

### **Major Energy saving measures implemented in the aluminium sector:**

All the plants have implemented a number of energy conservation measures in the past and have specific plans to implement a few in the near future. Investments required or implementing these measures are funded through internal reserves. Major energy conservation measures implemented in the last three years in this sector are given below:

- Installation data acquisition system
- Installation of energy efficient screw compressors
- Installation of PLC controlled burners in furnaces.
- Installation of de-super heaters for better heat transfer and steam saving in alumina refining
- Installation of liquid vapour hydro cyclone in evaporation feed flash tank to avoid caustic entrainment to the hotwell water and facilitates more flashing.
- Reduced compressor running hours by modifying pipe sizes, modifying the volumetric efficiencies, by providing air conservation ejector nozzles and regulating the pressure as per requirement.
- Installation of technologically upgraded recuperator in place of shell type in melting furnace.
- Reduction in oil consumption by installing fuel magnetizer and fused silica launders and reduction of furnace preparation time by using metal transfer trucks.
- Modification of digestion unit flash tank train by utilizing additional tank spared form slurry heater condensate flashing circuit.
- Installation of variable frequency drives.
- Utilization of energy efficient lighting system

#### Reference:

Energy Management Policy – Guidelines for Energy Intensive Industry of India,  
Chapter 3, pp 13-36 by Bureau of Energy Efficiency