



Case Study

Optimized Risk-based Inspections for US-Based Fortune 500 Downstream Major



Client

The client is a leading US-based Fortune 500 downstream major that owns 12+ refineries, with a total capacity of 2.0+ million barrels per day, and 18,000+ miles of crude and product pipelines.



Challenges

- ✓ Unplanned shutdowns due to too many incidents of leakages and hydrocarbon releases
- ✓ Lack of adequately defined RBI (Risk-based Inspections) programs and processes leading to time-based inspections
- ✓ Need for an integrated system that could minimize the unproductive time spent in not only gathering the necessary data and documentation, but also the post inspection analysis



LTIMindtree Solution

- ✓ Establishment of the basis for managing risks through methods, coverage, and frequency of inspections based on API RP 571 and WRC 489 Standards
- ✓ Definition of RBI processes including definition of what is acceptable risk and movement from time-based programs to risk-based programs
- ✓ Definition, quantification, and ranking the risk of process equipment failure to target the most important elements in a process plant
- ✓ Establishment of a system for maintaining documentation, personnel qualifications, data requirements, consistency of the program, and analysis updates
- ✓ Integration of the RBI program into the MOC program and maintenance management system



Business Benefits

20%

reduction in maintenance costs due to optimized risk-based inspections

Extended inspection intervals, reduced inspection scope, and increased equipment availability and reduced turnaround exposure

Prioritized allocation of inspection resources to high risk equipment, leading to systematic reduction of the likelihood and consequence of failure

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