

Title of Technology to be offered	Agglomeration of Iron Ore & Concentrates from Slimes
Type of Technology	Process development through Indigenous R&D
Area of Technology	Mineral (Iron Ore) Processing / Ferrous Processes (Iron Making)
Details of Collaborating Agency	Tata Steel Limited , Jamshedpur Steel Authority of India Limited, New Delhi Mecon Limited , Ranchi
Uses	Process development for setting up the commercial sinter plant as well as for the improvement in the existing sintering process so as to produce quality Sinter from Iron Ore Fines.
Salient Features	<p>The quality especially , the reduction properties (RDI and RI) of sinter do affect the Blast Furnace performance (BF) significantly. Understandably, the fines generated inside the furnace or during reduction affect the permeability of the stack zone, increase the pressure drop and disturb the gas distribution causing channelling of the furnace. All these factors result in decrease in driving rate and adversely affect the CO utilisation with ultimate consequence of higher coke rate and lower productivity.</p> <p>The sinter properties are influenced greatly from the sinter chemistry which is fixed in view of the BF requirement. Besides, the requirement of coke in the Indian Sinter Plant is high and Productivity is low.</p> <p>A technology has been developed to improve the RDI and RI of super-fluxed sinter through improvement in sintering efficiency. The technology also encompasses lowering of fuel consumption and improvement in the productivity of sinter plant.</p>
Scale of Development	Pilot Scale (Implemented in the commercial plant)
Major Raw Materials	Iron Ore Fines, Fluxes (Limestone, Dolomite or Other Mg bearing minerals), Coke Breeze, Lime and Metallurgical Wastes
Major Plant Equipment/Machinery	Preparation and Mixing Circuits of major raw materials , Sinter Machines, Sinter Cooler,
Details of specification application	IS 9963:1981 and IS 6495:1984, respectively, for the shatter and tumbler tests of sinter.RDI and RI tests follows standard measuring practice in Tata Steel or elsewhere.
Status of Development	The technology , though successfully implemented in typical plant, is material specific , hence the process need to be studied in our Laboratory in relation to the iron ore(s) from the customer before the process is implemented .
Ecological/Environmental Impact (if any, specify briefly)	The process is environment friendly. Besides, the emission of green house gas and other harmful ones is lowered.
Patenting details	Not filed
Commercialisation Status	The technology is material specific . NML has MOU with commercial units to implement the findings in this respect.
Techno-Economics	The unique and salient feature of the technology is that it does not involve any extra costs. With minor modification in the plant and logistic support, the technology/ process can be implemented.
Key words	Iron ore, Sinter, Cold (Tumbler) strength, RDI and RI