



BHP Billiton TEMCO

Slag / Alloy Gravity Recovery Plant



Model:	Utilising an automated IPJ 1500
Purpose:	Recovery of manganese alloy (prill) from crushed furnace slag.
Place:	TEMCO - Bell Bay, Tasmania, Australia.
Raw Materials & Marketing Metallurgist:	Paul Williams.
Date:	July 2008.
Results:	Up to 85% alloy recovery & 95% alloy grades.

BHP Billiton's Tasmanian Electro Metallurgical Company Pty Ltd (TEMCO) is Australia's only producer of manganese ferroalloy. Located at Bell Bay, Tasmania, TEMCO operates four furnaces to produce 250,000 tonnes of alloy annually comprising of ferromanganese and silico manganese. TEMCO alloys are used as additives in steel production processes.

The furnace processes typically result in a 3% loss of recovery. This is retained in crushed furnace melt (slag) and represents a significant economic and environmental cost to the manufacturer. The ability to recover value from slag (prill) and related waste products therefore offers potential benefits to alloy producers.

Gekko Systems, in conjunction with TEMCO, has developed a Gravity Recovery Plant to recover manganese from slag. The plant is automated to minimize operator intervention and maximize processing and recovery efficiency.



BHP's TEMCO Gravity Recovery Plant, Tasmania, Australia

The key processing unit within the plant is a Gekko Systems' InLine Pressure Jig (IPJ) 1500. The IPJ is a fully-automated, single hutch, circular jig with a moveable screen. The unit is characterized by flexible controls, simple processing, and high recovery rates. With just three moving parts, rapid installation and commissioning, ease of operation, and high volume throughput, the IPJ 1500 is versatile, flexible and economical.

Results from the TEMCO Plant, based on crushed slag feed rate of 35t/h show recovery rates of up to 85% of manganese alloy. This is triple the rate of recovery experienced by alternative capture methods. Within the recovery process there is no visible prill within the IPJ tailings product hence all liberated prill is recovered.

Designed, engineered, manufactured installed and commissioned by Gekko Systems, the TEMCO Jigging Plant incorporating the automated IPJ 1500 is adaptable, efficient and, in applying gravity separation technology to smelter slag products, innovative.

As importantly, and in keeping with Gekko System's operational philosophy, the automated IPJ 1500 provides mining and mineral-processing companies with economic and environmental cost-benefits not previously achievable.

For more information contact:

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