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Let's talk:

The right partner in the Fertilizer

Industry

Insights talked with the Head of Sales of the Fertilizer & Syngas Technologies Operating Unit Tobias Birwe about challenges in the fertilizer industry and the solutions that thyssenkrupp can offer.

Mr. Birwe, you are Head of Sales at Industrial Solutions and responsible for the Fertilizer & Syngas Operating Unit. Where do you currently see the biggest challenges to the fertilizer industry?

I see the main challenges in the changing conditions and the rising global population. On the one hand sustainability is already being supported and driven by governments in many regions. On the other hand I see a growing need for fertilizers, primarily to supply the global population and further boost economic strength in regions. That also calls for a rethink and greater flexibility in the fertilizer industry.

In the future, users will increasingly demand fertilizers that are more efficient, i.e. long-lasting and with optimum compositions to support plant growth.

The main challenge for producers will be to keep their ecological footprint as small as possible – which means more efficient plants with lower emissions and reduced use of raw materials (such as natural gas and water, to name two of the most important) or even dispensing with natural gas altogether and using renewable energy sources as a replacement.

We will still need conventional fertilizers and production plants to meet global demand, but these will have to be more efficient. That puts a greater focus on efficient large-scale plants.

How are we meeting these challenges at Industrial Solutions?

Industrial Solutions recognized the trends at an early stage and put a great deal of energy into developing special fertilizers, improving plant efficiency, increasing plant capacity and reducing emissions. And of course we are continuing to make developments that will enable us to offer tomorrow's solutions today. Digitization and green chemicals/green ammonia are two such development areas we are working on in addition to the others I just mentioned.

Possible addition: It's important to mention that our developments are examined and tested intensively before they are launched so as to maintain our good reputation as a responsible technology provider and EPC contractor. With a heritage stretching back almost 100 years and several hundred references as a technology and EPC provider we have proven ourselves to be a dependable partner to the fertilizer industry. Our aim is to maintain this reputation when addressing the new challenges.

What technologies and solutions can Industrial Solutions offer in the fertilizer sector? What new technologies have been added to the portfolio?

Industrial Solutions covers the entire fertilizer portfolio, in most cases with our proprietary, market-leading technologies. For other technologies we work with renowned licensors with whom we have decades of experience. Technologies and solutions are many and varied.

It starts with the individual components – it is important to us to only provide our customers with dependable, long-lasting components. Our design and purchasing departments both pay close attention to quality in order to ensure these properties.

These days, our plants are largely engineered on a modular basis, enabling us to design them with greater speed, quality and efficiency.

Our portfolio also includes innovative processes such as desulfurization using MDEA scrubbing or the Claus process, removal of NO_x using the EnviNO_x system, removal of CO₂ from flue gases, dual-pressure processes in ammonia and nitric acid technology to achieve higher plant capacities, waste air

purification for urea plants, and a new urea-formaldehyde substitute – to name just a few examples.

Products include new developments in the area of slow-release fertilizers, urea-ES and ammonium sulfate.

As you see it, what advantages do customers gain by cooperating with thyssenkrupp Industrial Solutions?

thyssenkrupp's customers benefit from our extensive experience as an established technology and EPC provider based on 100 years of plant engineering. This portfolio and the combination of decades of experience in technology development and EPC execution make tk a unique proposition. Customers receive everything from a single source, minimizing interfaces. In addition we can offer customers financing solutions and plant operation services, and of course they profit from our innovative technologies and solutions that make them fit for the future. We are aware of our responsibility to provide our customers with tailor-made plants that contribute to greater cost-efficiency and sustainability by offering a long service life and high availability.

What would you like to see for thyssenkrupp Industrial Solutions in the future? What will be the next developments?

I would like to see tk remain a dependable partner to our customers in the fertilizer industry by offering innovative solutions. As part of this I would like to see the first ammonia/fertilizer plants based on renewable energies. We can already offer industrial-scale plants based on our market-leading hydrogen electrolysis technology. I would be delighted for thyssenkrupp to be one of the key drivers of this development.



