Discussion Group P05: Centrifugal Pump Operation, Maintenance, and Reliability

Leaders:

- Henry Borchard, Machinery Engineer, Chevron Co.
- David DePaolis, Flowserve Co., Hydraulic Decoking Systems
- Richard Donley, PBF Energy, Toledo Refinery
- Adam Gottlieb, Principal Engineer, Celanese Clear Lake Plant
- Jamie Lucas, Machinists Foreman, Marathon Petroleum
- Calvin Stevenson, Principal Machinery Engineer, Flint Hills Resources Houston Plant
- Arun Kumar (HPCL Mittal Energy Ltd., India)

Suggested Topics:

- 1. Seal plan which was not expected wrong for the application
- 2. Preventive/predictive technologies
- 3. Off design operation
- 4. Mean time between failure how do we measure, and how do we use the metrics
- 5. How to create pump reliability in an unreliable plant
- 6. Seal-less versus sealed pump reliability, canned motor pumps versus mag drive pump reliability
- 7. Mechanical Integrity Inspections of VS 6 pumps in hydrocarbon service
- 8. Seals in light hydrocarbon service operations, risk, leak response, maintenance
- 9. Pump predictive/preventive maintenance program elements 3.
- 10. Measures of effectiveness of preventive and predictive programs for pumps
- 11. Roles of operations and maintenance/reliability in improvements and data collection
- 12. Reliability experience with liquid versus non contacting gas seals applications
- 13. Maintenance philosophy for pumps
- 14. Spare parts OEM versus non-OEM
- 15. Repairs OEM versus non-OEM service facilities
- 16. Pump foundation, alignment and pipe strain influence of reliability
- 17. Impact of corporate purchasing alliances on pump reliability
 - a. Repair facilities alliances
 - b. New equipment purchasing alliances
- 18. Repair techniques and material improvements

- 19. Portable and on-line monitoring impact on reliability
- 20. Wireless monitoring impact on reliability and risk of failure
- 21. Optimization of thrust bearings configuration
- 22. Lubrication system impact on reliability oil mist versus flood, oil selection
- 23. Mechanical Seals