

Honeywell Control Systems Help OMV Burghausen Succeed with Planned Refinery Shutdown



A special characteristic of this shutdown was the connection of new systems to the existing refinery plant. We would like to thank Honeywell for this excellent achievement.”

Dirk Schierenberg, OMV Deutschland GmbH

Benefits

OMV operates a refinery with a Honeywell control system at the Burghausen location. This represents one of the world's largest LCN installations in terms of the number of nodes within a cohesive network.

Thanks to exact preparations, it proved possible to realise the following objectives in the context of shutdown activities prior to expiration of the planned period of time:

- Enhancement of LCN network system performance
- Clear restructuring with regard to future expansions
- Subsequent smooth commissioning of the existing and new plants and/or plant components
- Conclusion of all PCS maintenance activities prior to expiration of the period of time planned for the shutdown

Background

OMV processes 3.5 million tonnes of crude oil per annum.

Adherence to the specified shutdown time periods is regarded as a maximum priority by all involved, as the shutdown costs 40 - 50 million Euros.

The common objective of all involved is therefore to minimise the shutdown period, as a start-up delay costs additional 1 million Euros per day.



Plant site, OMV Burghausen

Challenges

The shutdown of a refinery in Germany denotes the legally-stipulated, routine general inspection of all plants. This involves an inspection every 5 years to ascertain whether the plant operator has met all legal requirements in the context of the German Ordinance on Industrial Health and Safety.

“The objective of the shutdown is to obtain the permit for operation of a plant,” said Dirk Schierenberg, OMV Deutschland GmbH. “All plants undergo thorough maintenance and repair during the inspection to ensure optimum functional efficiency of the refinery.”

System performance represented an enormous challenge, due to the addition of new plant components and their connection to the existing refinery.

A complete shutdown involving all plant components did not occur at any time. Adept planning of the schedule ensured that plant components still in operation were not subject to any limitations during the overall conversion.

The two cohesive LCN networks with approximately 96 nodes each are among the largest LCN installations in the world.

Requirements entailed that the project be completed while observing specific customer PCS standardisation and implementation in all plant components.

Critical application modules and gateways for connection to the associated hiways were required to retain addresses during the restructuring.

The overlapping coordination of the activities of plant constructors involved also posed an enormous challenge.

On-schedule completion of interdependent part-projects also represented a point of emphasis in this respect. Continuous and short-term adaptation of manpower also proved necessary here.

Solution

Due to the complexity of the cohesive networks, a total of 3 different tools were employed during the inspection:

- System baseline performance test
- LCN traffic recording
- LCN load test

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2500 W. Union Hills Dr.

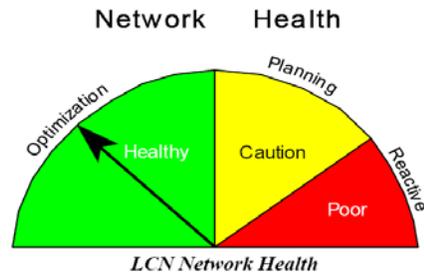
Phoenix, AZ 85027

Tel: +1-602-313-6665 or 877-466-3993

www.honeywell.com/ps

Enhancement of LCN network system performance was achieved through re-addressing and restructuring of segments and clusters, resulting in a lower number of token throughput runs.

Approximately 150 nodes were re-addressed during restructuring.



However, the system was still operating within the specification prior to restructuring, despite the high number of nodes involved. Additional GUS stations were installed to enable project-related loop checks and engineering activities during the restructuring.

The Honeywell team present at the OMV site made a major contribution to the success of these actions. Together with Honeywell partner firms, such as L&P, IAS, ProSys, Rösberg, and OMV partner firms, such as Kreuzpointner, Rösler and E-Plan, cooperation proceeded in an excellent, extremely useful fashion.

“You can always rely on Honeywell, and the quality is unbeatable!” concluded Dr. P. Krizan, OMV Deutschland GmbH.