Abstract

The Utilisation of Steel Slag in Waterway Construction

Michael Joost

DSU Gesellschaft für Dienstleistungen und Umwelttechnik mbH & Co. KG

Duisburg, Germany

Only 350,000 tons of the total 5,500,000 tons of German steel slag is used in hydraulic structures. But for some producers this market for certificated steel slag is a significant one.

Important applications for certificated steel slag as armour stone and mineral filter in large rivers and channels are groins, filling of eroded river bed, protection and raising of river bottom and bank reinforcement.

Especially the high specific density, the rough surface, the cubic shape and the strength against abrasion of the steel slag make it to desirable product for hydraulic engineering in Germany for more than 25 years.

The steel slag which is most suitable for the production of armour stones and filter aggregates for hydraulic structure shows – beside of course an environmentally friendly behaviour – high volume stability and a low porosity.

From the point of view of a producer of mineral products for hydraulic engineering the logistic connection and distance from the processing plant and the storage area to the ship loading facility is regarding the economics the most important aspect.

Biographical Details

Michael Joost

- 1990 until 1996: student of mineral processing at Technical University of Clausthal, Germany
- 1996 until 1998: operating engineer in the department “by-products” at Hüttenwerke Krupp Mannesmann, Duisburg, Germany
- since 1998: project engineer “slag management” at DSU, Duisburg, Germany [subsidiary of ThyssenKrupp and DEUTAG (asphalt producer); steel works services]

Contact: Joost@dsu-umwelttechnik.de