Pioneering Waterjet Cutting in the Oil & Gas Industry

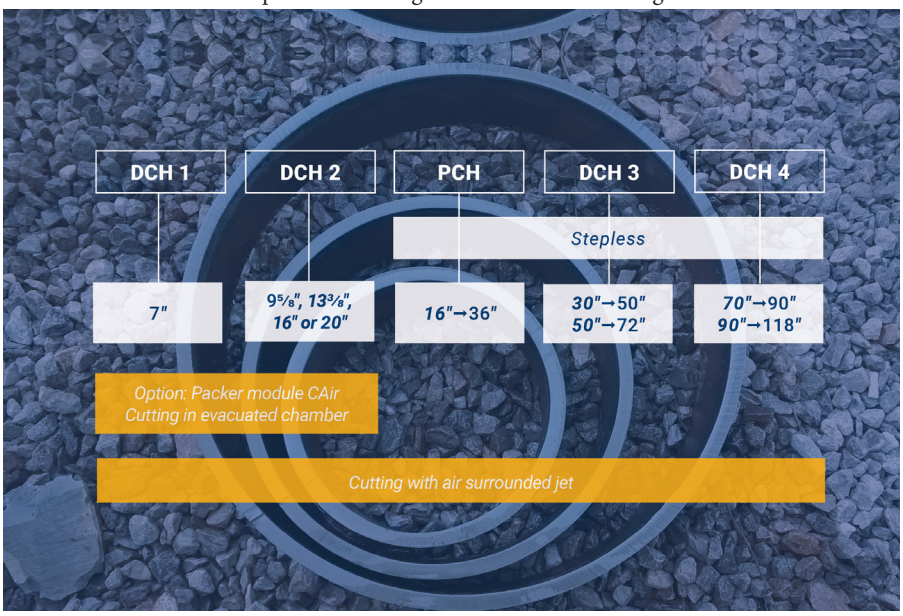
In this exclusive Q&A, we speak with ANT AG, a global leader in mobile waterjet cutting technology, to explore their extensive experience and innovative solutions in the oil and gas sector. With over 25 years of expertise, ANT AG has built a strong reputation for delivering safe, precise, and ATEX-compliant cutting systems tailored for challenging environments—from offshore decommissioning and well intervention to operations in hazardous zones. We delve into their latest advancements, including rigless technologies and specialized plug and abandonment tools, and gain insight into how their cutting-edge systems are helping clients around the world tackle complex decommissioning projects efficiently and sustainably.

OGI: Could you start by explaining ANT AG's credentials and experience in terms of your products and services for the oil and gas sector? Could you tell our readers the breadth of your experience, how long the company has been active, and its reach?

ANT AG: At ANT AG, we have been at the forefront of mobile waterjet cutting technology for over 25 years, providing safe, precise, and environmentally friendly solutions for a wide range of industrial applications. Our expertise extends across multiple sectors, including offshore oil and gas decommissioning, well intervention, and hazardous environment operations. We are recognized as a global leader in waterjet cutting, and our technology is used worldwide in offshore and onshore decommissioning projects. The key to our success has been our commitment to developing customized, ATEX-compliant solutions that meet the highest safety and operational standards.

As part of our strategic expansion, we have established a strong presence in the UK to better serve the North Sea decommissioning market. Being closer to our clients allows us to respond faster and provide more efficient support for their projects. The North Sea presents vast opportunities for decommissioning, and many of the service providers operating in this region are already our customers. It was a natural step for us to reinforce our local presence, ensuring that we can offer tailored solutions to meet the growing demands of the industry.

ANT provides Cutting Devices in different ranges.



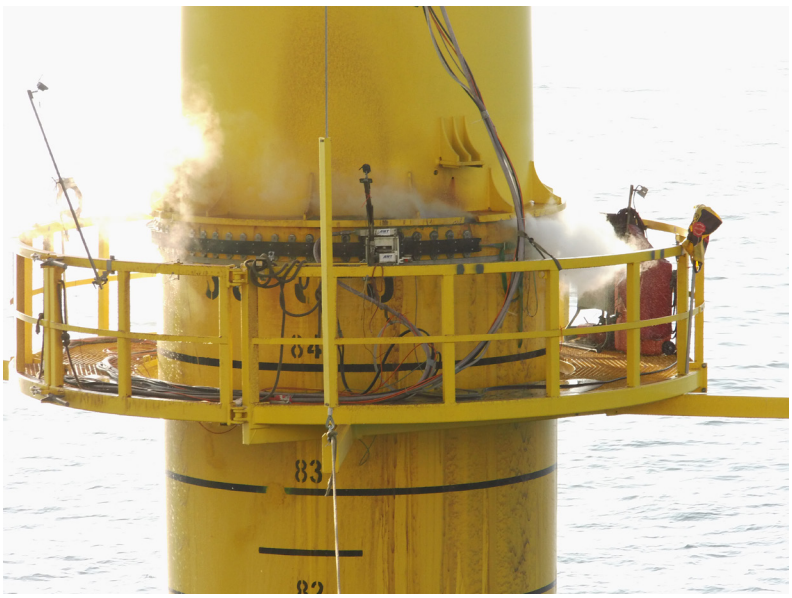
OGI: What are some of the applications of ANT's technology in hazardous areas, and are your products ATEX certified?

ANT AG: Our waterjet cutting solutions are specifically designed for use in hazardous environments, including offshore platforms, refineries, and other potentially explosive atmospheres. One of the biggest advantages of our technology is that it is a cold-cutting process, meaning it does not generate heat, sparks, or mechanical stress, which significantly reduces the risk of ignition in ATEX zones.

Yes, all of our waterjet products are fully ATEX-certified and meet the highest safety standards. Our range includes Downhole Cutting Heads and Packer modules, all of which can operate in water depths of up to 250 meters. At the heart of our technology is the Abrasive Mixing Unit (AMU), which is approved for ATEX Zone II 3G IIB T3 environments.

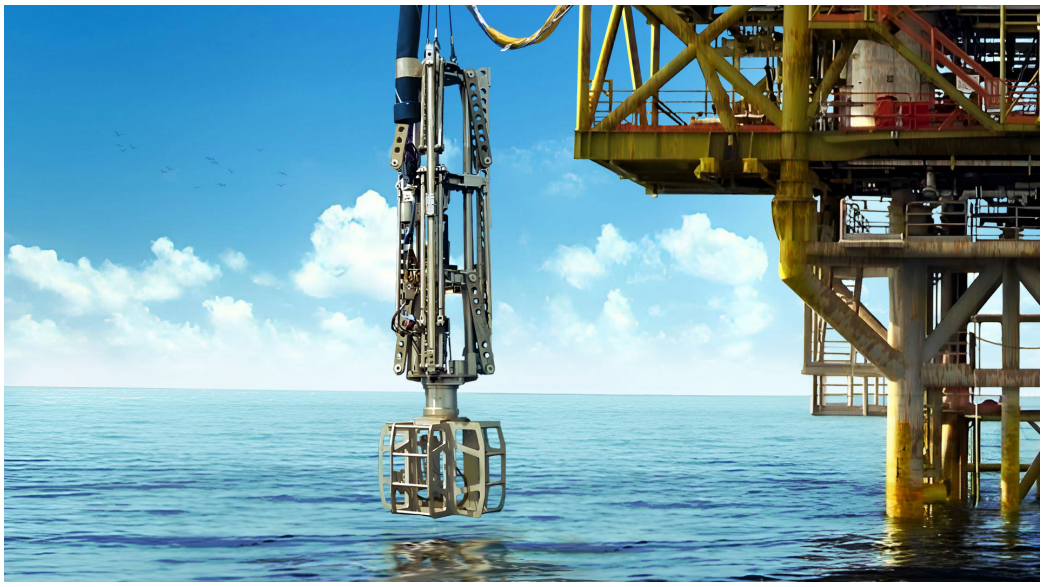
OGI: Can you talk about the work you have been doing on decommissioning projects?

ANT AG: Decommissioning is a major area of focus for us, and we have been involved in numerous offshore projects where precision cutting is essential. Our modular and mobile WAS cutting units are designed to provide flexibility in offshore, onshore, and confined-



Retrofitting Wind Turbine Monopiles with Waterjet Cutting.

ANT's DCH 4: Proven cut on 84"/2100mm – piles with 4"/100mm wallthickness in 2 hours à cutting speed 10"/250mm per min.



space environments. This allows us to support a wide range of decommissioning activities, from cutting and removing subsea structures to dismantling pipelines and platform topsides.

Our cutting systems have been used in projects worldwide to remove conductor casings, support plug and abandonment activities, and cut through heavily reinforced offshore structures with minimal environmental impact.

OGI: Can you explain the difference between external cutting and internal cutting?

ANT AG: External cutting is a process where waterjet cutting is applied from the outside of a structure, typically used for cutting pipes, casings, and other structural components. This is particularly useful for removing topside structures, platform legs, and conductor pipes in offshore environments. Our chain manipulation system is specifically designed for these applications and can handle a variety of materials, including composites and thick-walled metals.

Internal cutting is performed inside the wellbore or pipeline, typically for plug & abandonment operations. Our Downhole Cutting Heads (DCH) provide high-precision internal cuts, ensuring efficient multi-string well removal and casing separation. These systems feature real-time cutting verification and can operate in deepwater environments up to 250 meters.

For instance, our technology enables the cutting of multi-string conductors, piles, and other structures up to 5 meters below the mudline, with a cutting range of up to 118 inches in diameter. Unlike traditional section milling, our DCH series allows operators to cut through multiple casing layers in a single pass, making the process faster, safer, and more cost-effective.



Liam Toovey, Business Development Manager ANT AG.

Our internal cutting solutions are designed to minimize disruptions to surrounding structures, ensuring clean, precise, and reliable wellbore preparation for permanent decommissioning abandonment.

OGI: What type of plug and abandonment solutions do you offer?

ANT AG: At ANT AG, we offer specialized plug and abandonment cutting and erosion solutions that allow for safe and efficient casing removal, even in the most challenging conditions. Our waterjet cutting systems enable operators to cut multiple layers of casing simultaneously, ensuring a clean wellbore for permanent abandonment. One of our latest innovations is the wellANT Eroding Tool. This tool is capable of handling DHSV and flapper valve failures, collapsed tubulars, wellbore cleanout, cement removal, tubing cuts, internal packer release, and full plug removal.

Our long-term vision for the wellANT system is to make it a fully rigless solution that can operate at depths of up to 12,000 meters. The goal is to provide a viable alternative to traditional plug and perf, PWC, and section milling techniques, promoting thru tubing abandonment and reducing the reliance on heavy rigs and making the abandonment process more cost-effective and environmentally sustainable.

OGI: Can you explain why wellANT is a 'rigless' solution, and what does that mean for users?

ANT AG: Currently, wellANT still requires a rig or work over unit to enable the operation to be ran on jointed pipe for deployment, but we are actively developing a fully rigless version that can be operated via coiled tubing. This will be a game-changer for the industry, as it will eliminate the need for large drilling rigs and significantly reduce operational costs.

By going rigless, operators will benefit from simplified logistics, lower environmental impact, and greater flexibility for offshore and land-based well decommissioning. The modular design of wellANT allows it to be deployed quickly and easily, providing an efficient solution for cutting, cleaning, and removing obstructions in wells.

OGI: Finally, could you share a case study where ANT AG has helped a client with your solutions?

ANT AG: One of our most significant recent projects involved the development and deployment of the DCH 4 Manipulation Tool for offshore decommissioning. The client needed a solution that could cut large-diameter piles efficiently and safely in extreme offshore conditions.

We designed the DCH 4 tool to handle pile diameters ranging from 70 to 118 inches, using a stepless extendable cutting head and continuous clamping mechanism. With a maximum operating pressure of 2,500 bar, the tool delivered exceptional precision and performance. In one of the key operations, we successfully cut an 84-inch pile with a 4-inch wall thickness in just two hours.

The success of this project demonstrated the reliability and efficiency of our waterjet cutting technology in offshore decommissioning. By eliminating the need for explosives or heavy mechanical cutting tools, we were able to improve safety, reduce downtime, and minimize the overall environmental impact of the decommissioning process.

At ANT AG, we are committed to pushing the boundaries of waterjet cutting technology and continuously innovating to meet the evolving needs of the oil and gas industry. Our solutions are designed to provide operators with safe, efficient, and cost-effective methods for decommissioning, well intervention, and offshore structure removal. We look forward to continuing to support our clients with cutting-edge solutions that redefine industry standards.

ANT Applied New Technologies AG

T.: +49 (0)451 5 83 80-0

E: decom@ant-ag.com

W: https://www.ant-ag.com