

## Linde Engineering Migrates to Honeywell UniSim Design



“We perform large scale process simulation at Linde Engineering and we knew that our current commercial technology could not satisfy all our requirements. We looked for a partner that could meet our specific needs in handling simulation size and complexity as well as someone who was flexible enough in product development, service and support. We found a great partner in Honeywell and we use its robust simulation technology to continuously improve our process design and help optimize our business.”

Dr. Oliver Koch, Linde Engineering

### Benefits

As a leading engineering firm, Linde Engineering is a power user of simulation software and needed a partner that could provide both best in class software for design simulation, but also world-class service and support. The company decided to migrate from its legacy commercial simulation software in use for olefin, hydrogen and synthesis gas plants, and it chose Honeywell's UniSim® Design Suite software and services.

Linde experienced several benefits with the Honeywell UniSim Design Suite:

- Improved engineering efficiency
- Added flexibility for fast and reliable simulations of complex flowsheets through robust software that meets Linde's specific needs and pushes the limits of traditional simulators
- Increased support and service both during the migration from their previous commercial simulation technology and in everyday use
- The ability to participate with Honeywell in the planning of the simulation technology roadmap in order to meet their future requirements



Linde Engineering chose to migrate to Honeywell's UniSim simulation software for olefin, hydrogen and synthesis gas plants

### Background

The Linde Group is a world leading industrial gases and engineering company with more than 53,000 employees working in around 70 countries worldwide. Following the acquisition of The BOC Group, the company has gases and engineering sales of approximately 12 billion euro. Linde Engineering focuses on promising market segments such as hydrogen, oxygen and olefin plants and natural gas processing plants. Its extensive process engineering know-how in the planning, project development and construction of turnkey industrial plants distinguishes Linde Engineering from its competitors.

## Challenges

As a leading engineering firm, Linde relies on simulation software that is capable of large-scale process simulation modeling and interfacing with in-house technology. Linde models its complete processes in a single simulation so that all interactions between process units may be accounted for and optimized.

Facing limits concerning both the technology and service from their current commercial simulation technology provider for olefin, hydrogen and synthesis gas plants, Linde looked elsewhere to find a new partner when it came time to renew their contract.

“We needed a partner whose technology could handle our large complex models yet still meet our specific needs for software development, updates and service – flexibility in design was also a critical factor,” said Dr. Koch.

## Solution

After a detailed evaluation, Linde chose to migrate to the Honeywell UniSim Design Suite of software and services because of Honeywell’s ability to respond to Linde’s specific needs in a commercial product.

“UniSim Design is a highly robust product, and the new partnership with Honeywell has greatly improved our business over previous technology we had been using,” continued Koch. “It is a highly flexible process simulator with an innovative philosophy for process engineering and a promising development roadmap.”

Linde takes advantage of UniSim Design’s unique solution algorithm to work in the most efficient manner possible.

## More Information

For more information on UniSim Design Software and Services or any of Honeywell’s automation Products, Services, or Solutions, visit our website [www.honeywell.com/ps](http://www.honeywell.com/ps), or contact your Honeywell account manager.

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Engineers are able to build and interact with their models in an intuitive manner, allowing them to concentrate on the problems at hand rather than the tool being used.

With its own development team, Linde was also able to interface its in-house physical properties system to UniSim Design. Continued Koch, “The ability for us to integrate this with UniSim Design provides us with a state-of-the-art process simulation tool while ensuring that the thermodynamic calculations conform to our own standards.”

Linde has also developed a number of in-house unit operation models that have been incorporated into UniSim Design. Integration of these models has allowed Linde to optimize their processes holistically, avoiding the need for a manual transfer of results between different packages.

Linde uses UniSim Design for the following activities:

- Process engineering of olefin plants
- Process engineering of hydrogen and synthesis gas plants
- Development of processes in research and development
- As a starting point for the detailed engineering of complex equipment such as heat exchangers and distillation columns
- Plant safety design

“We are now able to take full advantage of the flexibility provided by UniSim Design to build fast, reliable simulations of our complex flowsheets, and we appreciate both the high-quality software and improved development and service that Honeywell provides,” concluded Koch.