

## Press Release

### **Zero-Waste refinery; environment conservation at its best in Sesa Sterlite Limited**

**Lanjigarh, Odisha, October 22, 2014:** Sesa Sterlite Limited's business unit at Lanjigarh in Odisha has adopted two innovative measures of sustainable engagement of waste namely Red Mud Powder Plant and Cement Free Green Concrete. The Lanjigarh unit which operates an aluminium refinery and an associated captive power plant, is the first company in the world to develop cement free fast setting geopolymers concrete by using fly ash, a waste product of the power plant. It is also the first aluminium company to start a **Red Mud Powder Plant**, designed to separate water from red mud slurry. Red mud is a waste formed from the refining of bauxite that produces alumina as raw material for the electrolysis of aluminium.

The generation of wet red mud is nearly one and half times of alumina. It cannot be disposed of easily and tends to be pumped into holding ponds which are vulnerable to earth movements and can create serious environmental threat. The Red Mud Powder Plant does away with wet red mud storage as the slurry is alkaline in nature. It minimizes land requirement by more than 50 per cent. The project is automatic and is also, equipped to make effective utilization of a waste matter. The capital expenditure of the plant is Rs 50 crore. The patent of this technology is under process.

“Due to commissioning of the Dry Red Mud Powder Plant, utilization of water is also reduced. The red mud accumulated in the red mud pond is also removed and sold to cement plants as per demand,” said Dr N Prasad, Director, MOEF, RO Bhubaneswar.

The development of geopolymers concrete by Lanjigarh's business unit was undertaken in collaboration with CSIR- Institute of Minerals and Materials Technology (IMMT), Bhubaneswar. The use of fly ash in cement free concrete not only minimizes Green House

Gas Emission but will also solve the problem of fly Ash disposal which is faced by power plants in India and save large quantities of water.

The concrete is named as ‘Cold Setting Geo-Polymer Concrete’ due to its properties of fast setting in ambient conditions. The concrete is truly ‘Green’, as water is required only at the time of preparing the mixture and thereafter, no water curing is required, saving not only huge quantity of water but labour as well, as the concrete is stabilized in less than 6 hours. At the Lanjigarh business unit, roads have been made of Cement Free Green Concrete, and future plans include progressively eradicating the use of cement in other construction projects.

“We pursue a Zero Harm philosophy and our Lanjigarh refinery’s road map for Zero Discharge and Zero waste aligns with our sustainability goals,” said Dr Mukesh Kumar, Group Head-Technology, Sesa Sterlite Limited.

**About Sesa Sterlite Limited (Formerly known as Sesa Goa Limited)**

Sesa Sterlite Limited (SSLT) is one of the world’s largest diversified natural resources company, whose business primarily involves exploring and processing minerals and oil & gas. SSLT produces oil & gas, zinc, lead, silver, copper, iron ore, aluminium and commercial power and has a presence across India, South Africa, Namibia, Ireland, Australia, Liberia and Sri Lanka. Sustainability is at the core of SSLT’s strategy, with a strong focus on health, safety and environment and on enhancing the lives of local communities.

SSLT is a subsidiary of Vedanta Resources Plc, a London-listed company. SSLT is listed on the Bombay Stock Exchange and the National Stock Exchange in India and has ADRs listed on the New York Stock Exchange.

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