Practical Application of Physical Asset Management in the Power Generation Utility Industry

The Academy for Professional Education and Training has structured industry-specific 2-day as well as 3-day workshops related to the 'Practical Application of Physical Asset Management', particularly for ***process plant***, ***power generation utilities***, ***water facilities***, ***transportation facilities***, and ***public infrastructure assets***, ranging from physical assets condition assessment through to assets life cycle costing and cost and maintenance optimisation. These comprehensive workshops are structured for asset-owners as well as asset stewards, and based on positive and insightful feedback from past delegates, we have realised that offering industry-specific workshops on the practical application of physical asset management definitely gives companies maximum benefit.

Workshops targeting the ***power generation*** industry include examples of specific power generation systems and equipment with regard to the following topics:

- Common features of asset management relating to asset owners, asset managers, and asset service providers in the power generation industry.
- Systems Breakdown Structuring (SBS) in power utilities.
- Developing an FSBS and FBD for power utilities support plant.
- The Life Cycle Management Planning Process in power utilities.
- Asset Aging Management Programs in power utilities support plant.
- Development of an Asset Aging Management Program in power utilities plant.
- The Maintenance Rule in an Asset Aging Management Program in power utilities.
- Availability Engineering in power utilities.
- Developing an Availability Engineering Program in power utilities plant.
- Reliability, Availability, Maintainability and Safety (RAMS) in power utilities.
- Developing a Reliability, Availability and Maintainability Program in power utilities plant.
- Selecting optimal maintenance tasks using the Combined RAM – RCM Decision Diagram.

A summary of the scope of the 3-day workshop is given below.

Workshop Day 1:

- Asset management principles and functions, typically for the power generation industry.
- Review of important features of asset management specifications and standards such as PAS 55-1 and Integrated Asset Management.
- Defining and developing assets tactical planning (systems modelling) and operational planning (processes and procedures).
- Systems hierarchical identification of power generation asset equipment (systems, sub-systems, assemblies, components).
- Determining critical equipment functions and defining functional conditions.
- Equipment condition assessment including analysis for results of equipment condition.
- Measures of equipment health status and remaining/residual life estimation modelling.
- Evaluation of typical equipment usage life cycle processes.
- Measures for equipment degradation and triggers for refurbishment.
- Determining equipment consumption criteria and preservation plans.

Workshop Day 2:

- Understanding and determining equipment integrity.
- Achieving the required equipment reliability and safety.
- Defining and determining assets whole-of-life budgeting and costing.
- Evaluating equipment usage life cycle costs and understanding cost criticality.
- Understanding qualitative and quantitative risk analysis techniques for asset equipment.
- Defining critical operations of asset equipment and identifying critical equipment functions.
- Identifying critical equipment risk and defining related equipment risk factors for safety.
- Developing and ranking essential equipment risk action plans and risk mitigation methods.

Workshop Day 3:

- Defining and relating equipment function to equipment utilisation and performance criteria.
- Establishing equipment performance measures related to equipment condition criteria.
- Defining and conducting equipment performance diagnosis and applying prognosis methods.
- Establishing practical criteria for developing/measuring equipment performance standards.
- Developing asset equipment key performance indicators that can be practically measured.
- Defining equipment maintenance types and selection for performance/cost optimisation.
- Developing maintenance action plans for defect, routine, and preventive maintenance.
- Establishing maintenance performance assessment criteria and outcome-based measures.

Although these topics are also structured around a 2-day workshop, the delegates found that this tended to be somewhat of an 'information overload'. As a result, the 3-day workshop particulars are given preference. ***For those companies seeking a 2-day workshop, don't hesitate to contact us***.

The 2-day and 3-day workshops ***include a printed bound manual plus an elegant workshop folder per delegate, as well as certification by the Academy***. Attendance Certification is given to each delegate completing the course. Competency Certification is given to delegates who complete and submit the question sets at the end of the manual.

Workshop Price Per Delegate:

The price per delegate for in-company venues (i.e. venue costs and refreshment/lunch costs carried by the company) is reduced to 2/3 of standard rate plus 10th person free of charge. For further information on prices per delegate for the 2-day and 3-day workshops, please contact us at the following address: info@apetorg.com.au.

Academy for Professional Education and Training Contact:

For further information regarding the Academy's courses and workshops, please go to the following address: www.apetorg.com.au.

Workshop Tutor:

The tutor for this workshop is Dr Fred Stapelberg. Fred has over three decades of engineering experience and consulting, covering industrial and mechanical engineering, and has specialised in reliability and risk engineering and engineering management of infrastructure and industrial assets in a wide range of public and private sector applications. He has been contracted-in by many different industries, especially by the larger multi-national corporations, to develop and establish operational and maintenance management systems, and has conducted training courses and workshops for managers, engineers, technicians, supervisors, planners, tradespersons and operators, for more than two decades.