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Strong team and meticulous planning essential for refinery turnaround.

“The work’s going well but there’s still a lot to do,” says Igor Mihajlovic, program manager at thyssenkrupp Uhde Engineering Services (tkUES). His project manager, Michael Leitsch, and engineering managers (Matthias Weser, Dr. Marian Patzlaff, Rami Khadra and Sebastian Seibel) and their teams have already spent almost two years planning the

shutdown of a refinery in Wesseling, during which numerous technical modifications and safety upgrades are to be implemented. An interdisciplinary team is on site.

The handful of employees who developed the initial concepts has grown into a 25–30-strong team now that works on the refinery closure in more than half a dozen projects: safety upgrades, availability improvement, capacity expansion, specification of long-lead items, preparation of purchase orders, the list goes on.

Everything has to be carefully orchestrated because for a turnaround on this scale (total duration approx. 6 weeks) plans that have been 3 years in the making have to be implemented in just 3 working weeks. Only a small part of the work can be performed before the shutdown. That's a challenge for everyone involved, especially as we're talking about an investment volume of dozens of millions of euros.

30 employees

These projects are typically executed in phases. Following the analysis of equipment requirements and identification of weak points, the next phase involves the comparison and rough planning of various solutions. The customer is informed of the cost, time and benefits of the solutions before the detailed planning is carried out and concrete costs calculated. In this phase immediately before orders are placed, cost estimates based on material take-offs (MTO) are extremely important. These are based on concrete technical plans in which equipment weights and quantities, motor ratings and further parameters are calculated. In brownfield projects, accurate planning requires in-depth expertise in the areas of technology, standards and customer procedures, as well as knowledge of the local area and possible suppliers. In addition to engineering

expertise, a good relationship with the customer and communication skills are essential in order to present the solutions and ensure they are fully understood by the customer.

At the refinery, work within the team and with the customer is going so well that the customer has decided to keep tkUES on board for the next detail engineering phase. “That’s a huge achievement for the whole team, because we’ll now be on site supporting the customer up to start-up of the plant to make sure it really works,” says Christian Wissel, Head of Revamps Execution, who is managing the team from Bad Soden. In addition to the complex technical issues on site, Wissel is also busy putting together the resources in the form of employees for the next project phases, for which at least as many engineers will be needed as in the previous phases. “You’ve got to find the right people. We can teach detailed specialist knowledge if we find someone who is motivated and committed, that’s our strength. New colleagues have to fit into the team and bring positive energy to their work,” says Wissel.

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The bottom line: In the next phase, as well as planning and calculating all the necessary parameters, the team will also be responsible for supervising and coordinating the work of external engineering firms to maintain a consistently high standard of quality. So more exciting new challenges beckon next year.
