

Abstract

Vitrified Blast Furnace Slag – Granulated or pelletized.

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In France, in order to speak about granulated and pelletized blast furnace slags, the best way seems to take the example of the SOLLAC integrated plant situated in Fos-sur-Mer, because it is the only area where you can find pelletized blast furnace slag (and also granulated one).

In Fos, 85% of the blast furnace slag is vitrified, to become hydraulic reactive material. This vitrification is obtained by two different process : one of them, very well-known, is granulation and takes place on the blast furnace n°1. But on the blast furnace n°2, slag is pelletized.

The originality of this process, first used in Canada 30 years ago, and used on the blast furnace n°2 since the beginning of the production in Fos in the mid-seventies, is to cool the slag, obtaining the necessary quenching that provokes the vitrification, as well by water as by air. The main goal was to save energy and water consumptions, but it is also important to keep in mind that the pelletizing area is completely confined in a building, avoiding any emission of noise and particles outside.

At first, a moderate watering is needed, and then slag falls on a drum that separates the flow in a multitude of small slag drops which are propelled through the air, provoking a fast cooling-down and vitrification.

After some improvements, during the last two years, in the water spreading and in the control of the slag particles trajectory in the air, SOLLAC reached its goal : to have a very similar quality as well in the granulated as in the pelletized products. For instance, the glass content of both of them are now very close, always over 80%.

Biographical Details

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is a French engineer (*Arts & Métiers*) who worked from 1991 to 2001 at COCHERY BOURDIN CHAUSSE, now called EUROVIA, a Public Works company specialising in Road construction.

He worked in several agencies and, from 1998 to 2001, he has been the managing director of a company, belonging both to EUROVIA and SCREG, which produces hot rolled asphalt, hydraulically bound mixtures and recycled concrete aggregates.

Since 2001, he is the director of the CTPL (Centre Technique et de Promotion des Laitiers Sidérurgiques).

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