

Balen/Pelt Smelter

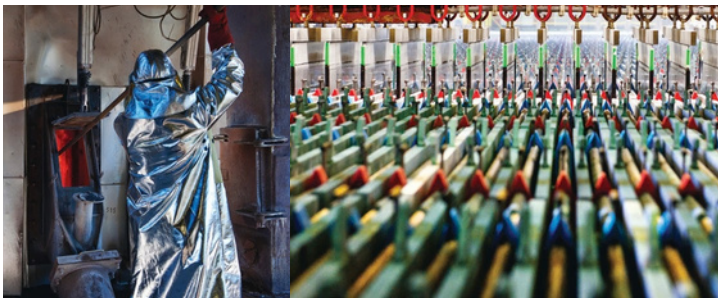
Belgium

Fast Facts

TECHNOLOGY: roasting, leaching, electrolysis (RLE) smelting, oxide washing

PRODUCTS: Special high grade (SHG) zinc; zinc alloys, including ZAMAK die-casting alloy; sulphuric acid; copper cement; and Balen Leach Product, which contains lead and precious metals.

EMPLOYEES: ~650



Location

The Balen and Pelt smelter operations are located in the northeast of Belgium, approximately 80 km east of Antwerp. Concentrates are transported by train from the port of Antwerp and secondary zinc feed materials are delivered to the plant by trucks.

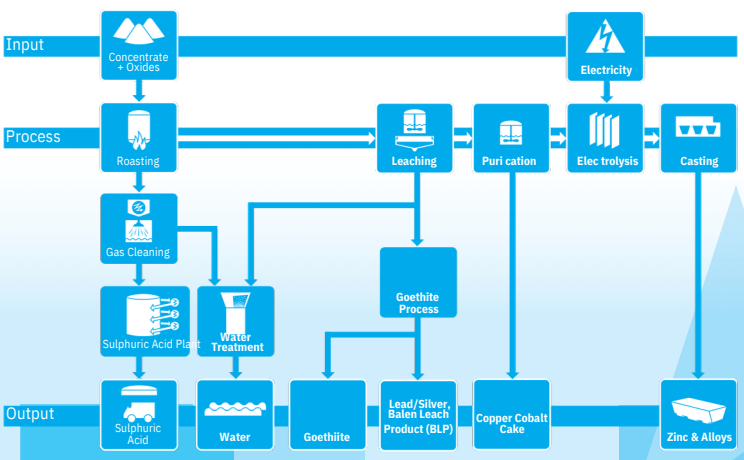
OVERVIEW

The Balen smelter is one of the world's largest zinc smelters in terms of production volume. The Balen and Pelt sites are only 18 kilometres apart. The sites' operations are complementary and highly integrated.

Cathodes produced at Balen and Auby (France) are transported to the centralised melting & casting facilities in Pelt. Pelt is also a central hub for preparing secondary materials for Nyrstar's European smelters, with one of the largest oxide washing facilities in Europe. The casting facilities in Pelt include a state-of-the-art melting furnace and fully automated casting lines.

The Balen smelter produces zinc from feedstock of both zinc concentrates and recycled zinc secondary feed materials. The site can process a high percentage of secondary feed material input without adversely affecting overall plant productivity, efficiency, or residue output.

PRODUCTION PROCESS AT BALEN/PELT





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SMELTING HEADQUARTERS

1. **BUDEL** Zinc Smelter & Corporate Office, *The Netherlands*
2. **BALEN / PELT** Zinc Smelter and Oxide Washing Plant, *Belgium*
3. **AUBY** Zinc Smelter, *France*
4. **STOLBERG** Lead / Multi-Metals Smelter, *Germany*
5. **PORT PIRIE** Lead / Multi- Metals Smelter, *Australia*
6. **HOBART** Zinc Smelter, *Australia*

NYRSTAR OVERVIEW

Nyrstar, headquartered in the Netherlands, is a leading international producer of industrial and critical minerals and metals essential to the energy transition, high-technology applications and regional security.

With a market-leading position in zinc and lead, the company operates interlinked smelting and related facilities across Europe and Australia, employing more than 3,000 people.

Nyrstar's operating business is wholly owned by Trafigura, a leading global commodities group providing critical resources to the world.

THE ZINC MARK

In 2024, Nyrstar Balen achieved The Zinc Mark, meeting best-in-class requirements for responsible production practices.

The Zinc Mark is awarded through The Copper Mark assurance framework and aims to promote responsible production practices across the value chains of the covered minerals. To receive The Zinc Mark, operations are assessed and independently verified against 32 responsible production criteria, including greenhouse gas emissions, community health and safety, respect for Indigenous rights, and business integrity, and must meet the required performance threshold.

HISTORY

In 1888, the Balen site began production of calcine (roasted zinc ore) under the brand 'Vieille Montagne', followed by its first zinc production two years later. The operation in Pelt started one year earlier, in 1887, as a multi metal production site.

In 1899, the roasting capacity doubled and a sulphuric acid plant was added. Between 1910 and 1976, the site operated as an integrated zinc-lead smelter organically growing to one of the largest roasting facilities in the world. For the last decades, the zinc smelter has used an electrolysis process to produce its zinc.

The site chronologically operated under the name Vielle Montagne, Acec-Union Minière, Union Minière, and Umicore until Nyrstar was founded in 2007.

Further historical facts and anecdotes are available here: www.overpeltfabriek.be and www.vmbalenwezel.be.







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