



WELCOME TO ANT APPLIED NEW TECHNOLOGIES AG

a cut ahead

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ANT

THE GLOBAL MARKET LEADER IN WATER ABRASIVE SUSPENSION TECHNOLOGY

ANT AG

ANT AG was set up in July 1999 and since then has successfully specialised in the core areas of Water Abrasive Suspension (WAS) cutting technology and special-purpose machinery. ANT has since become a global technology leader in mobile water jet cutting, offering this process on a fixed basis for the processing industry since 2016.

We continue to maintain our innovative edge thanks to our intensive research and development work, thus ensuring that our customers will always receive the very best tools from us for their cutting work.

ANT AG is able to call on professional and highly motivated employees. The training and experience as well as the personal commitment of each individual guarantees the high quality and functionality of our systems and their successful application at the customer's site. We ensure our technological know-how by having a great proportion of our staff as engineers along with numerous international patents.

+ CUTTING IN INDUSTRIAL PLANTS



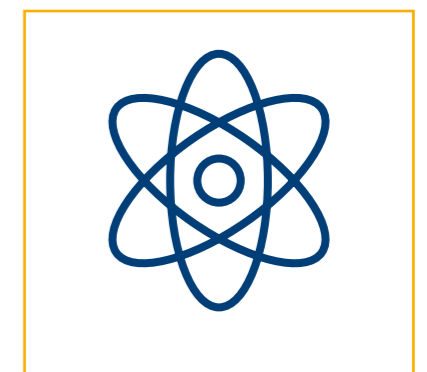
+ REPAIR AND DISMANTLING OF OFFSHORE STRUCTURES



+ TECHNOLOGY TO DIFFUSE EXPLOSIVES



+ REPAIR AND DISMANTLING OF NUCLEAR POWER PLANTS



FLEXIBLE AND SECURE SOLUTIONS WITH THE WAS CUTTING PROCESS

BE SURE OF AN INDIVIDUAL SOLUTION



Heat build-up, excessive material abrasion, deformation, huge space requirements or a risk to human life are all unwanted negative implications of conventional cutting techniques. However, you can avoid all of these issues with our systems, all thanks to the Water Abrasive Suspension (WAS) cutting process developed by ANT and ready for the market.

Industrial companies and nuclear power plants, for example, can benefit from our engineering in hardware and software around this technology – including in explosive and contaminated atmospheres as well. The offshore industry makes use of our systems for cutting tasks, both over land and under water.

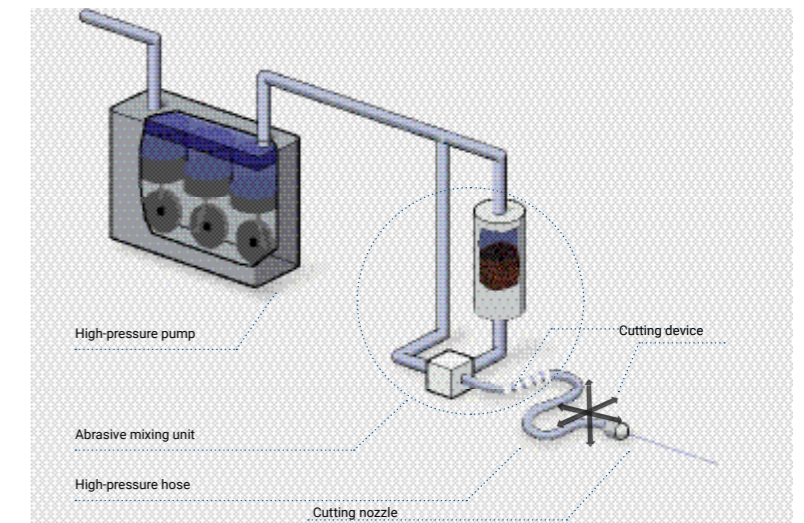
Cold cutting from a safe distance is also an excellent option to be used in explosive ordinance disposal measures or diffusing explosives.

TECHNOLOGY - UNIVERSALLY AVAILABLE AND COST EFFECTIVE

ANT's Water Abrasive Suspension (WAS) cutting process involves cutting using a high pressure water jet and a sharp-edged abrasive agent – preferably garnet sand. The different pressure ratings and nozzles are tailored specifically to the material to be separated. Pressure of up to 2500 bar, which is pressed through a hard metal nozzle of between 0.5 and 1.3 millimetres in diameter, is currently possible. This means that even high-strength steels and reinforced concrete up to a metre thick, as well as a variety of other tough-to-cut materials and sandwich structures can be cut in a safe, environmentally friendly and cost effective manner.

Our WAS systems are fitted with a high pressure pump, an abrasive mixing unit, a high-pressure hose and a cutting nozzle, along with a cutting device as an optional extra. This allows you to control separating processes from a safe distance in order to prevent any danger for operating staff in particular.

Our WAS cutting process is certified by the Federal Institute for Materials Research and Testing (BAM) for work in explosive atmospheres.



ANT-WAS System & WAIS System compared together - cutting is also possible in sensitive areas thanks to ANT's technology



+ CUTTING IN INDUSTRIAL PLANTS

In the industrial sector, we specialise in the dismantling and removal of sensitive and potentially explosive industrial plants in the chemical and petrochemical industry. With ANT solutions, it is also possible to make repair cuts after incidents, as well as cutting man and inspection openings into pipelines, tubes and containers. Our cold cutting technique is vibration-free and enables particularly economical cutting and separating work, even when production is running, while observing all factory and safety regulations as well. Our WAS systems also ensure increased efficiency when used in onshore operations. They can be used to cut vertical and horizontal boreholes in existing oil and gas wells quickly, safely and at a fraction of the cost incurred when using conventional processes.



+ REPAIR AND DISMANTLING OF OFFSHORE STRUCTURES

Remote Operated Vehicles (ROVs) and remote controlled cutting devices from ANT permit safe repair and dismantling of oil and gas platforms without the need for deep-sea divers. Even in explosive atmospheres, entire plants or individual parts such as casings, pipelines and steel constructions can be repaired or dismantled in an environmentally friendly manner with the help of ANT solutions. Even interior cuts in narrow pipes (as from 40 millimetres) and cutting work at underwater depths of up to 600 metres are possible. Extremely high-performance equipment is needed for offshore use. Our 2,500 bar WAS system – the largest and most powerful in the world – is therefore particularly in demand for offshore work.



+ TECHNOLOGY TO DIFFUSE EXPLOSIVES

In 83 countries around the world, millions of people suffer from the effects of mines and unexploded bombs, mainly left behind from wars, civil strife or other conflicts. Thanks to cold cutting methods, our contact-free cutting-guide systems and also remote operation of the equipment from a safe distance means that the risks involved in explosive ordnance disposal (EOD) can be considerably reduced. Our flexible, mobile WAS systems have also proven their worth with army, police and special deployment services all over the world in the area of improvised explosive device disposal (IEDD). We offer the only mobile, self-contained WAS system combining high-pressure pump and abrasive mixing unit in one – the mini MACE, which is specifically useful for defence or to combat international terrorism.



+ REPAIR AND DISMANTLING OF NUCLEAR POWER PLANTS

ANT's WAS technology has proven to be especially effective for the dismantling of reactor pressure vessels (RPVs), control rods, heat exchangers, large scale assemblies and other components of nuclear power plants. Fully remote controlled manipulation allows you to work in the "hot area" above and below water. As for this specific application area, the ANT systems can be fitted with water filtration systems to filter abrasives out of the WAS cutting jet for underwater applications.



ENSURING SAFETY IN USE

CONSTANT DRIPPING WEARS THE STONE

WAS – AN OVERVIEW OF THE BENEFITS



+ EASY TO SET UP

- simple hosing to the cutting nozzle
- easy and lightweight handling thanks to low restoring forces
- compact cutting devices enable remote separating processes

+ FLEXIBLE

- ability to cut all materials
- steel up to 1000 mm
 - ↳ cutting in air
 - ↳ underwater cutting (realised depth up to 600 m)

+ EFFICIENT

- low abrasive consumption
- high cutting speed
- high efficiency
- no overspray

+ SAFE

- no air in the jet
- contactless operation (up to 2 km away)
- can be used in ATEX zones; BAM certification
- can be used in explosive atmospheres; BAM certification

+ CUTTING QUALITY

- cold-cutting process
- no heat affected zone
- no deformation
- no structural changes
- no hardening in the cutting area
- good cutting quality - no reworking required
- narrow kerfs



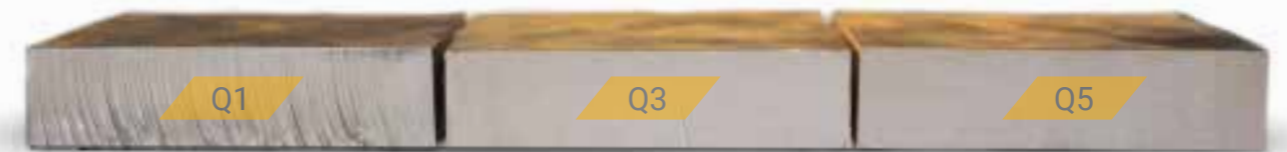
SUCCESSFUL CUTTING WITHOUT THE RISK

WAS - STILL DEVELOPING, EVEN TODAY



EXCEPTIONAL PRODUCTS - ANT Applied New Technologies AG is a proud winner at the Blechexpo Awards 2017, all thanks to its "ConSus" innovation. ConSus also picked up another award in 2018 in the "Forming technology" category of the prestigious Best of Industry Award. The ConSus system is an abrasive mixing unit, which continuously mixes the abrasive agent with the pressurised water using a worldwide patented sluice method.

Facing new manufacturing challenges? Want to be quicker and more precise than your competitors? Do you have tougher or harder materials, composites or ceramics? Then you need ConSus!



Cutting qualities for the industrial sector using the "ConSus" product

THE ANT QUALITY GUARANTEE

Our "Engineering made in Germany" is a global success and stands for high quality, reliability and an ability to solve problems. Providing intensive customer support, including the rapid delivery of high-quality spare parts, is a matter of course for us.

ANT products and solutions have proven themselves in the most varied of application areas. But that's not enough for us. Our innovative capacity will also shape our product portfolio in future as well. As a result, we are continuously improving our cutting systems and are therefore able to offer our customers an increasing number of new possible applications. Streamlined structures with short decision-making paths and a high level of flexibility throughout the entire company form the basis of our work tailored to the needs of our customers.



Marco Linde, COO



Franz Eder, CEO



THE WATER JET CUTTING EXPERIENCE

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References



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