



**ESSENER HOCHDRUCK-
ROHRLEITUNGSBAU**

**... always faster
when plant
availability is at stake**



A competitive edge through performance

The largest contract:

The extension of the refinery Holborn Europa Raffinerie by two new units (Prime G+, Cyclohexane incl. a tank farm) and the revamp and expansion of existing units (Powerformer, gas dryer, loading station) was the largest contract to be awarded in the field of piping and plant construction in Germany in 2003.

The aim of the project:

The creation of production facilities for low-emission fuels, which comply with stricter environmental regulations.

The first-class performance:

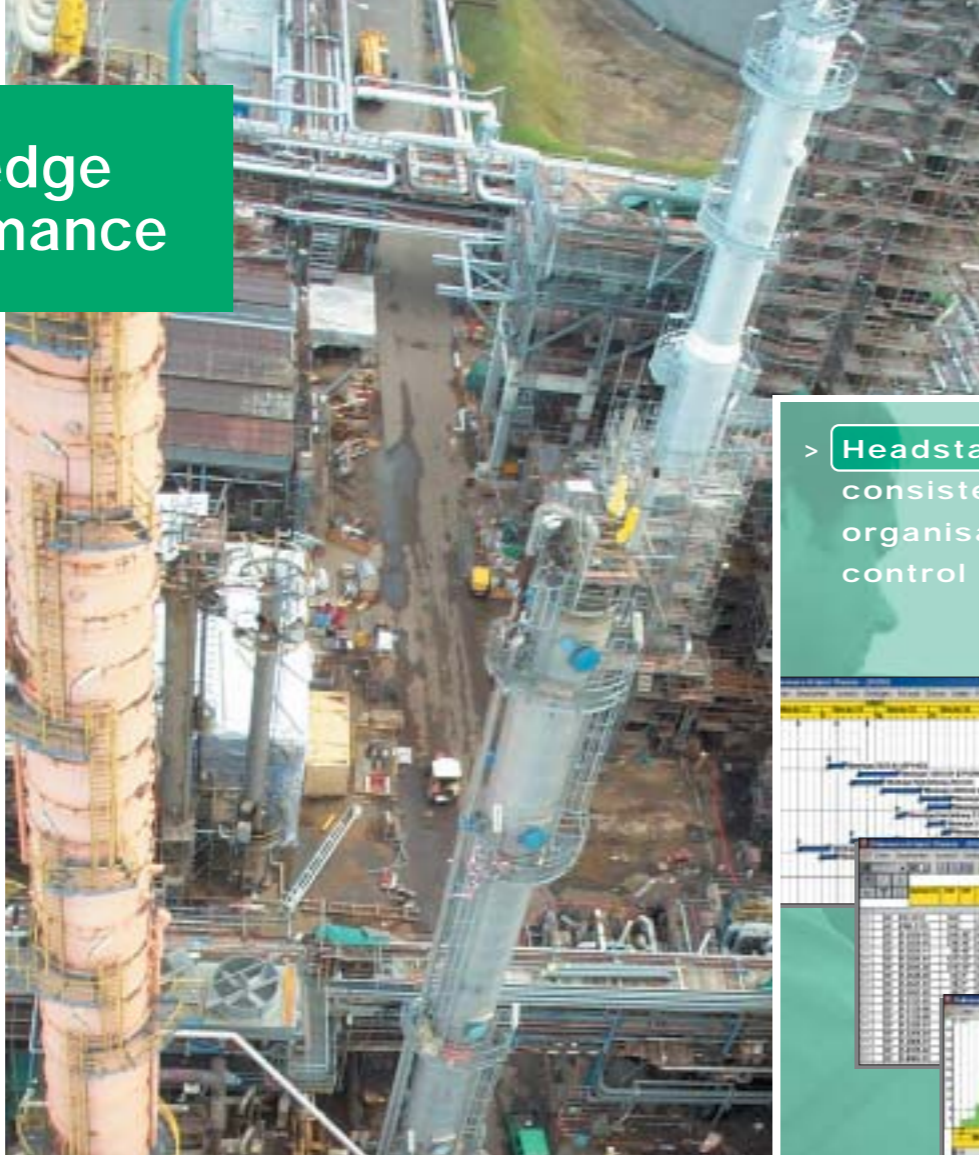
EHR completed that complex contract in Hamburg decisively faster than scheduled. In less than six months, 1,100 tons of piping were erected. Two weeks were saved on the new building works, seven days on the revamp and expansion of the Powerformer and the tie in work during shutdown.

The result:

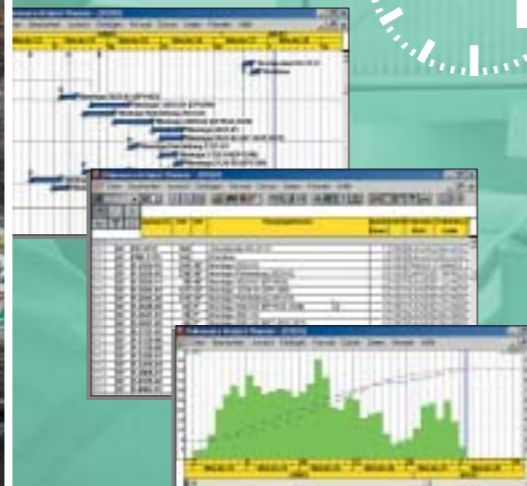
Owing to a downtime reduction of seven days, production was able to start sooner than scheduled.

Project key data

Total tonnage of piping	→ 1,100 to.
Thereof during shutdown	→ 400 to.
Total tonnage of equipment	→ 480 to.
Dismantling of equipment during shutdown	→ 430 to.
Dismantling of piping during shutdown	→ 370 to.
Total tonnage of supports	→ 150 to.
No. of welding seams	→ 45,000 units
Implementation period incl. prefabrication	→ about 6 months
Total no. of hours incl. prefabrication	→ about 340,000 h
Thereof during shutdown	→ about 100,000 h
Order value	→ about 16 million €



> **Headstart** through consistent planning, organisation and control system



> **Headstart** through own prefabrication



With system and mind

In production, gains are achieved and losses incurred every hour, every minute. More than 400 EHR technicians worked successfully together so that the finish flag of the shut down period was already seen after five weeks – essentially earlier than scheduled.

430 tons of equipment and 370 tons of piping were dismantled. In the construction process, the prefabrication of the new piping systems in two EHR shops lead to the decisive headstart: production started one week earlier after 480 tons of equipment and 1,100 tons of piping had been erected.

Handling of 47,000 individual parts during the shutdown of the Powerformer was a great challenge. Before the erection they had to be labelled with bar codes, intermediately stored in a high bay rack and spool storage,

scheduled and delivered just in time to the rigging point so that up to 2,500 parts could be erected per day. The documentation was continuously electronically filed.

Missing material was identified well in time, idle periods were avoided and headway in mechanical construction was decisively accelerated.



Always Primavera®

Primavera® is the name of one of the project control systems deployed by EHR. The bottom line of the IT assisted shutdown planning was a reduction in downtime by seven calendar days and an earlier production start with adequate advantage for the refinery. This is much more than mere adherence to schedules – this is best practice with technology and know

how as well as the high degree of professionalism and motivation of the entire EHR project and on-site team.

Both the EPCm-Contractor Uhde Edeleanu GmbH (UED) and the client Holborn Europa Raffinerie (HER) appraised and appreciated performance.

> **Headstart** through specialists, teamwork and a high degree of motivation





ESSENER HOCHDRUCK-ROHRLEITUNGSBAU

... always better –
own prefabrication –
just in time

Two own shops ensure independence, assured quality as well as delivery processes and work flow in time within the internal planning network.



Your partner in piping construction

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