

Quality info

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Remote Inspection: The Need of the Hour and the Future of Inspections

Remote inspection shouldn't be a stop-gap tool just for the pandemic

By Hari Taneja

Although remote inspection has been a topic of discussion in the oil, gas and shipping industry in the past, it has recently been getting more attention during the Covid-19 pandemic. Many ship oil and gas operators, as well as engineering, procurement, and construction (EPC) contractors and suppliers have come forward to discuss this topic with an open mind and explore possibilities. Remote inspection is perhaps the need of the hour, but it can also be the future of inspection.

What is remote inspection?

Remote inspection is an alternative to an onsite physical inspection in which the person performs inspection activities remotely using sophisticated technological tools. It's many benefits include:

- Elimination of personnel risk exposure to hazardous conditions and dangerous tasks in harsh environments
- Global collaboration and optimization of workforce use
- Inspection cost reduction
- Real-time feedback
- Flexibility
- Eco-friendly by helping to reduce overall global carbon footprint

Success factors for remote inspection

Vision

"It's not enough to be busy, so are the ants. The question is, what are we busy about?"

—Henry David Thoreau

Thoreau's words fit well in the current context when talking about remote inspection. The question is not, "Should we jump into remote inspection just because it's an alternative to physical inspection in the current Covid-19 situation?" The real question is: "Do we see remote inspection as the future of inspection? If so, what is our vision for remote inspection?" Having a clear-cut vision will play a key role in remote inspection's success.

Tools

"If you have built castles in the air, your work need not be lost; that is where they should be. Now put the foundations under them."

—Henry David Thoreau

Once the vision for remote inspection is in place, organizations should put a foundation under it. Tools are the critical part of this foundation and should be identified during the planning stage

Basic level: Tools for remote inspection require the capability for basic audio and video calls, and to store pictures and videos. This can be achieved using apps like Facetime, WhatsApp, Zoom, or any other audio-video calling tool. It also requires sharing pictures and videos via platforms such as email, SharePoint, or Google Drive.

Moderately advanced level: Tools offer more advanced audio-video capabilities for real-time data, audio, video, and document sharing. Microsoft teams, Cisco WebEx, Adobe Connect, and Skype for Business are some of the platforms that provide this capability.

Advanced and complex level: Tools require additional technical abilities such as augmented reality (AR) and enhanced collaboration. Microsoft HoloLens, Lenovo ThinkReality, and Iristick Z1 are examples of such tools.

Based on the level of interaction required, complexities involved, and the organizations' budgets for remote inspection, organizations should carefully identify and select the required tools. Regardless of which tools are selected for remote inspection activities, user friendliness, data integrity, privacy, and confidentiality are a must.

Work instructions and documented processes

Whether the task—or the method of performing it—is new or existing, clear and concise documented processes for stakeholders play a big role in the successful outcome. Because remote inspection is a relatively new and evolving concept in the shipping, oil and gas industry, clear and concise

documented processes and work instructions, with defined roles and responsibilities for the doers and stakeholders, are even more important to achieve both short (Covid-19 period) and long-term (post Covid-19 period) remote-inspection goals.

Inspection and test plans

A well thought out inspection and test plan (ITP) is key to achieving the desired results from an inspection activity. Developing good ITPs is a challenging task by itself, and remote inspection certainly brings added complexities to this task. If a person is physically inspecting, it is simpler to ask for (and more important, get) more information. When performing the inspection remotely the inspector certainly can ask for more information, but getting it might be a challenge. It is not that the person at the other end does not want to give or share the information with the remote inspector; the logistics to get the information and share it may at times be difficult. Therefore, a clear description of what will be shown during remote inspection, how it will be shown, what kinds of records will be provided, where the records will be saved, and how the records will be signed off should be reflected in the ITPs. The clearer the description, the fewer the issues during remote inspection execution.

Take baby steps, learn, and make it bigger

Organizations should carefully investigate their own as well as their supply chain's inspection activities and identify areas to pilot (take baby steps) a remote inspection. After a couple of pilots, the inspection team, along with all relevant stakeholders, can analyze what went well and what needs improvement. Lessons can be captured, improvements implemented, and then remote inspection can be implemented on a bigger scale.

Communication

Changing the method of inspection from physical to remote is a big procedural shift. If these changes are not communicated effectively to internal and external stakeholders, they will cause anxiety rather than benefit the organization. Therefore, developing and implementing a good communication plan about the changes is a must.

Develop skills: Enable people to perform remote inspection

Physical inspection is a skill and so is remote inspection. Without adequate training and practice, it will not be possible to reap the desired results of remote inspection. One-size-fits-all training for remote inspection will not work because the equipment to be inspected typically vary widely and bring their own share of technical nuances. A good training plan with a lot of practice will certainly help inspectors to better perform remote inspections.

Show and communicate what is in it for stakeholders

Moving from physical inspection to remote inspection requires a fundamental shift in the way inspections are performed. So unless organizations show the benefits of doing remote inspection to internal and external stakeholders, it will be difficult for personnel to embrace this change. Inspectors are the key stakeholders in this change. They might feel that remote inspections will put their livelihoods at risk. This feeling must be addressed by the organization to keep the morale of inspectors high, to assure them that their jobs are important, and that qualified and skilled inspectors will still be needed to perform remote inspections.

Conclusion

Covid-19 has affected all of us in many ways (mostly negative), but it has also pressed us to think and do things in new and often challenging ways. Remote inspection is a good example. However, let's not limit remote inspection to just this period of Covid-19 but envision the technology as a preferred method going forward. Better co-ordination and co-operation between various organizations such as classification societies, and various oil and gas industry inspection agencies will prove to be very beneficial for all concerned. With that vision in mind and solid foundations in place, we will certainly get there.

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