Germany

Construction of thermal utilisation and recycling plant for industrial waste, Bernau

Client

ELA GmbH / Bernau Hüls Troisdorf

Objectives

The aspect of material recycling has so far been ignored in considering the thermal disposal of production waste. The demand for a system that permits disposal of compound materials containing components unsuitable for incineration led to the development of the Pyrocom process. The main task at hand was to extract the copper from the copper-coated circuit-boards as metal and to destroy the flame-retardants in the organic matrix.

During the course of constructing a major plant for manufacturing printed circuit board basis material, BC Berlin was faced with the problem of either utilising the production residues within the works or returning it to the materials cycle in a form the recycling trade can handle.

Activities

BC Berlin therefore developed the Pyrocom process, a combination of pyrolysis with separation of usable material and of high-turbulence combustion with thermal conversion of the residual matter, for the disposal of:

- Industrial waste
- Production residues
- Special waste
- Electronic scarp

On the basis of the process it had developed, BC Berlin planned and built a plant for recycling residues from the production of printed circuit boards and insulation material, with a capacity of 3,500 tons p.a.

As a supplementary project, BC Berlin built an additional pyrolysis line which made an increase in processing capacity by 1,700 tonnes p.a. possible without the need of adding to the total firing capacity.

PROJECT DATA

- Plant area: 1,000 m²
- Throughput: 17 tons per day
- Solids: circuit boards, paper, glass-fibre (plastics, rubber, bitumen)
- Furnace capacity: approx. 3.0 MW
- Gases: pyrolysis gases

BC Berlin-Consult GmbH
Unter den Linden 39 ● 10117 Berlin ● Phone: +49 30 254 67-252 ● Fax: +49 30 254 67-300 ● www.berlin-consult.de