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## SMELTING

### Aluminium Making Process

#### Overview



VL has invested in two greenfield aluminium smelting plants at Jharsuguda, Orissa. The firm has collaborated with GAMI, a renowned technical consultant of China, in order to implement cutting edge technological innovation in the plants.

Phase 1 of Smelter Plant at Jharsuguda with a capacity of 0.5 mtpa meets the high quality standards and advanced technical specifications of British Standard Institute (BSI) thereby making it an ISO 9001 and ISO 14001 certified unit. Different operational areas include Green Anode Plant, Bake Oven, Rodding Plant,

Potlines, Cast House, Laboratory, Rectifier and Utility and ETP and STP. The plant offers a dynamic product portfolio of ingots, billets, wire rods, slabs and functions under the brand name "Vedanta", which is registered with London Metal Exchange (LME).

VL has already started Phase 2 at Jharsuguda, which has a capacity of 1.1 mtpa. All major civil orders for supply of PTM and FTP machines have been placed on ECL. To meet global technology benchmarks, VL has roped in M/s Outotec as the technology supplier for GAP & Rodding Shop.

#### World Class Practices

VL incorporates unparalleled technical expertise to constantly raise the bar of process standards at Jharsuguda. Leading-edge statistical tools like Six Sigma, RCA, FMEA, Parato, DOE are utilized for improved data management. SAP is implemented for resource planning, maintenance, productions and quality supervision. Plant performance is reviewed thoroughly and stringently through Asset Optimization Score Card.

Phase 1 has made significant achievements in process optimization and adherence to industry specifications. Wide spec coke has been used for production of slotted anodes. It has achieved pot normalization in 60 days and has reduced HFO specific consumption at the Baking Furnace.

While aligning business practices in sync with international models, VL emphasizes on protection of natural surroundings through 'Clean development Mechanism' (CDM). House-keeping staff from '5S' has been employed for the facilities.

#### Safety Measures

VL adopts rigorous Health and Safety measures to check occupational health hazards at Jharsuguda. In order to eliminate employee injuries and fatalities, VL conducts extremely effective internal as well as external audits of plant safety measures and practices. Lost Time Injury and Frequency Rate (LTIFR) is a key parameter often tested through safety risk assessment and HAZOP analysis. Periodic health check ups attended by various medical tests are conducted to secure employee health. The unit's collective good health and protection is looked into by the concerned senior management enabling the firm to live up to its OHSAS 18001 certification.