

The Critical Plant Manager

'We understand your need to effectively manage your assets'

JAHCon
Physical Asset Management Pty. Ltd.

Newsletter

March 2009

A newsletter from JAHCon Physical Asset Management Pty. Ltd. to keep our current and potential clients informed of our ongoing activities and to raise awareness of how JAHCon may be able to help your organisation meet its Asset Management needs.

This newsletter also provides a forum for sharing Asset Management ideas and experiences.

Projects

A number of projects undertaken by JAHCon involved auditing maintenance systems as a means of establishing the effectiveness of current maintenance practices and to determine how closely current practice approached worlds best practice.

The audit procedure is used to guide the auditor and maintenance personnel in carrying out a structured assessment of the Asset Management systems and practices within an organisation. The aim of the audit should be to identify opportunities for efficiency improvements and cost savings.

Even the most basic audit, if well structured, can provide valuable information for future improvement. The audit should not attempt to provide definitive solutions but identify those areas with the most potential. Contact JAHCon for a basic audit procedure.

Asset Management

Asset Management (AM) is a holistic approach to the management of assets throughout their life cycle. In particular, AM is especially concerned with the management of 'Critical assets'. Most modern manufacturing plants, mines, public infrastructure organisations etc. are primarily structured around one or more significant assets which are used to generate the wealth or produce the service offered by the organisation. The management of these assets is a crucial concern for all organisations as they represent a significant financial investment, they must be optimised to meet commercial needs, usually have risks associated with their operation and maintenance and can have long term implications for the organisation when they finally reach the end of their economic life.

AM is much more than simply another name for 'maintenance' although maintenance does form part of the AM cycle. There are many 'stages' within the full AM cycle including, but not limited to: (i) recognising the need, (ii) providing a suitable asset, (iii) operation and maintenance, (iv) continuous improvement and (v) decommissioning and disposal.

Only when an organisation fully implements these major components (as well as a host of supporting issues) can the organisation say that it is applying AM. The successful implementation of an Asset Management program requires a comprehensive understanding of the various components making up such a system.

Over the coming months I will outline the major components of an AM system for interested parties to make a start at implementing some of these stages in their organisation. As always, additional details will be made available on the JAHCon website when available. See www.jahcon.com.au.

Training News

The very successful JAHCon Introduction to Planning and Scheduling courses were run several times in 2008 under the auspices of the Singapore branch of IQPC Worldwide Pty. Ltd. These courses will continue to be provided in 2009 with the next Introduction to Planning and Scheduling course from the 17th-18th March. The next Advanced Planning and Scheduling course is on the 19th-20th March. Both courses are being held in Kuala Lumpur, Malaysia and at the time of writing some spaces were still available.

Running the courses together allows those interested in attending both courses to do so on one trip while others can attend the most relevant course as it becomes available. Please contact IQPC for details on www.iqpc.com or contact JAHCon and we will provide whatever information you need.

The next 'Introduction and Advanced Asset Management' courses are currently being scheduled and announcements will be made once the dates are finalised. These courses are well attended and expectations are that demand will remain high despite the prevailing economic climate. Some large companies are indicating they will upgrade skill levels for the inevitable upswing expected later in 2009 or early 2010 depending on who you listen to. Either way, large projects have time-lines longer than any expected downturn and training will continue to be in high demand due to the shortage of skilled trades etc.

Static verses Rotating equipment

The segregation of maintenance on static and rotating equipment into separate, and often disconnected, functions within the organisation, is one of the oddities of maintenance management. The series of articles on Asset Management beginning in this newsletter (and covered elsewhere by others) will hopefully go some way to breaking down these artificial demarcations. The asset that we own and operate over its life cycle, knows nothing of mere human preference for neat subdivisions of equipment, skills and organisation and is only influenced by the laws of physics and largely ignorant of all else.

When we connect our rotating equipment (pump etc.) to the pipework forming the links between reactors, vessel, heat exchangers, pumps, etc. the equipment we so carefully call a rotating asset works in concert with its collaborators in the system. The common chemistry, thermal and mechanical forces, transients etc. all conspire to break down our carefully erected barriers between these close 'colleagues' of the system. It is no surprise therefore that the system as a whole provides a better model of the equipment the Asset Manager has to consider over the life of the system and its multitude of interconnecting equipment, procedures, strategies etc. In the world of Asset Management the 'system' is king.

The Asset Management Cycle - Introduction

Asset Management (AM) is an evolving philosophy which has become one of the major business tools available to users of capital equipment. These tools help manage the increasing pressure from legislation, ensure safety and environmental targets are met and optimise asset performance. One of the major advantage of the AM philosophy is that it recognises the asset as part of a larger system and treats the interaction between assets and non-hardware systems, (e.g. operating and maintenance procedures, management strategies etc.) as related and interacting. In addition, decisions taken almost daily are often cumulative in effect and the overall performance of the asset throughout its life is influenced by this 'decision continuum'. This simply means that a decision regarding an asset taken today is influenced by the assets history and will influence the assets future - hopefully for the better.

Using this philosophy, the asset is managed over its life as part of a set of complex interactions rather than simply as a discreet item at a point in time. The operating context within which each asset and/or system operates includes business, safety, environmental and technical considerations that impact

directly on the assets performance and cost effectiveness and heavily influences the decision process over the life of the asset.

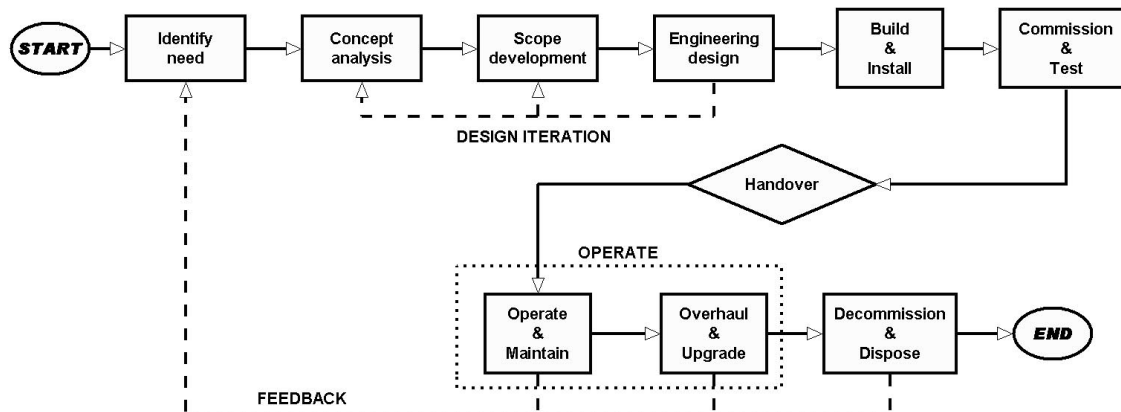
The Life Cycle of an asset presents many opportunities to optimise its performance, while at the same time minimizing the risk/s associated with that asset, including the cost of ownership. The optimum operational and maintenance condition for the asset is achieved when the 'Maximum Sustainable Capacity' is reached and sustained at the lowest practicable cost. The sooner this desirable state is reached, during or after commissioning, and the longer it is maintained, the lower the whole of life cost of the asset. In addition, this desirable state produces a higher level of 'control' which is also likely to minimise safety related incidents and lower environmental impact over the life of the asset.

The flowchart shown below is only one of many possible representations of the AM cycle and will be used in future newsletters to link the discussion of the various components. Many of the flowcharts used to represent the AM cycle are influenced by their end use and this chart is no different. The chart shown here (with embellishments) is frequently used as the basis of AM implementation projects and is supported by detailed charts

for each of the components as appropriate.

The next newsletter will discuss the early stages of establishing this cycle especially the 'Start' and 'End' points of the cycle.

I would encourage readers to investigate the various AM cycle charts available on the internet and identify the similarities and differences between this chart and the many variations.



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