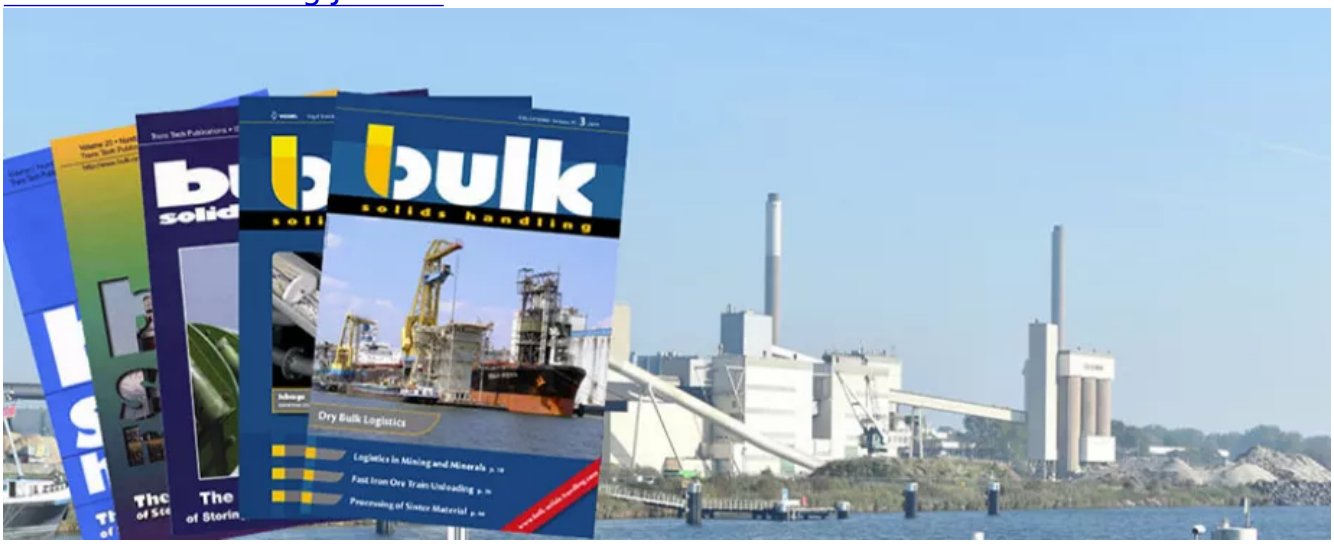
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Homogenizing/Blending Plant Applications in South Africa with Special Reference to Gencor's Hlobane and Optimum Plants

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This paper describes how an analysis of the functions objectives and decision criteria of homogenising/blending plants by South African metallurgists and engineers have led to a wide range of applications of this technology in South Africa over a relatively short timespan of 15 years with some interesting innovations practised at GENCOR's Hlobane and Optimum coal mines.

1. Introduction

1.1 Definitions/Functions

In a stockpile bulk solids are stacked to and subsequently reclaimed from a storage facility. Stockpiles link the various stages of bulk solids transportation systems to:

- bridge interruptions in sections of the system without stopping the whole system,
- act as a butter between continuous and discontinuous sections of the system,

- collect, store and distribute bulk solids coming from or going into different flow lines, such as in the stockyard of a terminal, and
- homogenise, blend or proportion bulk raw materials for a metallurgical or chemical process.

In a homogenising plant raw material such as crushed run-0fmine coal is stacked onto a bed (stockpile) and subsequently reclaimed in such a way that the inherent fluctuations in respect of quality and/or size distribution are evened out. The homogenising effect is expressed as the ratio of the standard deviation of a given quality parameter before and after the homogenising plant.