Italcementi relies on Retsch equipment for sample preparation

With an annual production capacity of approximately 74 million tons of cement, Italcementi Group is the world’s fifth largest cement producer. The Parent Company, Italcementi S.p.A., is one of Italy’s 10 largest industrial companies and is listed on the Italian Stock Exchange. Italcementi Group’s companies combine the expertise, knowhow and cultures of 21 countries in 4 Continents boasting an industrial network of 55 cement plants, 10 grinding centers, 8 terminals, 494 concrete batching units. In 2011 Italcementi Group sales exceeded 4.7 billion Euro. Through the activities of its Research and Innovation Centers in Italy and in France the Group intends to anticipate market trends and requirements giving priority to environmental issues and the optimization of resources.

i.lab is Italcementi’s new Research and Innovation Centre designed by the US Architect Richard Meier. Located in the Kilometro Rosso Science Park, the building has an overall surface area of 23,000 m² and hosts engineers, technicians and researchers from the Research & Development and Laboratories Departments of CTG, the Group Technical Centre, and from Italcementi’s Innovation Direction.

i.lab’s activity is geared around five main strategic axes:

- New clinker, cements or binders alternative to Ordinary Portland Cement.
- Unconventional products, such as TX Active, i.light and others, able to provide added technological and functional value to traditional products.
- Special concretes, repair and structural strengthening mortars for both new and existing construction delivering added value innovative performance.
- Technical solutions aimed at reducing the CO₂ impact within the construction materials industry.
- Networking with international architects and project designers aimed at defining and disseminating a culture of construction that is mindful of the environment and the people.

RETSCH EQUIPMENT

To stay in line with the overall concept the laboratory instruments, both for sample preparation and chemical analyses, had to be of extremely high quality. Thus Retsch equipment was selected as a standard for sample preparation, both for mills and sieve shakers.

For decades Retsch equipment has been used in Italcementi’s laboratories. For the new research center they decided to take some of the most recent systems and purchase some new instruments.
The main projects were related to:

- **Clinker grinding**
  i.lab is using **BB 51 Tungsten Carbide and BB 300 heavy metal free steel jaw crushers**. With the already existing BB 200 Tungsten Carbide they are now ready to process any kind of cement clinker, building materials, in different batch volumes.

- **RDF and exhaust tires preparation**
  To do chlorine determination on exhaust tires, the lab uses a **CryoMill** with 50 ml stainless steel jar and 50 liters liquid nitrogen container. The lab technicians are very satisfied with the high fineness they achieve with the CryoMill.

- **Sieve analysis of cements and cement additives**
  The new lab of Italcementi is equipped with **3 air jet sieving machines AS 200 jet**. They are using the AS 200 jet with 32 and 63 microns sieves to check the quality of their finest cements and additives.