

Partnering for Success: Global Phosphate-based Fertilizers Major Partnered with Greenwave



Client Profile

Global Phosphate-based Fertilizers Major Partnered with Greenwave to implement Predictive Analytics in their Di-Ammonium Phosphate Plant on PTC Thingworx.

Engagement Brief

The project goal was to provide Soft Sensor based prediction for Moisture and Nutrient Ratio in the DAP production along with Stack Performance Visibility and Contribution Analysis.



— POWERED BY —
DELL Technologies



Solution Construct

Greenwave implemented PTC Thingworx and integrated the same with the existing DCS Systems through PTC's Industrial Gateway. Tank Yard system and Quality Management System were also integrated with the application. A centralised repository of the contextualised Process and Quality Data was developed. A total of 45 Digital Twins were created covering all process equipment. Advanced algorithms were deployed to predict Moisture of the final product on real time basis and Nutrient Ratio of the same. This effectively reduced rework percentage due to Moisture or Nutrient Ratio Failure. Prior to this implementation these parameters were tested offline in the quality lab on hourly basis with a quality blind spot of couple of hours.

The Digital Twins and Plant Operational Dashboards were securely published on Mobile. Remote monitoring facility with the real time analytics helped the client to cut down on their Reactor Boil out time and improved safety aspect of the Boil out operation.

- Digital Twins
- Production and Process Dashboard
- Soft Sensors for Predictive Analytics
- Anomaly Prediction with Causal Analysis
- Rework Reduction
- Product Quality Improvement
- Reactor Boil out time Reduction
- Enhanced Safety