

Optimizing efficiency through digitalization in chemicals, petrochemicals and refining
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Exclusive Speaker Interview



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1. What does the subject of digital transformation and IoT mean to you?

I believe that this is the future! It's impossible to think in the technological development in the next years without IoT, this is not different for the downstream industry.

2. What's the greatest impact IoT, data analytics and AI will have on the industry? What lies ahead of operators and how will they adapt?

In my opinion, the greatest impact is the constant need for the specialization of the professionals. It's increasingly important to keep studying and keep up to date on the new technologies and methods. Nowadays it is impossible to think of good professionals without good training and interest by new technologies.

3. How will this paradigm shift affect the classic production process and manufacturing value chain?

As aforementioned, this change creates the need for high-level professionals. The Oil & Gas professionals need to change their mind map and understand the opportunity created by new technologies and this can improve the manufacturing value chain reducing waste of natural resources and creating processes safer and under a better control.

4. What are the latest technology adoptions by downstream operators in Brazil? Are there any success stories that Asian operators can learn from?



Currently, our operators are using Personal Digital Assistant, a mobile platform that helps the operators in their routines and can accelerate the work permissions manufacturing and maintenance notes creation. This approximates the production and maintenance areas and saves time and costs. The equipment requires the major presence of the operators in the process area during operations handling, this can improve the process safety, mainly in critical tasks.

5. Will Artificial Intelligence replace humans working in oil and gas?

Despite the great technological development over the years, I believe that the human will keep at the core of our business. We always depend upon our workforce, on the other hand, this workforce needs to increasingly prepared to handle with technological development and this includes Artificial Intelligence.

6. What is the current state of cybersecurity preparedness across refining, petrochemicals and chemicals and how is the cybersecurity market set to evolve?

Unfortunately, the technological development has a dark side, the malware has been increasingly sophisticated and harder to eliminate and to prevent. Cyber-attacks is a real threat and can't be despised by the energy industry, some references relate that the energy industry is the second preferred target of cybercriminals in the recent years.

Thus, it has become a great concern for the energy industry, mainly for the oil & gas production chain, with companies including cyber-attacks as part of the major risks. But we have good technologies to protect industrial plants against cyber-attacks. An example is a continuous development of monitoring systems for tank inventory control, ERP systems increasingly less vulnerable to cybercriminals. Nowadays, I believe that the cybersecurity market is following the cyber threat, the next step is to anticipate and stay one step ahead.

7. What impact does Big Data have on operational efficiency and how is Big Data changing the industry?

Big Data creates an amazing opportunity to improve operational efficiency in the sense that it allows a great content of information with quality, accuracy and velocity. Through this opportunity, it is possible to develop better process simulators and process management software. In addition, these tools will help to ensure efficient and reliable processes. I believe that in a short term the Big Data will be capable to help us to reduce carbon emissions through reduction in energy consumption.

8. What are your views on Energy Efficiency and what strategies can operators use to improve their energy usage?



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In my point of view, the energy efficiency is strongly related to process optimization. Optimizing the processing unit means to use the equipment with limit but in safe and low-cost conditions. In refining or petrochemical processes, we need to minimize steam loss mainly through leaks, in this sense, the operators are very important and as process plant owners, they need to carefully report these failures to the managers and monitor the maintenance of the process plant to reduce the wastage of energy.

9. With these radical changes looming, what opportunities lie ahead for manufacturers?

I believe that the manufacturers have great opportunities in this scenario, but it's necessary to be prepared. The specialization of technology creates the necessity of continuous training and the maintenance of these systems is normally only offered by the manufacturer which makes it a great opportunity for high-quality suppliers.

10. What will be the highlight of your presentation at Asian Downstream Summit?

I intend to show how we are saving energy and costs in refining process through equipment optimization and process strategies according to energy consumption market.