

Nickel and cobalt are totally imported at present. RRL, Bhubaneswar has been entrusted by the Government of India to coordinate a project with other agencies for beneficiating chromite over-burden to recover nickel and cobalt, so that an industrial plant to manufacture these could be established in the country.

Agglomeration of ore fines and concentrates has become an integral part of the iron and steel producing industry. Due to mechanised mining, huge quantities of ore fines are generated. Besides the utilisation of fines, the concentrates produced from low grade ores need agglomeration. In India, out of the total production of 55 million tonnes per annum of iron ore, 43% is in the form of lumps, 46% fines and the other 11% as concentrate.

Other Services

With the increasing role of minerals in economic activity, India, over the years, has strengthened its service sector by enlarging the scope, nature of activities and functions of premier organisations such as Geological Survey of India (GSI), Indian Bureau of Mines (IBM) and research laboratories of Council for Scientific and Industrial Research (CSIR). In addition, new service organisations such as Mineral Exploration Corporation Ltd. (MECL) and Metallurgical and Engineering Consultants (MECON) have been set up to provide exploration and engineering consultancy services respectively to a wide range of industries, including mining.

Indian Capabilities

Consequently, India now has fairly well developed capabilities and capacities to provide a range of services. While the profiles on "Service Organisations" detail the type of services rendered by leading organisations, some of the major available services are listed below:

- (i) Geological exploration - mine plans, mineral properties, logging and sampling of bore holes, geophysical, geochemical, remote sensing, actual surveys, mineral targetting, evaluation of exploratory data, contract drilling etc.
- (ii) Bonification technologies (investigations) of lean ores (copper, gold, nickel, chromite, manganese ore etc.)
- (iii) Mining services - preparation of feasibility reports, mine development proposals, preparation of detailed project reports (DPRs); mining technology upgradation; mine construction etc.
- (iv) Environmental Management - environment management plan, including water air pollution control systems, afforestation, reclamation, recovery of mineral wealth and utilisation of mine waste etc.
- (v) Research and Development - in mining technologies, bonification, equipment and machinery adaptation, mineral processing.
- (vi) Project management, and
- (vii) Consultancy service in the above areas.