



CLIENT EXPERIENCE

BPCL refinery at Kochi optimizes inspection management with TCS's help

Customer
Bharat Petroleum Corporation Limited (BPCL)

Industry
Petroleum

Offering
System based Asset Integrity Management

For refiners, asset performance is vital, especially in the current market scenario characterized by continuously fluctuating oil and energy prices, global economic crisis, and intensifying competition. In this situation, controlling operating cost is possible only through effective plant asset management. To gain efficiencies in the inspection process, and reduce risk, BPCL decided to implement Meridium inspection management system and Reliability Based Inspection modules at its Kochi refinery. BPCL chose TCS as its implementation partner for this first-of-its-kind Meridium implementation in a refinery in India.

Through TCS' intervention, BPCL Kochi refinery is expected to optimise its inspection process which will eventually become a key differentiator for future operations.



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BPCL is a large Indian Public sector oil company involved in refining and retailing of petro products. A Fortune 500 company, BPCL is considered to be a pioneer in Indian petroleum industry with various path-breaking initiatives such as Pure for Sure campaign, Petro card, and Fleet card. The company is also diversifying into oil and gas exploration. BPCL currently has refineries at Mumbai and Kochi with a capacity of 12 Million Metric Tonnes (MMT) and 7.5 MMTPA respectively for refining crude oil. Kochi refinery, a part of BPCL, is widely recognised for its reliability, customer satisfaction and quality product delivery.

Business Situation

As oil and energy prices fluctuate, there is intense pressure on refineries to sustain operations at high utilisation rates. High asset integrity and availability are therefore the essential factors that influence the success of a refinery.

BPCL's Kochi refinery produces all fuel-based refinery products - Liquefied Petroleum Gas, Naphtha, Gasoline, Kerosene, Aviation Turbine Fuel, Gas Oil, Fuel Oil, and Asphalt. Initially the BPCL- Kochi refinery followed a manual inspection process. This rendered a rather low inspection performance with each inspection cycle taking several days to complete. In addition, lack of proper decision support systems to evaluate the asset deterioration with respect to risk, further reduced the inspection performance.

BPCL Kochi refinery decided to implement an inspection coupled corrosion management system and Reliability Based Inspection (RBI) that would help it move from conventional documentation and reporting for decision making on inspection of its critical assets. It would also help improve efficiency and effectiveness in recommendation and inspection management, and work order closure. A risk based inspection system would help it select relevant maintenance and inspection tasks and techniques, and also help optimise such efforts. After an in-depth evaluation, Kochi refinery chose Meridium's solution and TCS as its implementation partner. The company was confident that with TCS' help the Kochi refinery would achieve the best inspection performance based on risk, enabling it to retain its leadership position.

TCS Solution

TCS is helping BPCL Kochi refinery to implement Meridium's Inspection Management System (IMS) which will be integrated with the existing SAP system. The IMS system will enable risk-based inspection – prioritising the failure potential of assets based on criticality and impact on the business. With the integration, a regular recommendation management from IMS to SAP will be generated which will in turn generate notification to users for creating work orders. Once closed, the work orders can be updated in both the SAP and the Meridium system.

To execute the project, TCS is leveraging its domain expertise in Reliability Centered Maintenance (RCM). The project is being delivered through a mixed onsite-offsite model, with the onsite team leading the implementation and the offshore team helping in Interface configuration and data migration.

