

Zinc roasting plants

Asturiana de Zinc, Spain



The Outokumpu partnership

As one of the world's leading developers and suppliers of technology, Outokumpu Technology designs and delivers plants, processes and equipment tailored to each customer's needs. We provide engineering, project and support services for the minerals processing and metallurgical industries globally.

The most modern zinc roasting technology

In 1999, Asturiana de Zinc awarded Outokumpu Technology the contract to build the world's most modern zinc roasting and sulphuric acid plant, comprising

- roasting plant for zinc concentrates with heat-recovery facilities
- gas-cleaning system
- sulphuric acid production plant



The Asturiana plants

Asturiana de Zinc operates three zinc roasting plants, the first built in 1972, using our technology. When the company decided to expand its production capacity to become Europe's most important zinc producer, it was natural that they should turn once again to our experts.

Ideal process conditions

Outokumpu offers solutions for roasting over 300,000 tpa of zinc concentrates in a large fluidized bed. Our advanced roasting process allows concentrates to roast under ideal process conditions. The process incorporates a heat-recovery system which employs the off-gases to produce the steam required in the zinc leaching process.

Clean off-gases

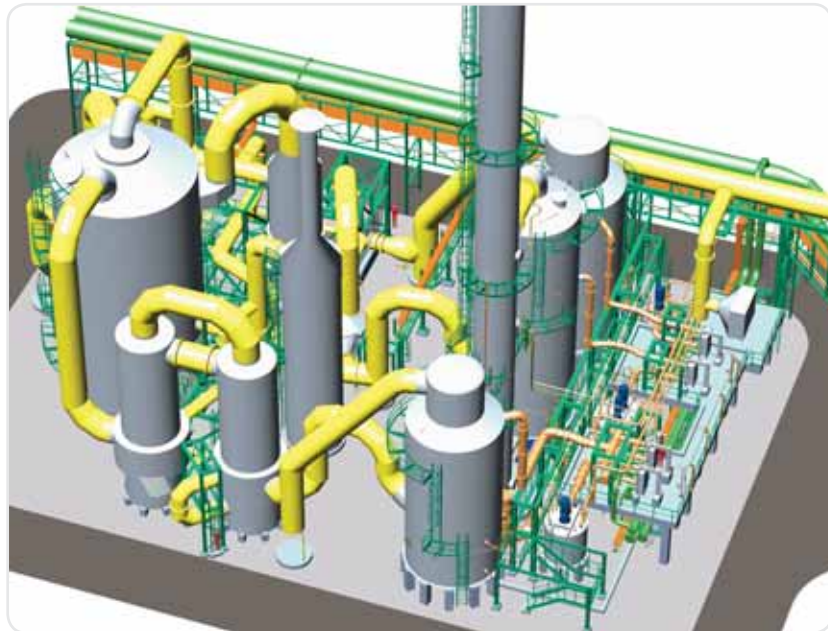
Every year, tourists from all over the world come to see Asturia's beautiful scenery. A decisive factor in the choice of our technology was its ability to achieve significant reductions in process emissions.

The roasting off-gases are purified in a chain of processing elements: wet electrostatic precipitators, scrubbers and coolers. The sulphuric acid plant, installed downstream of the process, uses the sulphur dioxide contained in the gases to produce 840 tons of sulphuric acid per day. The acid is sold to fertilizer manufacturers.

At Asturiana de Zinc, we have proved for the first time that it is possible to reduce the SO₂ content of the tail gas to as little as 100 ppm, without using any further gas treatment.

Record execution time

In addition to vast experience in process and plant design, Outokumpu offers modern tools and concepts for project



3-dimensional model of the acid plant.

execution that ensure the smooth integration of new plant into existing facilities:

- 3-dimensional software tools, such as 3D-PDS
- Early involvement of local suppliers and partners at the project development phase
- Worldwide sourcing

These factors led to a record execution time of only 18 months from the award of the contract to physical completion.

Outokumpu offers you worldwide support and service in maintenance as well as other invaluable customer-support functions during the whole lifetime of your investment.



Roasting over 300,000 tpa of Zinc concentrates in a 123 m² fluidized bed.

Outokumpu is a dynamic metals and technology group. Customers in a wide range of industries use our metal products, technology and services worldwide. We help our customers to gain a competitive advantage by enhancing their performance. We call this the Outokumpu factor.



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