



R & D Projects Undertaken

1. Augmentation of PREE Solvent Extraction Test facility at RED
2. Pilot Scale Production for Nanosize Rare Earth Phosphates and Development of Industrially Potential Application areas
3. Design and Development of Environmentally Secure Rare Earth based Colorants
4. Inflight processing of metallised ilmenite in a DC plasma furnace for continuous production of Titania Rich Slag and Pig Iron.
5. Production of Aluminium-Silicon Master Alloys from Sillimanite through Plasma Processing
6. Development of Cerium Oxide based nano materials for applications as Chemical-Mechanical Planarisation/Polishing (CMP) Slurry.
7. Recovery of Heavy Rare Earths from Phosphoric Acid using Phosphorous Based Commercial Extractants and their mixtures
8. Synthesis and properties of electrodeposited nickel/ceria nanocomposite coatings
9. Catalysis by Nano Crystalline Ceria Modifies with Transition Metals.
10. Design and scale up of Annular Centrifugal Extractor (ACE)
11. Processing of monazite through sulphuric acid for the recovery of Rare Earths, Thorium and Uranium
12. Preparation of Mullite and Zirconia Toughened Mullite from Sillimanite
13. Study of suitability of magnetic separators as replacement for air tables for recovery of monazite
14. Versatile Nano Zirconia production facility at Indian Rare Earths Limited, OSCOM



15. Development of high-field composite varistors based on Rare Earth Oxides
16. Development of Smart Magneto Rheological Elastomers Based on Rare Earth Magnets
17. Process development for the production of Nano Titania from ilmenite and set up a pilot plant to process 1 ton/ batch
18. Pilot plant Production of Environmentally Secure Rare Earth Oxide Brown Pigment for Surface Coating Applications