



TOA reviews critical activities and potentially reduces shutdown schedule by 9 days

“Shell Global Solutions’ consultants are aware of what’s going on within the industry and bring along new ideas... I’m completely satisfied with the service,” refinery manager

Situation

As part of turnaround maintenance strategy, TOA Oil Co. Ltd. had scheduled a turnaround for their Ohgimachi Refinery, Japan, in September 2003. During the initial planning stages they had identified several equipment problems to be on or close to the critical path schedule for the shutdown, that would reduce production availability and revenues.

Prior to the turnaround, the client needed an external perspective and guidance in reducing the impact of these critical activities on a successful turnaround. Shell Global Solutions was commissioned to utilise their significant experience of turnaround maintenance to provide a structured methodology and the necessary techniques in order to appraise and optimise the critical activities.

Benefits

The Shell schedule optimisation workshop concluded that successful optimisation of the critical activities would reduce their impact on the schedule. The management had originally estimated an overall shutdown schedule of 34 stream days, and the review identified a **potential reduction of 9 days, significantly increasing plant availability.**

Client Verdict

TOA Oil Ltd, Ohgimachi refinery manager: *“Within the duration of the 5-day workshop, the change in attitudes was immediately obvious.”*

“A real team spirit had been encouraged and our turnaround personnel felt a true commitment in striving to achieve the target reduction identified during the workshop.”

“The problem-solving techniques introduced by Shell Global Solutions simply made sense and presented us with a new approach to solve issues that is also easily transferable to other activities within the company.”

The workshop achieved the client’s objective within the short-term, by optimising the identified critical activities and potentially reducing the shutdown time. The review also highlighted previously unknown issues to the client that required further appraisal in order to realise a successful turnaround. Shell Global Solutions can offer additional services to address such high-risk issues. For instance, reviewing integration of operational shutdown, decontamination maintenance and start-up sequences would help to define the optimal sequence in order to minimise plant downtime and maximise production revenue.





The client also recognised a key long-term benefit from the workshop. As the enthusiastic turnaround team had readily accepted the new ideas and techniques introduced by Shell Global Solutions, a positive team spirit and common goal was promoted. By planting decision ownership firmly within the team, the client has experienced improved efficiency and a change in attitudes towards maintenance.

With respect to future turnarounds, the client was advised to build on the expertise gained from this workshop and conduct a scope challenge review as a routine procedure 12-months prior to a shutdown. Aiming to reduce the turnaround cost and duration, this review optimises the turnaround scope, and ensures that the optimum risk-based scope is selected for implementation.

Solution

Shell Global Solutions offers a variety of services to address issues relating to turnaround optimisation. These services range from preparation and planning, through to problem elimination and management of the turnaround event. As the client had already scheduled a turnaround and identified specific issues, a Shell schedule optimisation workshop was necessary.

Shell Global Solutions' consultants acted as facilitators in transferring best-practices during a one-week on-site workshop. The client turnaround team, representing personnel from all areas of the turnaround process, worked together with the consultants to:

- assess opportunities for improvement in terms of work planning, safety and quality requirements;
- review scope, sequence, resource availability, working time and activity optimisation;
- assess potential risks and provide alternative solutions;
- formulate an implementation plan for activity optimisation.

For further information please contact:

OGNL-businessconsultancy@shell.com
www.shellglobalsolutions.com

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