

# **Agglomeration of Iron Ore Fines & Concentrates**

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## **Abstract**

For extraction of metal values through any pyro metallurgical route, a particular size range of the respective ore is recommended. Hence, ore fines generated during mining operation or upgradation process are to be subjected to further processing prior to their use in metallurgical industry. Agglomeration is the only method to utilize the fines and concentrates for size enlargement by consolidation of the ore particles. Pelletization, sintering and briquetting are the three processes for agglomeration. In case of iron ore fines, sintering and pelletization processes are being applied for agglomeration before using for metal production. Recently, briquetting of ore fines has been used in some metallurgical furnaces to extract metal values specially for iron ore fines and concentrates. Characterizations of agglomerates are essential for producing good quality product. In this paper, the theory and practices of various agglomeration processes with their merits have been described and discussed with particular reference to iron ore fines and concentrates.

**Key words:** Iron ore fines, concentrates, agglomerates, pelletization, sintering, briquetting, characterization.