



## Case Study

# **Keep it all Clean: Efficient and Water-saving Washing of Crushed Material**

Edited by on 13. Feb. 2024

[Published in bulk solids handling, Vol. 31 \(2011\) No. 3](#)

Prior to the introduction of a new washing plant it was the sand washing process which was the biggest area of concern for Natal Portland Cement. Due to inefficiencies of the old plant, the company had to buy up to 80 per cent of the fine sand used for downstream production. This led to significantly increased production costs.

Natal Portland Cement has improved its productivity and efficiency at their Sterkspuit quarry in KwaZulu-Natal, South Africa, following the introduction of a new washing plant. The loss of quality fines during the sand processing phase of production has been eliminated following the introduction of a new washing plant to replace a bucket wheel de-waterer previously employed at the Sterkspuit site.

The cement manufacturer also reports an industry first with the introduction of an Aquacycle high rate thickener allowing for the recycling of 90 per cent of the water used in the washing of their crushed material. While thickener systems are in use throughout the mining sector in South Africa it is believed that the system now in operation is the first of its kind in a crushed rock or sand and gravel application.