Conveying, Crushing, and Materials Handling Systems

Macmahon Engineering has the in-house capability to provide total conveying, crushing and materials handling design, supply and construct solutions for the resource and mining sectors.

With a practical understanding of the types of conditions and issues encountered in the underground and surface environments, Macmahon reduces the risks associated with logistical and practical challenges. Macmahon also delivers a more practical asset that can be easily maintained with the lowest operating costs.

Macmahon employs experienced, practical engineers and draftspersons to design customised solutions with a made to order approach for each project. With complete 3D modelling capability, Macmahon uses latest versions of Inventor, Solid Edge, AutoCad and Microstation drafting software for all drawing requirements. Macmahon design engineers use SpaceGass for structural analysis and ANSYS for Finite Element Analysis (FEA). State of the art Helix Conveyor software is used to design all conveyor installations. Macmahon's design office operates with a quality management system that complies with the requirements of AS/NZS ISO 9001:2008.

The Company's experienced teams are totally supported by the Macmahon Safety Management System. Macmahon can provide complete support from safety administration, training and inductions, through to hands on guidance assessing the risk and safety of all tasks undertaken throughout the project execution phase.
Past and Present Projects include:

Rio Tinto's Northparkes Mine
Construction of the Northparkes Lift 1 underground conveyor which was 750m long.
Construction of the Northparkes Lift 2 underground conveyor system comprising of two incline conveyors and transfer station with combined length of some 1.8km.
Construction of a 2km long curved overland conveyor, secondary crushe feed conveyor, secondary crushe, transfer towers and associated facilities.

Rio Tinto's Argyle Diamonds Mine
Construction of a temporary underground crushing plant comprising a 36x48 jaw crushe, crushe vibrating feeder and loading bin, fine ore bin, and conveyor loading arrangement.

Aditya Birla Minerals Nifty Copper Mine
Design, supply and installation of a 3.0MTPA underground crushing and conveying project. The project included a 42" primary gyratory crushe, plate feeder, and conveying system. The transfer crushe was 265m long and the main drift crushe was 2300m long, and the system conveyed the crushed ore from 410m BC to the surface.

BHP Billiton's Leinster Nickel Operations
Construction of the Perseverance 3.0MTPA underground crushing and materials handling system. The installation comprised of a C160 jaw crushe, apron feeders, and conveying system.

Newcrest's Ridgeway Mine
Construction of the Ridgeway Mine, 5.0MTPA conveyor system which included a 2.2km long, 1:5.3 trunk crushe and 3.2km, 1:5.3 portal crushe.

For further information please contact:

Nic Breheny
Design Manager Tel: (08) 9232 1000
nbreheny@macmahon.com.au