Using Idhammar OEE to create the perfect picture of health

The Hull manufacturing site of SMITH & NEPHEW is well on its way to being the leanest and most efficient health-product operation in the world.The company at the cutting edge of advanced wound management is using Idhammar's OEE Management System in a fully-automated environment as a key component to drive its TPM programme.

Mark Rogers, Site Maintenance Manager commented:

"We have seen real sustainable improvements in our assets through reducing the six losses of OEE. One particular asset was running seven days a week and still struggling to meet customer demands. Now it typically does the same volume in four-and-a-half days."

OEE supporting world-class lean manufacturing

For more than 150 years Smith & Nephew, the global leader in advanced wound management, endoscopy and orthopaedics, has been based in the city of Hull where it employs more than 1200 people. Products manufactured in Hull range from hydrocellular foam dressings to a silver sulphadiazinephate based burns cream.

In the last 5 years, Smith & Nephew has spent £40 million purely on modernising the site infrastructure to create a modern medical device manufacturing centre with state-of-the-art clean-rooms. In 2003, this modernisation was accompanied by the launch of a new vision of lean manufacturing.

"We want to be the leanest most responsive manufacturer of our type here, and create the capacity for future new products that are coming on stream" states Noel Waters, Director of Operations at the plant where activity is centred on the wound management facility and features state-of-the-art air handling and environmental monitoring equipment.

Early in 2004, as a key element of the lean manufacturing programme, Smith & Nephew, decided to install a fully-automated OEE monitoring system to replace the manual spreadsheets previously used to record production issues. Idhammar OEE was selected because it provided a powerful and visible analytical tool. Mark Rogers, site Maintenance Manager concluded;

"The functionality and user friendliness of the system made Idhammar the choice for our business."

To start with 30 machines were fitted with Idhammar OEE to monitor how frequently, and for what reasons, they stopped through a fully-automated interface that eliminated manual shop-floor data capture and paperwork.

As Richard Lowe, Controls Engineer at Smith & Nephew, says;

"Now when a machine shuts down, an operator has to enter the reason for the stoppage onto the touch-screen before the machine can be restarted, meaning we have shop-floor buy-in plus an accurate record of everything that happens to that machine."

By simply recording key events, the OEE software provides accurate, real-time data in a clear graphical or reporting format to show exactly what has gone wrong. Any element of any graph can also be clicked-on to provide drill-down access to lower level elements, such as improvement potential, "what-if" analysis, and the quantity and cost of downtime. It allows the plant to harness data already collected for more detailed performance analysis at the touch of a button, freeing up time for real performance improvement planning.

"Using the system alongside our existing computerised maintenance management system, we are also able to deal with the regulatory issues we need to comply with as a medical device manufacturer. It means we can work towards Total Productive Manufacturing." Said Richard.

Idhammar Systems worked closely with a team of key users of the new system at Smith & Nephew in the initial stages, training them to use the system and enabling them to maximise its benefits. Following the roll-out across the site, Idhammar has provided further training and continues to assist the company in establishing a continuous improvement and loss management strategy. A long-term partnership has developed between Idhammar and Smith & Nephew, due in part to the consistent approach both have demonstrated.

'Improvement Agenda' drives change

Use of the Improvement Agenda is also seen as a critical tool to drive action, as Richard Lowe comments. '*We use the module to track safety and quality actions, as well as to drive plant performance improvements. The targets we set can be segregated into defined categories, such as direct energy impact and can be clearly monitored using highly visible traffic light controls. This means that senior managers can see at a glance when an improvement project is behind schedule, if the traffic light has gone through amber to red, the manager knows a key milestone has been missed and can take appropriate action.*'

Postively impacting both efficiency and teamwork

During the first nine months of operating Idhammar. OEE at Smith & Nephew, the firm reported that the OEE measure improved by 10 per cent.

Mark Rogers, site maintenance manager at Smith & Nephew commented:

"The Idhammar System has played a real part in performance improvement. The team worked on facts generated from the system and checked whether improvements had the desired effect. In many cases the result was increased capacity through existing assets which avoided additional capital expenditure."

"In addition to providing clear improvements to manufacturing capacity, the Idhammar OEE system has had a surprising affect on the team-work on the factory floor.", says Mark Rogers, *"Engineering in particular has benefited from data and analysis rather than speculation and finger pointing. We now have a real culture of continuous improvement."*

The company is already planning to extend the implementation to include more production lines in the near future.

> *"The functionality and user friendliness of the system made Idhammer the choice for our business."*
>
> MARK ROGERS
> MAINTENANCE MANAGER
> SMITH & NEPHEW