

Asset Integrity: "This Is The Time To Revisit Your Established Procedures And Get Creative."

With the current oil price downturn, hydrocarbons companies are under more pressure on companies, both big and small, to retrench and take stock of their assets.

In this interview, we speak with a top asset integrity professional about his thoughts on the oil price crisis with regards to his asset integrity management in the MENA region, and some of the novel practices he has put in place to promote cost savings.

SPEAKER KEY

TH Tim Haïdar, Editor In Chief, [Oil & Gas IQ](#)
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TH **Samy, thank you so much for joining us today.**

SA Thank you, Tim, my pleasure.

TH **Samy, from your perspective in the Omani-based Salalah Methanol Company, has the collapse in oil prices heightened the importance on asset**

integrity and is it a positive or negative thing?

AS Yes, it absolutely has made asset integrity far more important but, overall, price decline is a negative for the oil and gas business.

From an asset integrity point of view, we are getting more positive traction now with other departments because, suddenly, everybody is interested in how we can extend time between shutdowns and reduce our downtime because as areas that can get reduce the cost of production.

Times like this can be negative in terms of employment and in terms of profit for oil companies, but they also present opportunities to experiment with ways to minimise the cost of production, mainly through integrity and maintenance practices. As the oil price approaches the breakeven point for some regions, this is the time to revisit your established procedures and get creative.

Now, within that creativity, what kind of applications of technology are you seeing currently and on the horizon that you think are going to enhance that asset integrity and promote life extension?

AS I think the key thing for a lot of companies will be to concentrate on risk-based inspection (RBI) and risk-based maintenance. In many cases, this is contracted out to third parties and once the work has been done, the

frequency and follow up of subsequent inspection and maintenance activities is not 100 per cent carried out to plan, because people try to cut corners and make some efficiencies.

If you stick to a plan, then clearly you can reduce a lot of operating costs and minimise shutdown windows. One of the things that has come out of a lower oil price and wanting to make sure we follow up in a methodical manner, is that we are moving away from contracting, and we are training our own employees to engage in a lot of inspection activity. In that, we can see huge benefits for our internal capability and also help reduce unnecessary costs.

As an example, before the oil price drop, even if we needed to do a small helium test, we might go to a specialist contractor based somewhere in the Middle East or even in Europe to carry out the checks we needed. We have our own lab for that kind of thing but didn't think of trying to do the testing ourselves. So, we decided that we would try, and we came up with a methodology and fabricated some machine attachments for testing apparatus. This all worked well and now we have the capacity to do these tests in-house at a fraction of the cost.

As well as developing our own testing processes and devices, our staff are now able to carry out the tests and both repeat them in the future and pass this received

knowledge onto other staff as teachers. This is the kind of creativity that I was talking about!

TH **So, do you think that you will see your dependency on contracting diminish across the board?**

AS Well, there will always be subcontractors involved in the oil and gas world. We simply cannot be specialists in everything we need to do – there will always be gaps. And, it is also established practice that anything you cannot do yourself you get somebody else to do for you, whether it is providing a service or even training people to one day be able to carry out that function themselves.

I think that many companies will now try and go half way in this area: they will rely on contractors for services and training but also try and utilise and capture the experience of their own internal employees to enhance these processes. It is often surprising what kinds of knowledge you can find in the experienced people that you have working for you, once it is all audited and shared.

TH **Samy, where do you see the MENA region with respect to asset integrity practices? Is it leading or is it lagging behind other regions?**

AS I think that is difficult to say, in general, but certainly the MENA region is leading in certain areas because of the specific challenges that we face, mainly down to environmental factors.

Salalah Methanol is based on the coastal area of the Arabian Sea, which has its own unique challenges. We are dealing with a high-salinity environment and extremely high temperatures all year round, so external corrosion is a big worry in the region. In addition to this, we also have to deal with periodic high winds which contain dust and sand.

These are extremely abrasive and need to be prepared for in line with corrosion protections. So, we are probably very well equipped to deal with these concerns compared to other regions.

TH **Okay. Now let's talk more about the area that you're going to be speaking on at the conference in Oman. To your mind, what are the best ways to maintain, test and manage process safety valves (PSVs)?**

AS The idea behind why I wanted to look at this issue is that, in the Middle East, there is no fixed time interval for the calibration and examination of pressure safety valves. There are many codes and sets of guidelines that that point in different directions.

The NBAC in America, for example, proscribes a fixed interval, and if testing is not carried out in this window, then the plant will not be allowed to function. PSVs are that important to the core of each facility.

What we did was a kind of criticality testing: we identified which of the PSVs, are susceptible to corrosion, which aren't, which are under heightened pressure, which deal with steam. We computed the metrics, and based on those metrics we allotted intervals.

Normally, we would shutdown and turnaround our plant every four to five years, but some of the PSVs involved in our processes have to be calibrated every two years, requiring a full or partial shutdown. Boiler PSVs, for example, will have to be checked/replaced at least every two years because our boilers are outputting 100 bar pressure.

Another example is that a lot of PSVs in the gas area, like high pressure hydrogen valves, may discharge very minor leaks that may be undetected by conventional inspection means or visual or sound cues, resulting in a lot of energy loss in a plant. Therefore, inspections have to be done at tight intervals.

We do online safety relief valve testing with Trevitest which allows for testing with no operational interruptions and we combine this with ultrasonic testing with Ultraprobe and infrared thermography to view any temperature differences. In this way we are using a whole range of tools to make sure that energy loss is minimised across the plant in these key areas. This is the kind of practice that I would like to share with the conference audience.

TH **Samy, thanks for that rundown and your views on asset integrity in the MENA region. We look forward to welcoming you to the event in March.**

AS Thank you, Tim.

Join asset integrity experts from companies including **PDO, Shell Development Oman, Occidental Oman, Saudi Aramco, ZADCO** at the **11th Annual Asset Integrity Management Summit** taking place from 6-9 March 2016 at the Al Bustan Palace, Muscat, Oman, officially hosted by Petroleum Development Oman and co-hosted by Orpic. For more information, visit www.assetintegrityme.com or contact us at +971 4 364 2975 / enquiry@iqpc.ae

