

Making MRO matter

Surprising as it may seem, some plants and factories may be expending too much of their maintenance effort in the wrong direction. Brian Wall reports



As UK industry embarks – yet again – on the tentative and fragile process of shaking off the impact of recession, manufacturers and plant operators face an almost unprecedented set of performance improvement challenges. Yet the backdrop is one of increasing raw material and commodity costs, combined with pressurised lead times, and continued tight controls on operating budgets, employment and capital investment.

So, it's tough. However, all the more reason for plant engineers and managers to refocus on better ways to optimise production output and efficiency, while also reducing operational costs. And that may well mean reconsidering your current approaches to maintenance and asset management.

“A best-in-class approach to optimising plant performance will align the strategies, goals and metrics of both the production and maintenance teams, fostering collaboration between them to aid plant prioritisation and decision-making,” says Ian

Ritchie, managing director of Brammer UK.

Working together might seem quite a strange initial observation to many time-served engineers and technicians, but it's a point well made. And there's more. “Common objectives should be standardised around metrics used by the best manufacturers,” insists Ritchie. And he cites, for example, OEE (overall equipment effectiveness) – which provides a measure of plant availability, performance and quality – and asset downtime.

Focusing minds

Why these? Because they focus minds on both sides of the operations versus maintenance engineering divide (where it remains) on what matters to the organisation as a whole, and their



Ian Ritchie,
managing director,
Brammer UK:
unplanned
production
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BAE Systems turns to outsourced maintenance

Maintenance, repair and overhaul (MRO) products and services specialist Brammer has started fulfilling a new contract with BAE Systems, under which it is now managing the aerospace giant's maintenance supply chain throughout the UK.

The deal follows a competitive tender and Brammer will also be responsible for implementing “value-added services” at some of the company's UK sites.

BAE Systems is already reporting “significant operational cost savings and production efficiency improvements” since the contract began. “Brammer demonstrates an ethos of continuous improvement, evident in all aspects of its offering, from the MRO supply chain to the onsite support provided,” comments Francis Gregson, category leader, indirect procurement at BAE Systems.

“This culture was a key factor in our decision to appoint Brammer to manage our MRO operations,” he continues. “The Insite [in-situ Brammer staff] service enables easy access to Brammer's team of technical experts, who can help our engineers with any questions or advice needed, as well as a single point of contact for all components,” adds Gregson.



Mike Houghton,
Siemens Industry
Sector: 'Read a Plant
Fast' scheme sees
where improvements
can be made

roles in making sustainable improvements. So the next question is, how do you put them into action?

"In order to maximise OEE and minimise asset downtime, plant must be both well operated and well maintained, with critical spares available when needed and unscheduled downtime minimised," states Ritchie.

Obvious, you would have thought. But plenty of plants fall short. Yet any significant unplanned production downtime inevitably throws manufacturing schedule adherence into disarray. It may also cost many thousands of pounds per hour and be commercially damaging – particularly for asset-intensive industries. As Ritchie puts it: "Lost production time may also mean a failure to meet order deadlines and even the consequential loss of valuable customers."

All well and good, but another problem is securing enough high-quality engineers. "A skills gap often develops as people move up from the shopfloor into management, for example, or when their MRO [maintenance, repair and overhaul] function has been outsourced," observes Mike Houghton, divisional director Siemens customer services business.

Hence the number of organisations that are increasingly taking responsibility for plant MRO that extends way beyond the remit of any equipment

they installed. In Siemens' case, that now extends to providing support for plants' operational efficiency, condition monitoring and reliability, as well as energy and environment. And that is valuable, because, again, a big-picture, collaborative approach.

"For example, when it comes to operational efficiency, our support team conducts an exercise, built on Lean and Six Sigma principles, to see where our technology might deliver a strong return on [their] investment and add value to their operations," explains Houghton.

He cites one hypothetical situation where, facing quality issues in production, the Siemens team's task might first be focused on getting real-time maintenance data available to operators and management, so that they can take appropriate action as quickly as possible and so avoid potential issues. "Take a food manufacturer that might be having quality problems at the end of a cake run. We could introduce a visual inspection system to sit alongside the existing controls, incorporating cameras that monitor what's happening and enable production to adjust, say, the conveyor speed and oven temperature."

Fast thinking

Siemens also performs a service known as 'Read a Plant Fast', which is touted as a means of carrying out a high-level assessment of the efficiency of any production facility. "This is an opportunity to assess all areas of manufacturing, from people culture to factory flow, maintenance and supply chain integration – and advise where improvements can be made," explains Houghton.

Outcomes from that service don't begin and end with improving maintenance, though. On the energy technology front, for example, Siemens can offer a web-based tool that connects energy-monitoring equipment over the Internet to a web page, providing the plant with a comprehensive view of its usage and the impact on costs.

"This might encourage them to change their production schedules to run overnight and take advantage of cheaper energy rates," comments Houghton. "Once you have that data, you can build up a business case on how you may optimise your energy usage, too."

The bottom line is that the UK still has something of a reputation for sweating its assets. "The problem is, if you push them too far, you can end up with a lot of ageing plant and equipment. Then you have obsolescence problems and unavailability of spare parts. In the worst case, it can put the future of a manufacturing facility at risk.

"My advice would be to invest small and often. Investing in new technology will protect you from this, while also giving insights into ways to improve your operations significantly." **FE**

Aiming high with AMIS

Massive engineering energy expended, but little positive result – that is one of the worst nightmares for a plant's maintenance, repair and overhaul (MRO) programme, if it isn't carried out in a structured, focused and inclusive manner.

So argues Richard Jones, managing director of MCP Consulting & Training, who says he has witnessed many plant regimes that, despite having made major investments in asset management, have failed to get the expected benefits. "Unfortunately, so much of many MRO operations has become reactive. Yes, there may be hundreds of PM [planned maintenance] jobs completed, but what if it's the wrong maintenance and approach?"

Jones acknowledges that there is a lot of pressure on today's management teams when it comes to performance and cutting costs. And all of that can easily translate into a regime based on expediency and short-term goals. Hence the often seen myopic focus on delivering the required target for the upcoming shift, or working on a machine problem by pulling in engineers who should be focused on other issues – effectively fire-fighting, instead of driving continuous improvement.

"The result is that overall equipment effectiveness (OEE) is low, often because effective asset management regimes haven't been set up properly in the first place."

As a counterbalance to this, MCP points to its Asset Management Improvement Service (AMIS). This is based on measuring the effectiveness and efficiency not just of maintenance, but also energy usage, operations, computer systems and people development. And it's not without its following: Jones says that AMIS assessments have been carried out at more than 4,500 sites worldwide.



Richard Jones, managing
director of MCP Consulting
& Training