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i.light®, "transparent" cement for the Italian Pavilion at Expo 2010 in Shanghai

Italcementi perfected an innovative "transparent" cement for the **Italian Pavilion at Expo 2010 in Shanghai** (designed by architect Giampaolo Imbrighi).
The product contributed to the success of the Pavilion, which received more than 7.3 million visitors and was particularly appreciated by the Chinese public, to the extent that even though Expo regulations stated that the pavilions would be demolished at the end of the event, they wanted it to stay in China because it is so architecturally interesting.

i.light® bonds special resins into a newly conceived cement mix which permits the manufacture of solid, insulated yet light-transmitting construction panels. Italcementi researchers have identified the right formula for a dry ready-mixed product that permits inclusion of these plastic resins in cement, which is naturally opaque, without creating cracks and jeopardizing the structure.

3,774 transparent **i.light®** panels have been used to cover a total surface area of 1,887 m² (189 tons of "transparent" cement), approximately 40% of Pavilion's wrapper. The effect created is a sequence of lights and shadows that evolves constantly: its transparency is most dramatic in the dark, when the light from inside the building is visible outside, while during the day it allows soft, warm daylight to pervade the interior of the building.

Italcementi researchers perfected an innovative material which does not contain optic fibers like the transparent cements produced so far; light is transmitted thanks to special colored resins which Italcementi researchers have found to be particularly suitable for this type of application. This solution does not require costly optic fibers, is particularly suitable

for industrial production, and lets more light into the building as the resins make optimal use of the angle at which light strikes the building.

“Transparent” cement panels are architectural components which serve a variety of functions that may be integrated, including internal lighting based on techniques for shading and spreading light inside buildings.