

SEMI-AUTONOMOUS PLANT

Outcomes

27



Total No. of
Plants Digitalized

48

Total Areas

266

No. of Critical
Equipment

550

Monitoring
Locations

3210 Hrs.
Unplanned Downtime

941 Hrs.
MTBR (Mean Time
Between Repair)

The **99%** Trust Loop™

ABOUT THE COMPANY

Coromandel International (Coromandel Group), a leading Indian fertilizers producer, valued at ~\$7.6B USD.



KEY AREA

- Pumps (Centrifugal/Process)
- Compressors
- Scrubbers
- Cooling Tower
- Chillers
- Evaporators



Chiller



Scrubber Fan (Belt Drive)



PlantOS™
Manufacturing
Intelligence

Equipment Data
Contextualization
Single Source of Truth
48 Areas → 266 critical equipment

User-validated outcomes
Unplanned Downtime – 3210 hrs
MTBF – 0 Hrs (last 12 months)



Prescriptions Acted Upon
93.47% (801)

Prediction Accuracy
99.80%

Missed Faults
1

Note – Data as of January 07 2026

Source – PlantOS™ Digital Reporting System – User Validated True Positives & False Negative Rate

1 The Challenge: Building Reliability at Scale

Coromandel’s Kakinada plant faced frequent equipment reliability challenges that impacted production continuity and manpower efficiency. Manual monitoring couldn’t provide timely insights or predict failures, leading to unplanned downtime and maintenance inefficiencies. The need was clear – to strengthen reliability through real-time visibility and data-backed decision-making.

2 The Solution: From Pilot to Enterprise-wide Impact

In 2021, Coromandel partnered with Infinite Uptime to introduce predictive intelligence at its Kakinada plant, starting with 32 sensors monitoring key rotating assets such as:

- Pumps (Centrifugal/Process)
- Compressors
- Scrubbers
- Cooling Towers, Chillers, and Evaporators

The early success at Kakinada proved the reliability gains and operational value of PlantOS™. By the end of 2023, the deployment had grown to over 450 sensors across three fertilizer plants, further expanding into CPC and SSP units with specialized ATEX-certified sensors.

Today, Coromandel’s network runs on 550 monitoring locations (sensors) across 27 Plants, with PlantOS™ at the core of its reliability transformation journey.

3 The Pivot: The Rise of Prescriptive AI

With 24x7 condition monitoring, advanced analytics, and domain expertise, Coromandel’s teams evolved from reactive maintenance to prescriptive reliability. Digital workorders and automated prescriptions ensured faster execution, minimized manual intervention, and improved decision consistency.

The current focus remains on strengthening reliability outcomes, while the path ahead points toward integrating reliability, process, and energy optimization – three outcomes in one prescription with zero guesswork



4 The Result: Guaranteed Outcomes

Coromandel’s partnership with Infinite Uptime turned predictive insights into measurable reliability and performance outcomes. The impact was tangible across both production efficiency and operational intelligence.

Reliability Outcomes

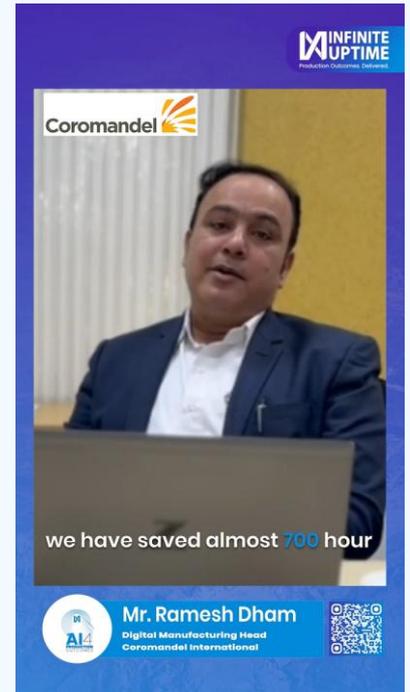
- Eliminated 3210 hours of unpanned downtime
- 0 Hours of MTBF (Mean Time Between Failures)
- Significant improvement in equipment availability and plant uptime

Reliability Intelligence Outcomes

- 940 breakdowns avoided through proactive prescriptions
- 801 recommendations executed i.e. 93.47% implementation rate
- Data-driven maintenance culture reinforced across site

Infinite Uptime has improved our plant reliability and helped us **avoid surprise breakdowns**. I truly value the real-time alerts—they draw our attention to changes instantly, allowing us to act early and plan maintenance systematically. This has made a real difference for us.

–Mr. Ramesh Dham, Digital Manufacturing Head, Coromandel International.



Click to Play 

INFINITE UPTIME 12 Jun 2024 - 09:59am
Diagnostic Report
 Equipment: 2000 CFM Compressor IUSERV430547863
 Plant: [REDACTED]

Report Status: COMPLETED

Completed On: 20 Oct 2024 - 09:00am

Observation

FFT Spectrum shows bearing defects frequencies in motor bearings.

Diagnostic

1.High & Fluctuating vibration velocity trend from 9mm/sec to 26mm/sec and increasing Total acceleration from 576 (m/s)² to 2378 (m/s)² recorded at Motor DE bearing since 19.05.2024. Minor bearing defect frequencies (BPFO, BPFI & BSF) are identified in spectra of Motor DE bearing (FAG NU222).



Recommendation

In an Opportunity inspect Motor DE & NDE bearings with respect to defects within raceway & rolling elements, and replace the bearings.

Business Impact

Downtime savings of 8 hrs

Corrective Actions Taken

- Bearing inspection
- Base bolt tightness
- Structural looseness correction
- Carry out Bearing replacement

Customer Comment

Motor bearing replaced done

Attachments



Completed By: @coromandel.murugappa.com

INFINITE UPTIME 12 Dec 2025 - 07:00pm
Diagnostic Report
 Equipment: Evaporator Circulation Pump-C IUSERV785836610
 Plant: [REDACTED]

Report Status: COMPLETED

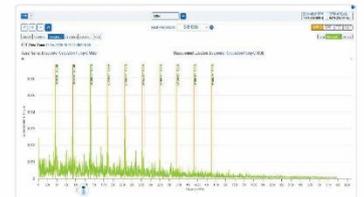
Completed On: 31 Dec 2025 - 01:06pm

Observation

Temperature is increased from 57 to 74 degree C at Motor DE. Spectrum indicates bearing defect frequency of outer race at Motor DE.

Diagnostic

Vibration characteristics indicate s inadequate lubrication condition in Motor DE bearing and bearing defect frequency are identified in spectra of Motor DE.(SKF 6318)



Recommendation

1. As a preliminary action, Re-lubricate the Motor DE bearing.

Business Impact

Downtime savings of 2 hrs

Corrective Actions Taken

- Lubrication

Customer Comment

greasing done

Attachments



Completed By: coromandel.murugappa.com

Ready to close the Trust Loop in your facility?

Infinite Uptime is currently delivering results for 844 plants in 26 countries

Click Here to **Try PlantOS™ Today**