

RMC 2006 Reliability Q&A Session

Questions	
1.	What is your approach in dealing with cast iron pumps and valves in hydrocarbon service? What reliability issues have you experienced?
2.	What department in your organization handles the preventive maintenance functions for rotating equipment? How do you verify and audit these functions?
3.	What criteria are you using to identify critical equipment? What percentage of the total equipment population is classified as critical? How does equipment criticality affect prioritization, job planning and scheduling of the repair?
4.	How do you manage storage and retrieval of detailed equipment history (e.g. calibration records, repair reports, equipment manuals, etc.)?
5.	What triggers a detailed failure analysis? Who conducts the analysis and what tools are utilized (e.g. RCFA, FMEA)?
6.	How do you apply the API 653 guidelines when setting internal inspection intervals for tankage? How do you determine if your cathodic protection and coating systems are effective?
7.	What criteria are you using to determine whether or not to conduct an internal inspection for a piece of equipment (e.g. RBI, operations, performance, etc.)? After these criteria are assembled, who in your organization makes the final decision as to what do next?
8.	What methods are you using to protect critical production analyzers in terms of equipment life, repeatability and accuracy?
9.	What is your reliability philosophy on cooling water exchangers: run to destruction, alloy up, chemical treatment or continuous performance monitoring?
10.	How do you balance installed costs versus long-term reliability?

RMC2006 Turnaround Q&A Session

Questions	
Safety	
1	How do you manage the siting of temporary facilities such as offices, change rooms, tool rooms, and permit shacks following the Chemical Safety Board's warning about placing these in proximity to process units?
2	What are your "lock out-tag out" procedures during the turnaround and are they different from your usual procedures? Do you use locks or tags?
Turnaround Strategy	
3	How do you integrate the turnaround maintenance work with the tie-in work associated with a large capital project? What are the advantages and disadvantages of bringing in a turnaround contractor to do turnaround maintenance rather than the project contractor?
4	What roadblocks can the owner companies remove that will enable the contractors and make their success more likely?
5	What contracting strategies are companies using? What are the pros and cons of cost plus fixed fee? Time and materials? Lump sum? Are there any new wrinkles in these types of contracts?
6	What is the optimum contractor involvement in pre-turnaround activities?
Workforce	
7	How do you ensure that you have enough workers available for your turnaround, especially critical crafts?
8	Are you requiring skills assessments for your turnaround workforce? Do you have specific performance requirements?
9	Does your turnaround workforce include non-English speakers and, if so, what provisions do you make for them?
Performance	
10	Does relying on Solomon indices and rankings to set turnaround objectives for cost, duration, and interval lead us in the desired direction?
11	How are operations start-up and shutdown activities planned and benchmarked? How do you ensure that the measures are executed as planned?
12	What are some realistic methods to obtain accurate measures of workforce productivity for turnaround activities? How often do you measure? Who measures? What would be considered best in class productivity performance?

RMC2006 Workforce Q&A Session

Questions	
1.	<p>How do you address the lower availability of skilled craft professionals?</p> <ul style="list-style-type: none"> a. Increased supervision & quality control b. Increased headcount to compensate for reduced productivity c. Different issues with maintenance, construction & turnarounds
2.	<p>What are the greatest challenges that you face in recruiting craft personnel and what are you doing to address these challenges?</p> <ul style="list-style-type: none"> a. Competition with other industries b. Industry image c. Wages & benefits d. Working conditions e. Requirements to work in industry (drug testing, background checks, training)
3.	<p>What are the greatest challenges that you face in recruiting maintenance and reliability professionals and what are you doing to address those challenges?</p>
4.	<p>What are the benefits and risks of using a non-English speaking workforce?</p> <ul style="list-style-type: none"> a. Operating Company to discuss how to manage risks with non-English speaking personnel b. Discuss NCCER training
5.	<p>What can you do to train enough craft professionals to meet industry needs?</p>
6.	<p>What can owner companies do to support workforce development?</p> <ul style="list-style-type: none"> a. Response from contractor perspective and owner perspective. b. Increase number of helpers. c. Increase funding for training. d. Regional leveling of manpower requirements (across companies)
7.	<p>What are you doing to retain your current workforce and how much turnover are you experiencing?</p> <ul style="list-style-type: none"> a. Answer to address maintenance, construction & turnaround.
8.	<p>How do you define and measure craft productivity, what trends have you observed and what is considered best in class performance?</p>
9.	<p>How do you develop the new skills necessary to work with new technology?</p>