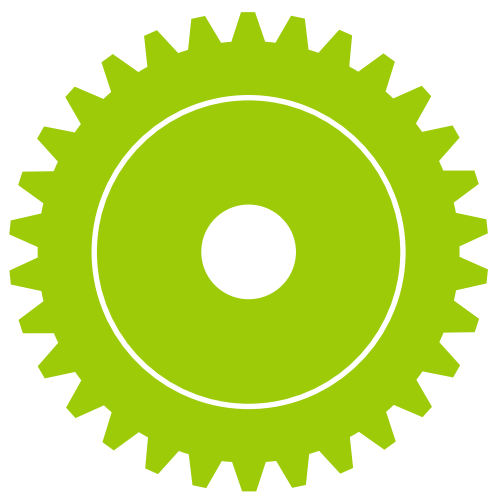


How it's made



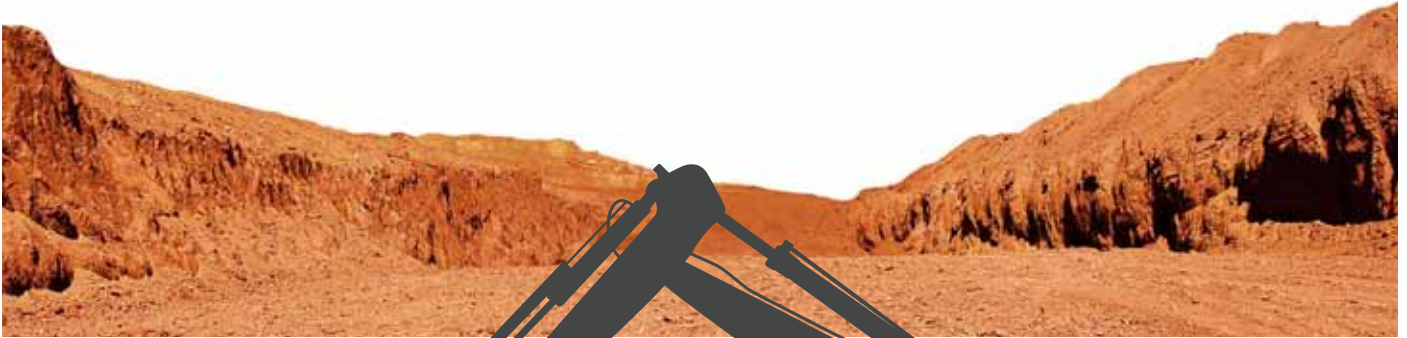
Ever wonder how aluminium is made?

AND HOW IS IT TRANSFORMED
INTO CANS, CARS OR TAILOR
MADE PARTS?

Get the highlights on aluminium's journey from bauxite, through production, use and recycling.

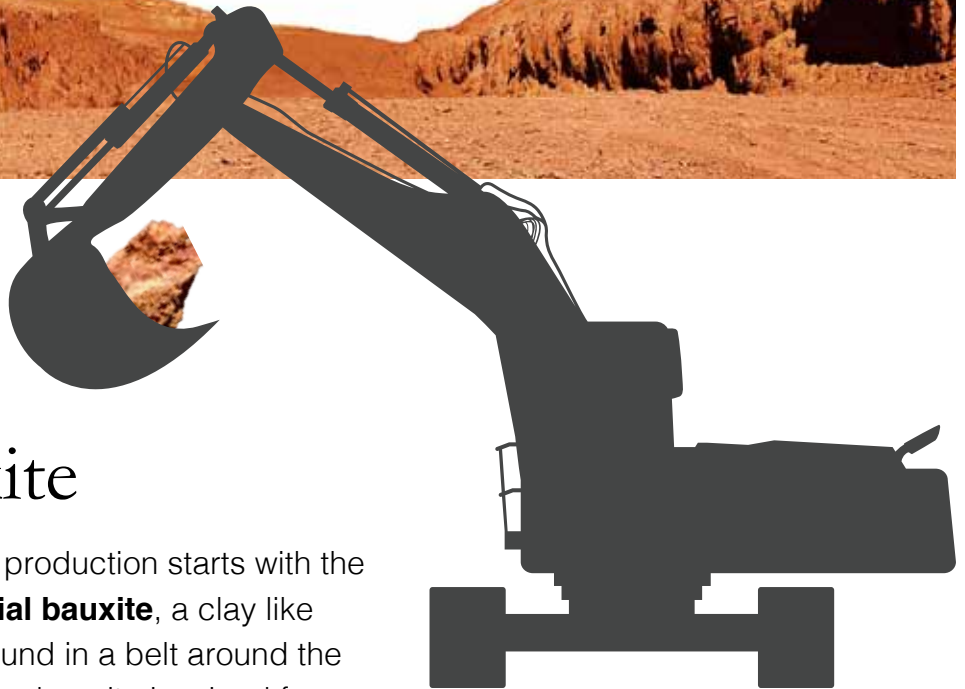


RAW MATERIAL



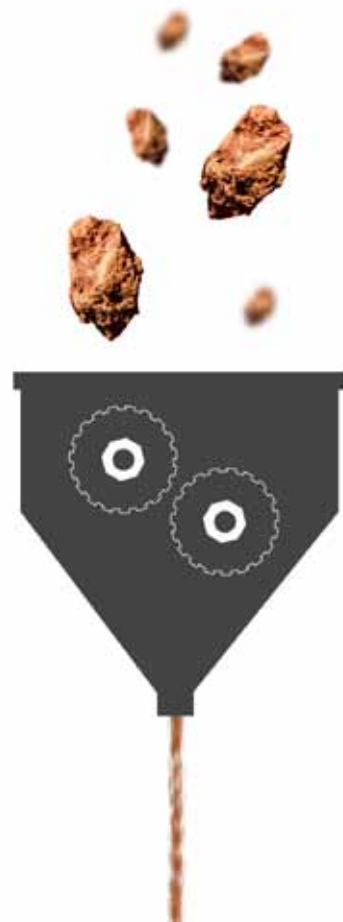
Bauxite

Aluminium production starts with the **raw material bauxite**, a clay like soil type found in a belt around the equator. The bauxite is mined from a few meters below the ground.



Bauxite grinder

The bauxite is then transported to plants where the clay is washed off and the bauxite passes through a grinder.



Alumina

Alumina, or aluminium oxide, is extracted from the bauxite through refining.

Refining process

Alumina is separated from the bauxite by using a hot solution of caustic soda and lime.

Pure alumina

The mixture is heated and filtered, and the remaining alumina is dried to a white powder.



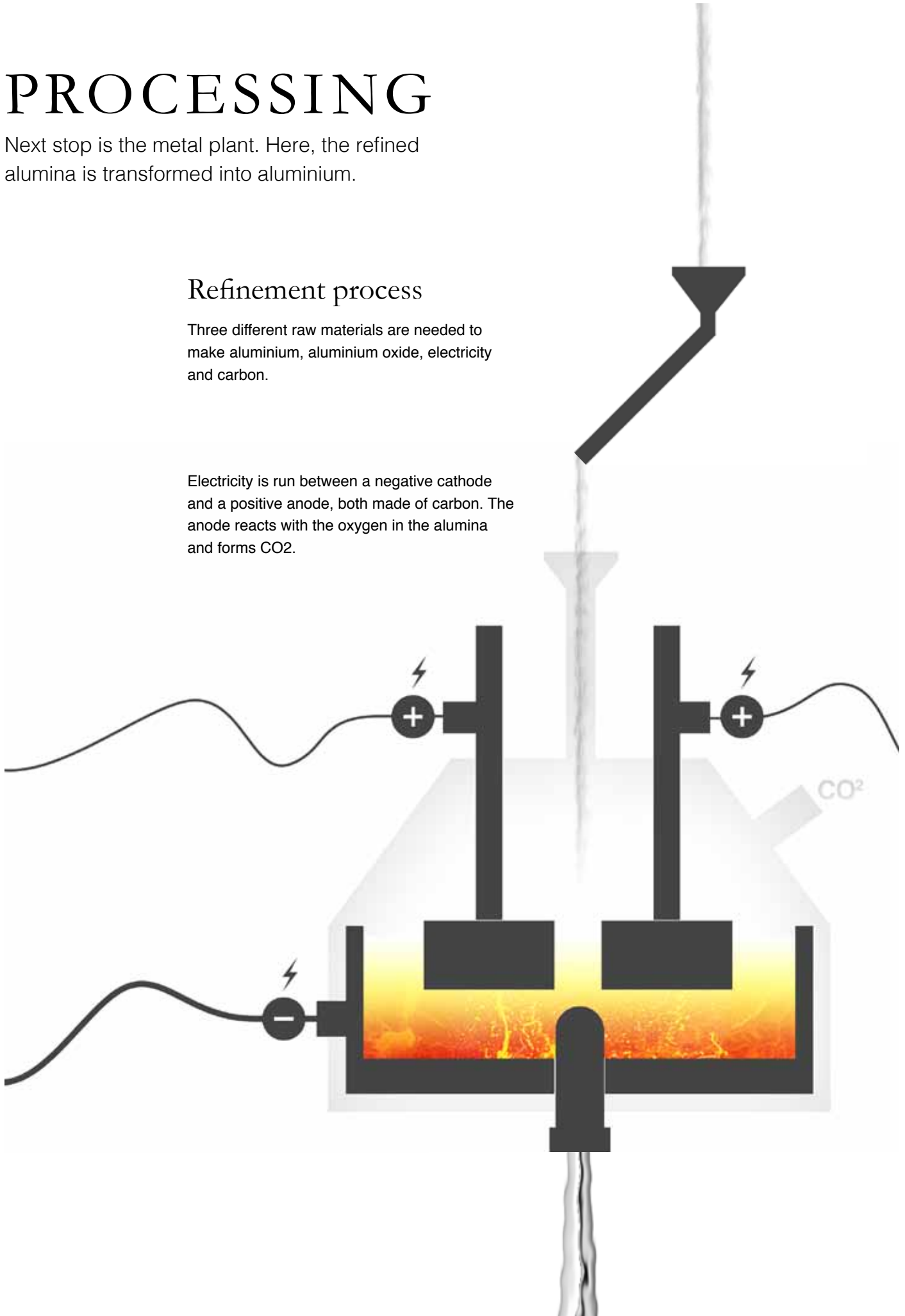
PROCESSING

Next stop is the metal plant. Here, the refined alumina is transformed into aluminium.

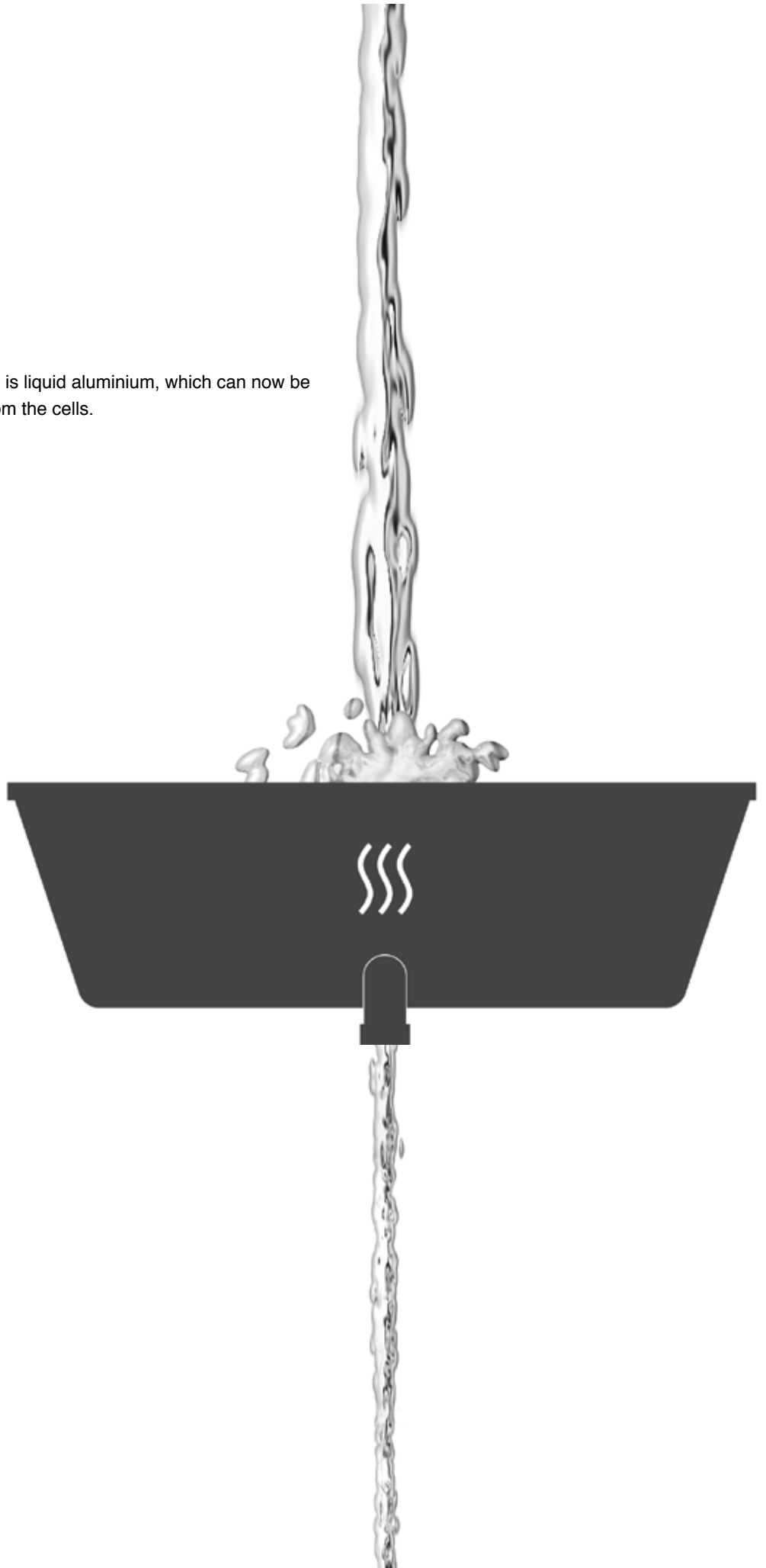
Refinement process

Three different raw materials are needed to make aluminium, aluminium oxide, electricity and carbon.

Electricity is run between a negative cathode and a positive anode, both made of carbon. The anode reacts with the oxygen in the alumina and forms CO_2 .



The result is liquid aluminium, which can now be tapped from the cells.



PRODUCTS

The liquid aluminium is casted into **extrusion ingots**, **sheet ingots** or **foundry alloys**, all depending on what it will be used for.



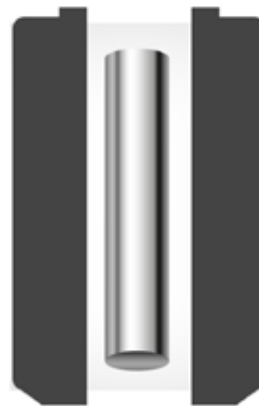
Extrusion ingot



Sheet ingot



Foundry alloys



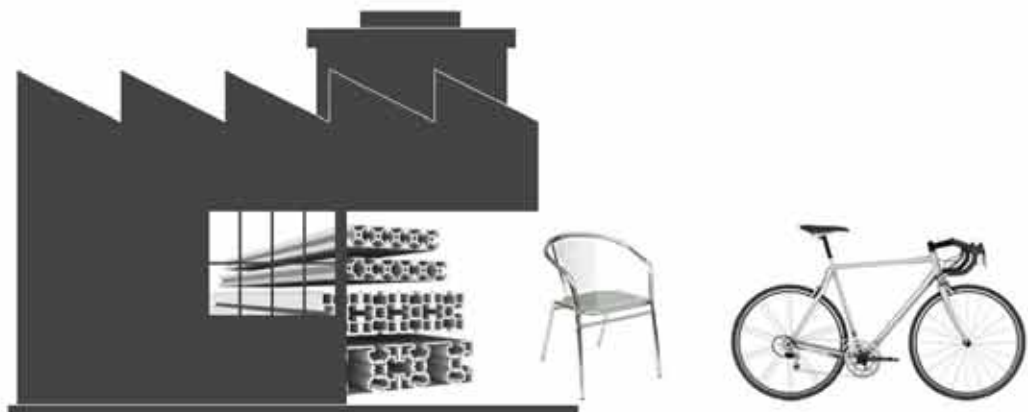
Extrusion

The extrusion technique has almost unlimited possibilities for design and offers countless application opportunities.



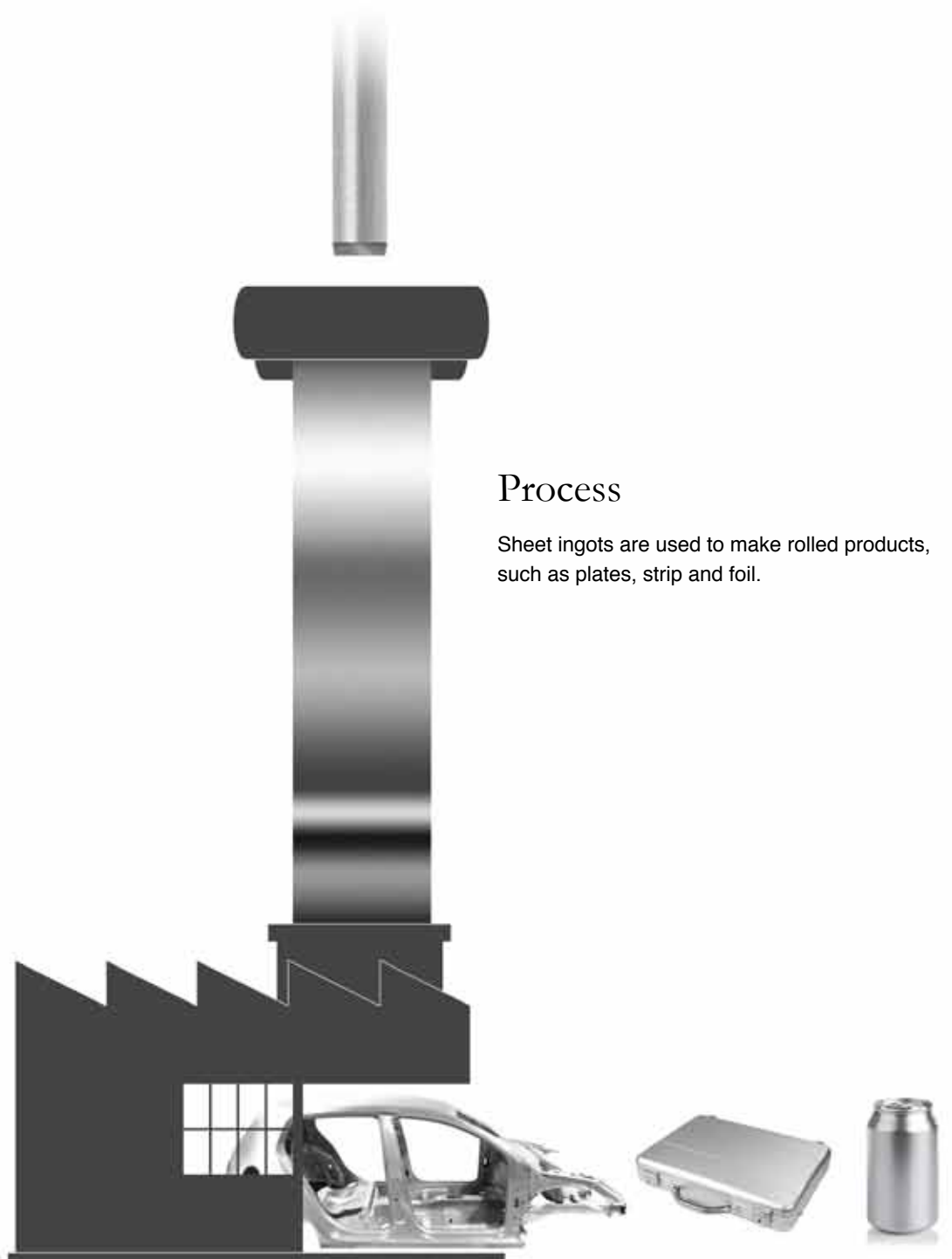
Process

In the extrusion process, the aluminium ingot is heated and pressed through a shaped tool called a die.



Rolling

Aluminium is very ductile. Foil can be rolled from 60 cm to 2-6 mm, and final foil product can be as thin as 0.006 mm. It still will not let light, aroma or taste in or out.

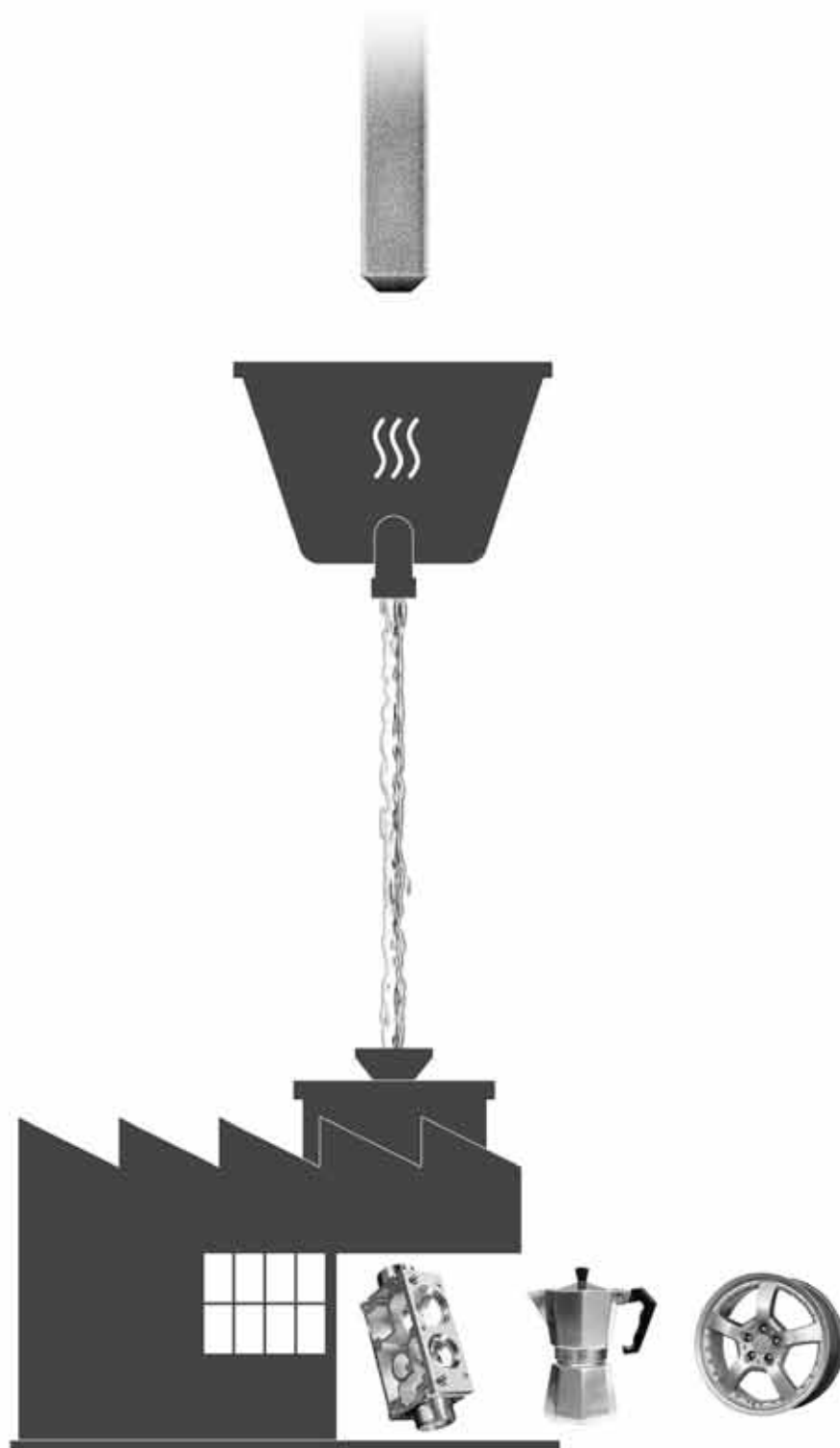


Process

Sheet ingots are used to make rolled products, such as plates, strip and foil.

Primary foundry alloys

Aluminium foundry alloys are cast in different shapes. The metal will be remelted again and made into, for example, wheel rims or other car parts. The content in foundry alloys can be customized to fit their further use.



Recycling

Recycling scrap aluminium requires only 5 percent of the energy used to make new aluminium.

Aluminium can be recycled over and over again with 100 percent efficiency. In other words, none of aluminium's natural qualities are lost in the recycling process.

The recycled product may be the same as the original product, or it can become something completely different. Aircraft, automobiles, bicycles, boats, computers, household appliances, wire and cans are all sources for recycling.

