

CASE STUDY

Alumina Refining - India

CHALLENGE

Growth of India's alumina refining industry is driven by rapid industrialization, and increased demand from key sectors like construction, aluminum production, renewable energy, and infrastructure development.

A leading alumina refinery in India approached Cleanova Micronics seeking a higher-performing disc filter media than what their incumbent supplier was delivering.

Their primary goals were:

- Ramp up alumina production throughput without incurring significant increases in cost per tonne.
- Achieve longer cloth service life, reducing frequent changeouts.
- Reduce filtrate solids in the mother liquor, directly improving yield and refinery efficiency.

The refinery needed a filter cloth solution that could reliably deliver higher output and reduced downtime, while ensuring better control of filtrate solids.

SOLUTION

PrimaDisc™ filter media was selected to meet the refinery's performance objectives.

PrimaDisc™ has been successfully applied in alumina refineries worldwide since 1995 - including the UAE, Brazil, and Australia - and is engineered to deliver superior resistance to harsh chemical and mechanical environments.



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By switching to PrimaDisc™, the refinery realized measurable operational improvements:

- Up to 35% increase in filter cloth service life, as compared with the incumbent supplier.
- Reduction of filtrate solids by 70%, ultimately improving the alumina-to-caustic ratio of the mother liquor.
- Improved alumina yield per tonne of bauxite processed, lowering cost per tonne.
- Reduction in unplanned downtime due to fewer cloth failures and changeouts.
- 35% decrease in maintenance costs through extended operating intervals.



Why Cleanova Micronics?

By partnering with Cleanova Micronics, the client gained:

- Access to a dedicated global Alumina Refining Industry Manager and a technical support team with deep industry experience.
- Regular onsite visits to evaluate cloth performance and advise on optimization strategies.
- A total engineered filtration solutions approach, backed by global technical expertise and strong in-country sales representation.

Our team worked closely with both refinery operations and senior management, building trust through results-driven service and continuous performance monitoring.

At Cleanova Micronics, we go beyond simply supplying filter cloths - we deliver engineered filtration solutions that improve refinery performance, reduce cost per tonne, and support long-term operational success.