



Routine examination

Louise Davis speaks with an engineering inspection expert to explore how plants can incorporate inspection activities into their regular maintenance plans – and what site personnel can do to ensure inspections run smoothly

According to David Fawkes, chief mechanical engineer at testing, inspection and certification specialist, Bureau Veritas, there are several things that engineering plant managers can do to ensure their equipment inspections run efficiently. "Communication is critical to ensuring a smooth inspection," begins Fawkes. "And this spans both central planning and the direct communication with the engineer surveyor."

Fawkes explains that ensuring a proper flow of communication enables plants to have their equipment "available, ready for inspection and in a position to conduct a safe examination". He also notes that, "Where needed, plants can ensure there is a chaperone available to locate equipment and communicate internally. Simply being prepared in advance and communicating with the engineer surveyor can go a long way to reducing any hold ups."

Additionally, Fawkes advises that plants take a holistic approach to scheduling inspection activities. "Align equipment so that inspection work is done at the same time rather than requiring repeat visits for a small number of assets," he suggests.

"That may sound obvious, but not



Left: Chaperones can assist engineer surveyors with locating equipment and internal communications

Left: Bureau Veritas offers a wide range of engineering inspection services

CHALLENGING SITUATION

Some engineering inspection tasks are made difficult by the type or location of certain plant equipment, but Fawkes also reports that challenges can be found elsewhere. "The difficulties faced by the engineer surveyors are a daily occurrence and the surveyors have to be adaptable to the situations they are faced with – whether conducting work for a large multi-national organisation or a small local garage," says Fawkes.

"No equipment owner wants to have downtime or the chance of having to take equipment offline for repairs. We find this can lead them to try and push the engineer surveyor not to report the defects noted. Scenarios such as this illustrate why having experienced engineer surveyors is crucial."



Right: David Fawkes, chief mechanical engineer, Bureau Veritas

every plant has in-house inspection expertise, so it's always worth consulting with independent inspection experts to see how we can offer guidance on what plants can do to ensure inspections are conducted at an appropriate time and without causing unnecessary downtime."

Bureau Veritas is one of those independent inspection experts, so what exactly does the organisation offer engineering plants? "We deliver a wide range of engineering inspection services, which include all the major mechanical and electrical assets within a range of industrial and commercial settings,"

answers Fawkes.

"The inspections are completed by Bureau Veritas employees and reported on via our internally developed customer web portal, Swift. For mechanical inspections we are a Type A ISO 17020 UKAS accredited organisation and for the electrical inspections we are certified with the NICIEC."

The inspections that Bureau Veritas routinely completes include: LOLER inspections (for lifting equipment and lifts); PUWER inspections (other work equipment); and COSHH inspections (local exhaust ventilation). "Other areas include power press inspections, fixed electrical testing, ATEX electrical inspection, and The Workplace (Health, Safety & Welfare) Regulations 1992

(escalators)," Fawkes adds.

Given that these inspections are all conducted in accordance with regulatory requirements, regardless of which company conducts them, how does Bureau Veritas differentiate itself from other companies offering these same inspection services? "We provide a customer-orientated service and have a variety of ways to distinguish our company from other players," Fawkes states. "For instance, we offer a fantastic online platform for all customers to access the inspection data and can offer data integration with customer platforms to reduce administration.

"The administration teams and engineer surveyors have experience of working with a variety of computerised maintenance management systems

Right: **Pressure systems are required to undergo regular inspections**



(CMMS) and routinely work to update the systems on behalf of the duty holder," he details.

Further supporting his earlier point on communication, Fawkes also points out that, "Our dedicated technical team are on hand to discuss customer queries and can assist with reviewing inspection practices for bespoke equipment and inspection efficiencies."

CRITICAL CARE

When asked about the bigger picture, in terms of where engineering inspection sits within overall plant management, Fawkes emphasises that, "Inspection is a critical part of the overall engineering function irrespective of the statutory requirements." Expanding on this, he says: "Independent inspection of equipment provides a true reflection of the safety of the equipment for continued operation. Maintenance is often the first area hit when budget cuts occur, but maintenance is critical and if done correctly, should eliminate any

findings from inspections."

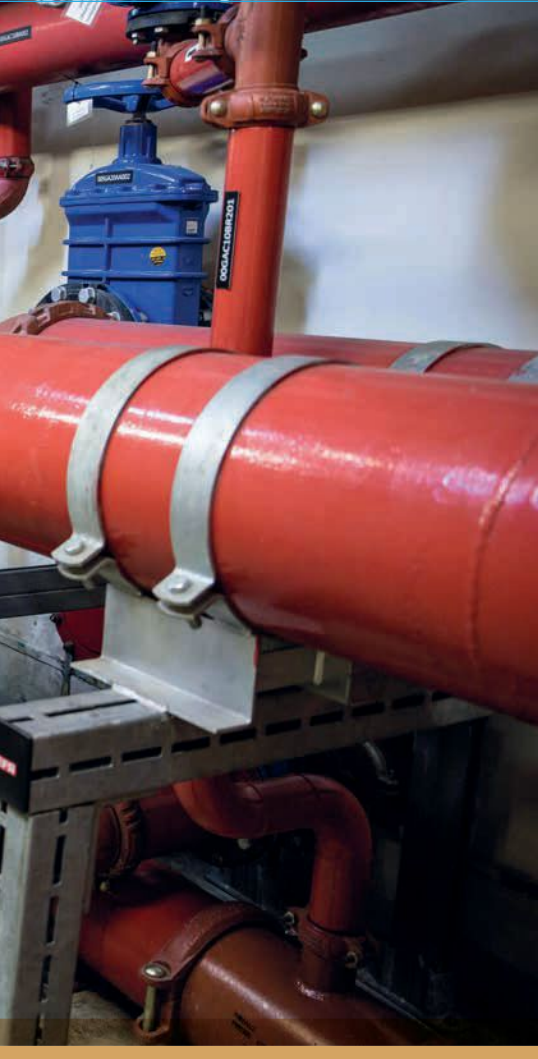
That last point aptly illustrates how plants can benefit from incorporating inspection into their broader maintenance efforts; making inspection more of a simple 'box-ticking exercise' rather than something to be feared is certainly a more desirable scenario that one that sees inspections unearthing nasty surprises.

On the subject of maintenance, Fawkes also observes that, "Any reduction or alteration to maintenance regimes has an impact on the asset and the independent inspection is the function that can identify these impacts."

INTELLIGENT INTEGRATION

Inspection is one area of engineering that has not much been affected by the rise of AI – partly, as Fawkes points out, because the majority of work performed by engineer surveyors is physical checks. But he does say that AI will undoubtedly play a part in the future: "I see this being in the space around planning. If using





Left: Plants should align equipment so that all inspection work can be done at the same time

ACCREDITATION ADVANCES

In 2024 Bureau Veritas announced that it had been awarded two new accreditations by the UK Accreditation Service (UKAS) to deliver services on behalf of its energy and engineering technical service business units, ISO/IEC 17021-1:2015 and ISO/IEC 17065:2012.

The ISO/IEC 17021-1:2015 accreditation standard establishes a framework to ensure any audits and certifications demonstrate proficiency in evaluating and verifying compliance with management system standards.

And the ISO/IEC 17065:2012 accreditation validates Bureau Veritas' competence in certifying the quality of products, processes and services, whilst enhancing the efficiency, effectiveness, and productivity of the company.

The newly acquired certifications are a result of the transition from ISO17020 accreditations that Bureau Veritas UK has held since the original induction of EU New Approach Directives

It further highlights the quality of service that the company is delivering to meet the evolving needs of clients, proving it can manage the new accreditations that are required as a result of moving to outside the EU, supporting the application of the UKCA mark in the manufacturing sector related to Pressure Equipment, Machinery and Lift regulations.



Left: Engineer surveyors primarily perform physical equipment checks, so their jobs are not currently threatened by the rise of AI

central planning, AI could assist with this and learn from the missed inspections, delays or traffic issues. This will enable the planning to be altered to reduce these issues and provide a better customer experience.

"AI could also play a critical role in the quality assurance process. When you produce over a million reports annually it is impossible to check 100% of them: AI could provide a way to conduct 100% assessment of the reports and can also be used to identify common errors so these can be tackled and prevented," he predicts.

Interestingly, Fawkes can also foresee AI being useful when it comes to planning inspection activities. "AI could be used to

identify the equipment and highlight any common defects, safety alerts and could even initiate the report," he says.

A helping hand – whether from AI tools or not – is something that many plants would certainly be grateful for when it comes to their inspection activities. Fawkes reports that Bureau Veritas has noticed a growing trend for customers not being fully aware of the assets they have on site and the legal requirements they have to comply with.

Once again, the solution is simply to seek expert counsel. "We have a team that conduct asset verification to identify all assets on a customer site and provide advice in relation to maintenance and inspection requirements based on the SFG 20 standard," Fawkes explains.

"Ignorance of the law is not a defence and not knowing (or being aware of) either assets or legislation would not be accepted as an excuse. Through asset verification, we can assist to ensure duty holders have the information they need." 