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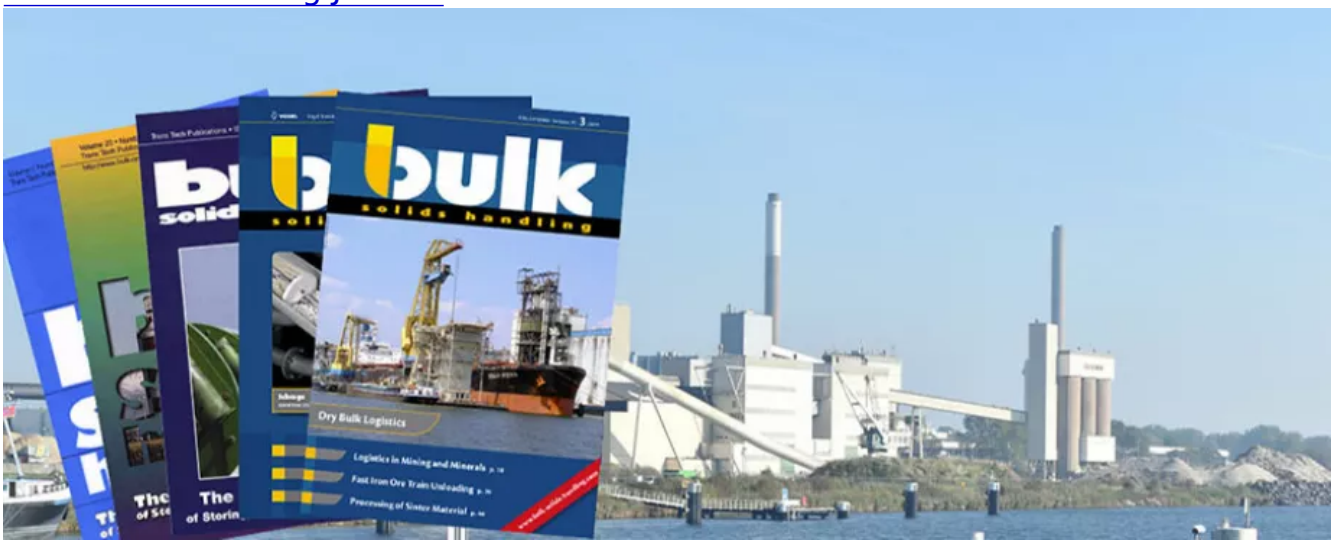

Technical Article

Cost Considerations for In-Pit Crushing/Conveying Systems

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This article focuses on continuous materials handling systems used in the hard rock open-pit mining industry. Guidelines for mine planning with continuous systems are outlined. Key parameters affecting capital and operating costs are identified. Commonly encountered trade-offs between operating and capital costs are discussed. A typical range of costs is presented based on average operating conditions.

1. Definitions

Because in-pit/crushing/conveying is relatively new to the industry, the vocabulary used is still in a state of flux and causes considerable confusion at times. The following definitions will be used in this discussion:

Near-Pit Crusher: Crusher located outside the pit but adja cent to the perimeter, e.g. Duval Sierrita s 60 inch gyratory waste crushers, G i b r a l t a r's 54 inch gyratory ore crusher.

In-Pit Crusher: Crusher located within the past or future in fluence of the ore body, e.g. Anamax Twin Buttes' 54 inch gyratory waste crusher and Cyprus 8agdad's 60 inch gyratory ore crusher.

Mobile Crusher System: Crusher and feeder with integral propelling mechanism such as walking pads or permanent crawler, e.g. Palabora s 54 inch gyratory ore crusher.

Portable Crusher System: Crusher and feeder with in dependent propelling mechanism such as crawler transporter, e.g. Duval Sierrita's 60 inch gyratory ore crusher.

Movable Crusher System: Crusher/feeder with indepen dent propelling mechanism such as crawler transporter and with relocation costs from 10% to 15 0/o of capital costs for site preparation and dismantling, e.g.proposed Utah Mines Island Copper 54inchgyratoryorecrusherand Iscor 60inch gyratory waste crusher...