# Iron Oxide feed as Corex burden at JVSL

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## Abstract

The Corex process consists of two main reactors, the melter-gasifier and the reduction shaft furnace. Fed into the reduction shaft, the iron oxides( ore/ pellets) and additives are reduced and calcined respectively by reducing gas injected through bustles installed on the lower side wall of the reduction shaft. Reduced iron(DRI) and calcined additives are fed into the melter gasifier by screw feeders installed on the bottom side wall of the reduction shaft. On the other hand, coal is fed into the melter gasifier and gasified by oxygen injected through the tuyeres on the lower side wall of the melter gasifier.

All raw materials fed to the COREX has to meet certain specifications because physical, chemical and metallurgical properties of raw materials are significant factors for the stable process control of COREX. Consequently it can be stressed that stable operation depends on proper selection of raw materials in COREX process.

From the early stages of the start up of COREX operation, different kinds of iron oxides have been used as feed material . Some kind of ores and pellets provided better operational results than other ores and pellets. This meant that there were quality differences among the type of iron oxides.