

## NEWS



## Hydratight excels at boring project

Hydratight machining expertise came to the aid of managers at the OMV refinery at Burghausen in the Bavarian “Chemical Triangle”.

When optimising processes, OMV engineers wanted to improve tension on the base of two huge coker units.

This required the precise change of geometry on different borings and slots. Hydratight’s challenge was to do this 196 times!

“Geometry change of borings or slots isn’t normally a big task, even though the admissible tolerance here was very tight” explained Hydratight’s project engineer, Goetz Wagnitz.

“The challenging part of the job to achieve the same accuracy for all the slots, so the coker units wouldn’t suffer out-of-specification stresses.”

This wasn’t the only challenge: the entire project had to be completed during a scheduled 30-day shut-down — a rate of almost 11 completed slots a day, with two teams of Hydratight specialists working in shifts round the clock.

To achieve the required accuracy the team developed a special milling frame, which allowed not only precise worm-gear driven control of the cutting head, but also fast set-up and transfer from slot to slot.

After testing several approaches at their workshop in Dietzenbach, on the outskirts of Frankfurt, the team came up with a super-stiff steel rig that could clamp to each coker unit with 18 super-powerful electro-magnets.

“We needed something that offered not only fast set up, but also had to be vibration free, so we could achieve those very tight specified tolerances,” explained Goetz.

“This rig could be fixed with completely free movement, thanks to the magnetic clamping system, so the single slot could be fixed horizontally or vertically to cut either hole or slot. Once the power was applied it virtually became part of the coker unit.

“And we designed it so the frame was only 70mm from the work surface. That meant vibration was kept to an absolute minimum.”

OMV managers were delighted with the result.

“It was excellent research and development that produced the right tool specifically for this specific project,” said Goetz. “The work was completed in good time with the accuracy demanded and in the time allowed and the coker units now operate just as the client wanted.

“This is the sort of job we are being awarded more and more — because we spend a lot of effort getting it right. The results speak for themselves.”

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