

Optima ProcessSuite®

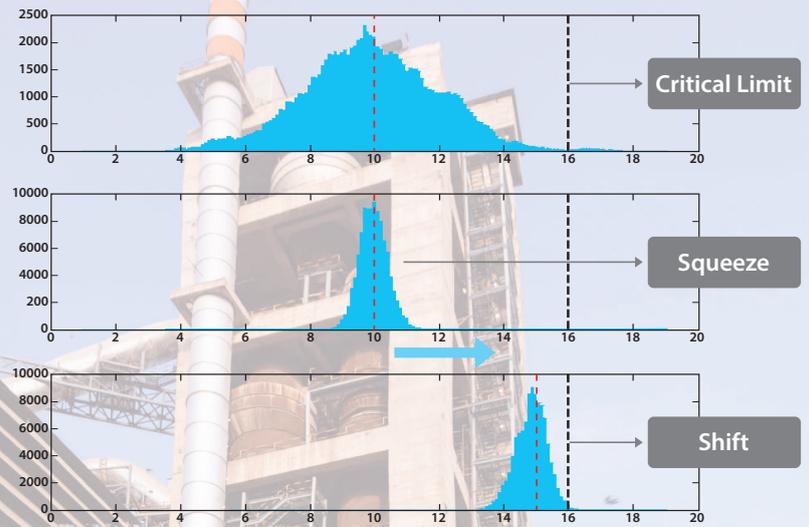
A Sustainability Solution for
Cement Manufacturing

An **Advanced Process Control (APC)** that assists plant operators to start or stop, stabilize and optimize a unit department like grinding, milling, pyro processing or combined plant operations with strategies that align with business objectives. It helps cement companies to produce cement in sustainable ways by optimizing its available resources, reduce carbon footprint, conserve water, and reduce the emission of particulate and hazardous gases. It maximizes overall plant productivity and improves business profitability.

ProcessSuite® comes from the Ramco group, having competencies in software systems, digital transformation solutions, cement plant operation and maintenance; - a unique combination for robust plant performance. The core of the ProcessSuite® is built with an MPC (Model Predictive Control) engine from its joint venture with 2-control ApS, a Denmark based R&D company.

ProcessSuite® goes far beyond conventional and currently available ways of optimizing only a unit department that focus on specific process variables or control loops. It integrates highly specialized and asset-focused “digital islands” to its robust control & optimizer blocks.

ProcessSuite® continuously determines the best operating points based on machine/equipment conditions, process conditions, material (raw material, fuel) conditions, parameter variations, and business needs. It comes with application modules like ProcessSuite-Mill® for Grinding & Milling systems having Ball Mill, Roller Press, Vertical Roller Mill equipment, and ProcessSuite-Pyro® for Pyro systems having Preheater, Kiln, Cooler, Fuel Firing, Waste Heat Recovery system.



ProcessSuite® - An Advanced Tech Solution

ProcessSuite® is a wider platform that houses various Artificial Intelligence (AI) based control techniques



Model Predictive Control (MPC)



Kalman Estimator



Fuzzy Logic



Artificial Neural Network (ANN)



Next-Gen User Interface (UI)



Interface for external systems



Key Performance Indicator (KPI) Dashboards



Machine Learning (ML) based Calibrators

Why use Ramco Optima ProcessSuite®?

ProcessSuite®, upon implementation, delivers significant benefits for several years in the areas of sustainability by being an integral part of Digitalization with many direct and indirect benefits.



Direct Benefits



3 to 5% increase in production



1-5% reduction in specific power



1-5% reduction in specific fuel



10-30% reduction in variation in standard deviation of quality parameters



Indirect Benefits



Extends assets performance and life (mines, equipment)



Improves overall plant productivity



Improves (reduces) unit department's operating costs (power, fuel, wear/tear, maintenance)



Improves utilization of alternate fuels and TSR (Thermal Substitution Rate)



Integrates “digital islands” like condition monitoring, refractory monitoring, flame monitoring, online and laboratory analytical systems



Focuses on the full value chain than on specific process variables to deliver higher availability and performance



ABOUT RAMCO SYSTEMS

Ramco Systems is a leading enterprise software solution, revolutionizing Enterprise Applications with AI/ML, Chatbot, Cloud, Mobile, Event-driven ERP and disrupting the market with its multi-tenanted cloud and mobile-based enterprise software. We develop and deliver enterprise software for customers around the world who manufacture and distribute goods, build and maintain assets, and manage service-focused operations.

Our team of 1800+ employees and growing ecosystem of partners support more than 1,000+ customers around the world to challenge the status quo and realize their competitive advantage. Learn more about how our enterprise software solutions can help your business today at ramco.com



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