

uhde® ammonia cracking – enabling the global hydrogen economy

Ammonia is an ideal energy and hydrogen carrier – energy-dense, easy to transport, with an established global infrastructure. To unlock its full potential, we need a technology that can efficiently and sustainably provide hydrogen at the point of use:
uhde® ammonia cracking

THYSSENKRUPP UHDE – A GLOBAL LEADER IN AMMONIA AND HYDROGEN TECHNOLOGY

#1 in world-scale ammonia plants: With over 130 ammonia plants built worldwide, we are leaders in ammonia technology and project delivery of complete plants and production complexes.

We have built many of the world's largest steam reformers for ammonia, methanol, hydrogen and propane dehydrogenation plants.

End-to-end project execution: From idea to implementation, we deliver complete solutions – from process design and licensing to EPC, services, and digital operation support. A single point of responsibility, with the full power of a global engineering powerhouse.

KEY BENEFITS

✓ Industry-proven

Our solutions are based on decades of experience in high-temperature and catalytic reforming technologies.

✓ High efficiency & conversion rates

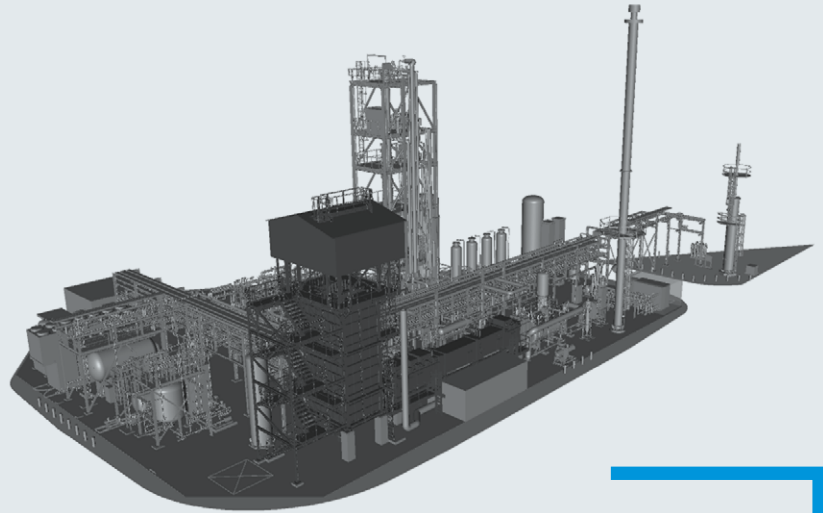
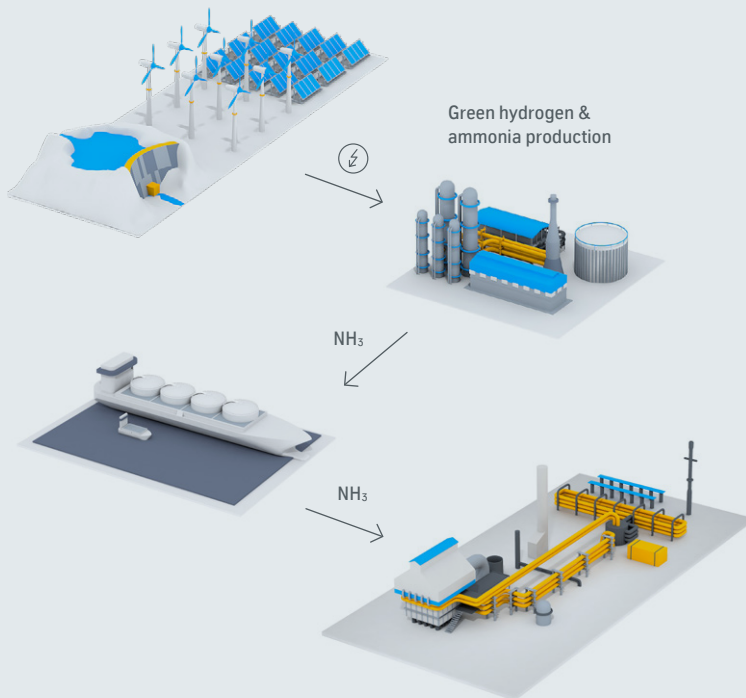
Exceptional process design concept delivers high hydrogen yields and highest thermal efficiency.

✓ Ultra-low emissions with EnviNOx®

Our proprietary EnviNOx® technology – recognized as BAT (Best Available Technology) for NO_x/N₂O emission reduction by the EU – sets standards in clean ammonia cracking.

✓ Flexible operation

Engineered to operate at partial loads, the system adjusts to variable hydrogen demand or feedstock availability.



uhde® ammonia cracking demo plant

thyssenkrupp Uhde is implementing a demonstration cracker to de-risk the new technology with commissioning planned for the end of 2026. Some key facts:

- Capacity of 28 mtpd ammonia
- Commercial size tubes for easy up-numbering to large scale application
- Flexibility in firing (ammonia, cracked gas/ hydrogen and/or natural gas)
- Test of different catalysts, burners and construction materials

Complete hydrogen value chain from a single source

thyssenkrupp can deliver all necessary solutions for green hydrogen and ammonia production, storage, and ammonia cracking.



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OUR WEBSITE



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