

Distillation columns for zinc refining Union Minière, Overpelt (Belgium)

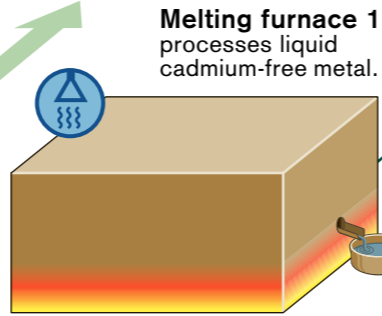
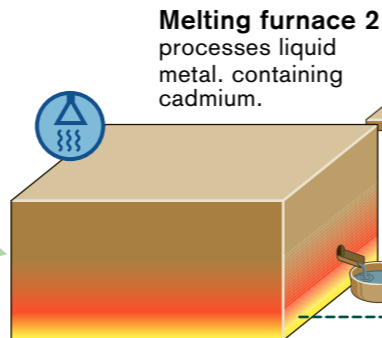
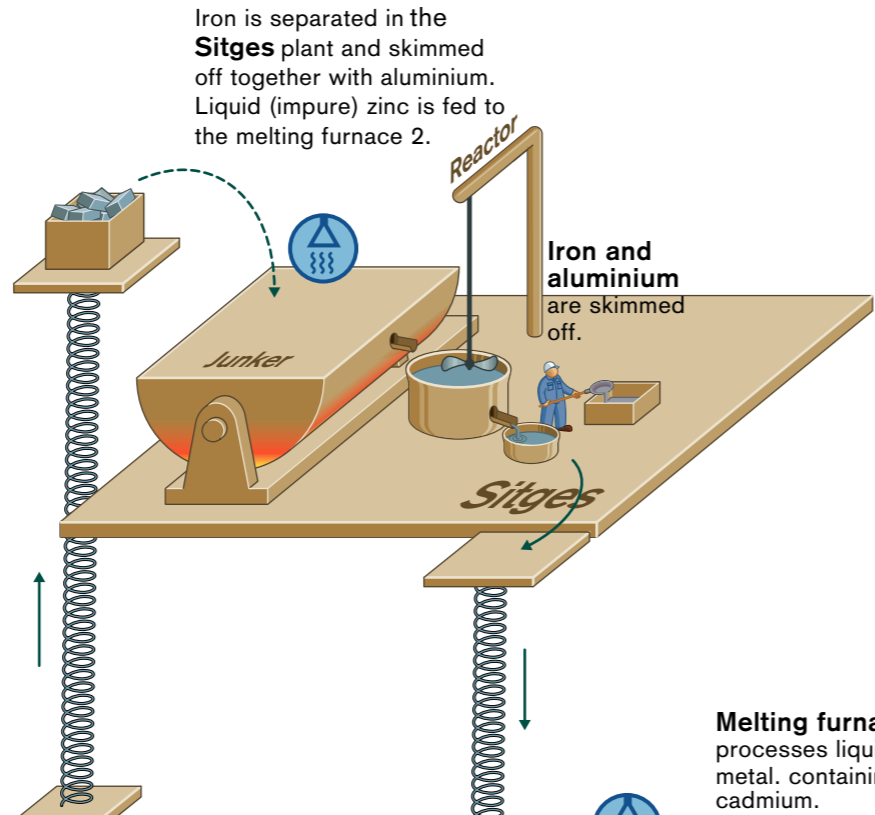
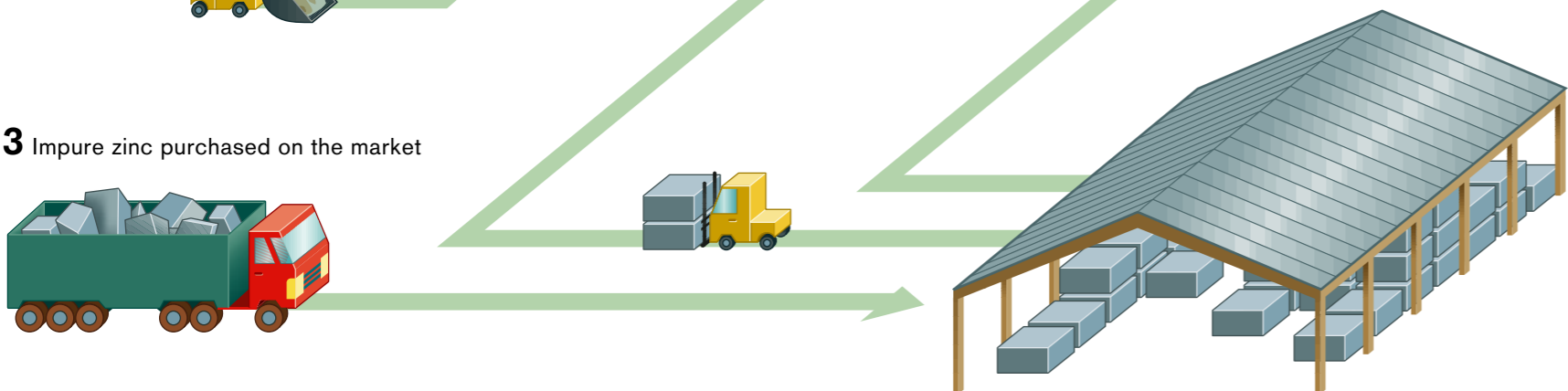
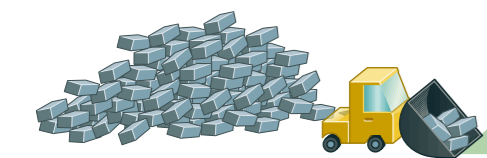


There are three sources of supply:

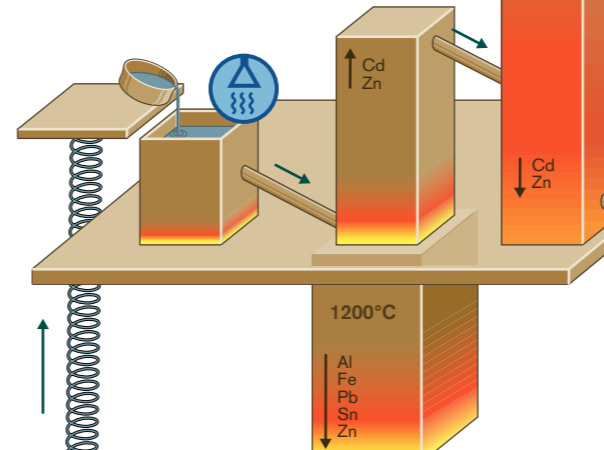
1 (Iron-bearing) mattes generated in galvanisation baths

2 Non-ferrous metals scrap (Al, Cu, Sn, Zn,...)

3 Impure zinc purchased on the market



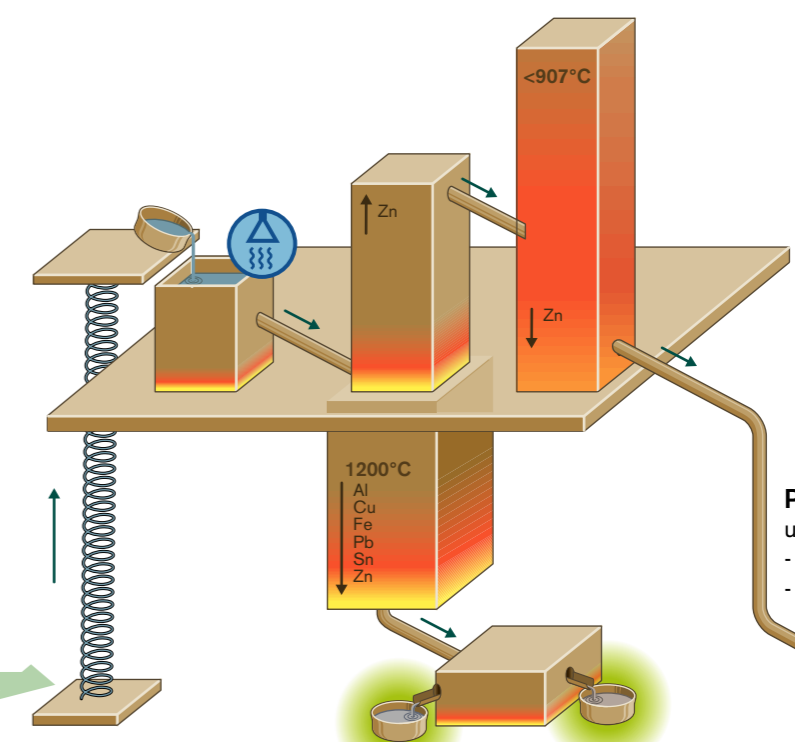
The **holding furnace** provides continuous feed to the column.



The **run off** contains a lot of elements (Al, Cu, Fe, Pb, Sn, Zn,...) but no cadmium.

Slags are recycled.

Lead is pumped and sold.

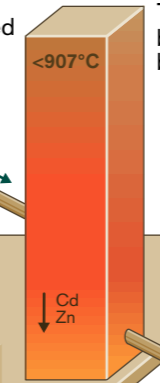


The **bleed** contains approx 45% Al, 20% Cu, 20% Zn,... and is sold in the shape of granules.

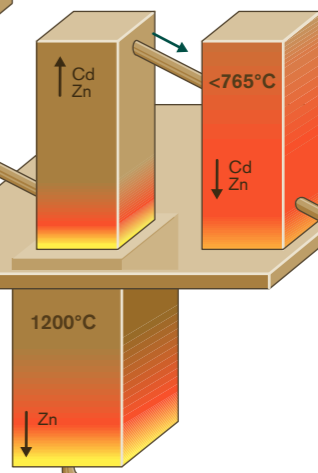
Lead is pumped and sold.

Zinc and cadmium evaporate together in the **first column**. Other metals are part of the run off which is purified in a later step.

The **condenser** brings the metals back to liquid state.



The **second column** separates the pure zinc.



Pure zinc (SHG) is used for the production of:
- powders for batteries
- alloys for die-casting.

Cadmium remains in the zinc alloy and is sold.

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- powders for batteries
- alloys for die-casting.

