



Operational Excellence Services

Reliability & Maintenance Turnaround Scope Optimization & Planning



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Turnaround Scope Optimization & Planning

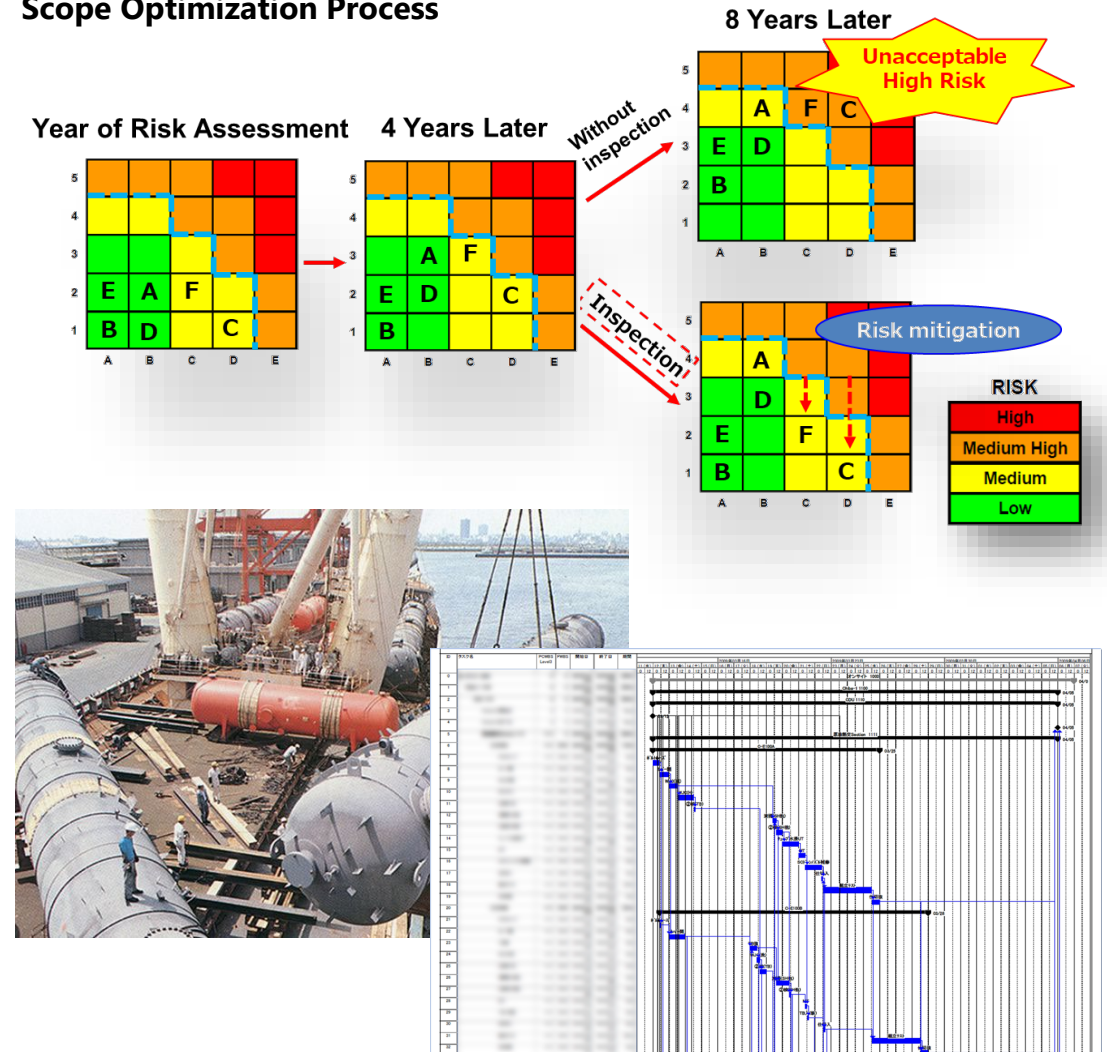
Do you have any of these issues?

- ☹ **Many reliability incidents during operation**
- ☹ **High turnaround maintenance cost**
- ☹ **Fail to achieve Solomon First Quartile Target**

Turnaround Solution

- Setting of turnaround leadership and steering team
- Risk based process of maintenance and inspection work scope definition by multi-disciplined team
- Comprehensive review process for high cost/long duration items to find lower cost/shorter duration alternatives
- Setting milestone based on turnaround complexity

Scope Optimization Process



Turnaround Scope Optimization & Planning

Turnaround Planning Process

- **Turnaround (TA) planning starts 12 months prior to turnaround (for Medium / High Complexity TA)**

- 12 to - 10 months

Basic Maintenance & Inspection Planning

- **Develop TA execution plan** based on turnaround strategy and finalized work scope
- **Develop inspection plan** based on inspection strategy
- **Bidding for long lead item**
- **Provide cost information** for budget

- 9 to - 7 months

Procurement and Contract Preparation

- **Procurement plan**
- **Preparation of job package** for service contract
- **Specification preparation** for material procurement
- **Contracting for major services**
- **Ensuring availability of specialty service** e.g., refractory specialist

- 6 to - 2 months

Detail Implementation Planning

- **Develop detail work steps and resource requirement** to finalize timeline chart
- **Issue TA Schedule** with Critical Path works
- **Detail cost forecast** to be provided

Our Strengths

- Professional Maintenance Engineer Teams
- Global resources
- Practical application of Risk Based Work Selection process such as RCM and RBI
- Rigorous turnaround readiness review methodology
- So many experience of turnaround planning

Our Experiences

Executed Project

40+ Cases

Case Study ~ Turnaround Scope Optimization & Planning

Return to
Reliability &
Maintenance menu

Background:

A Refinery in Southeast Asia have encountered some difficulties for managing hot spots in several portions and some damages at air lift pipe and air rings in regenerators of RFCC unit after their completion of the second Turnaround & Inspection (T&I).

Objective:

The third turnaround maintenance work is itemized properly for 4 years continuous operation after turnaround.

Achievement:

JGC provided the mechanical and refractory assessment for the major maintenance work itemization for the third turnaround, and the engineering for modification of air lift pipe and air rings including root cause analysis.

Key Deliverables :

1. Root Cause Analysis of Hot Spots
2. Maintenance Planning Worksheet (Mechanical/Refractory)
3. Location Map of Major Work (Mechanical/Refractory)
4. List of Major Spare Parts
5. Method Statement of Critical Work
6. Preliminary Scaffolding Assembling Plan

Sample Deliverables



Reference Services

FCC Unit in a Refinery Complex in Middle East

- ♦ 2010 - 2011 : T&I Planning and Execution Support at site
- ♦ 2015 : T&I Execution Support at site
- ♦ 2018 : T&I Planning

RFCC Unit in a Refinery Complex in Southeast Asia

- ♦ 2016 - 2017 : T&I Planning

Gas Processing Plant in Middle East

- ♦ 2022 – Present : T&I Planning