

PENETRATING GAS CYLINDERS

WITH WATERJET TECHNOLOGY



OPERATORS

- Fire brigades
- Intervention Units
- Civil Protection

CHALLENGE

Safe & controlled penetrating of gas cylinders to prevent hazards

SOLUTION

Water Abrasive Suspension Cutting with specialized remote manipulation systems

INTRODUCTION & PROJECT OVERVIEW

Compressed gas cylinders that have been exposed to fire or extreme heat can pose a significant hazard, even if they appear undamaged on the outside. The structural integrity of the cylinder may be compromised, leading to an unpredictable risk of sudden rupture or explosion. In such cases, safe transport or manual handling is nearly impossible and poses severe dangers to personnel.

To address this critical issue, we conducted a case study in collaboration with the Vienna Fire Department. Using our miniMACE plus two-axis cutting table, we successfully and safely cut open several gas cylinders, demonstrating a reliable and controlled method for handling potentially hazardous cylinders. Our approach ensures that these high-risk objects can be neutralized without exposing personnel to unnecessary dangers.



GET IN TOUCH WITH US

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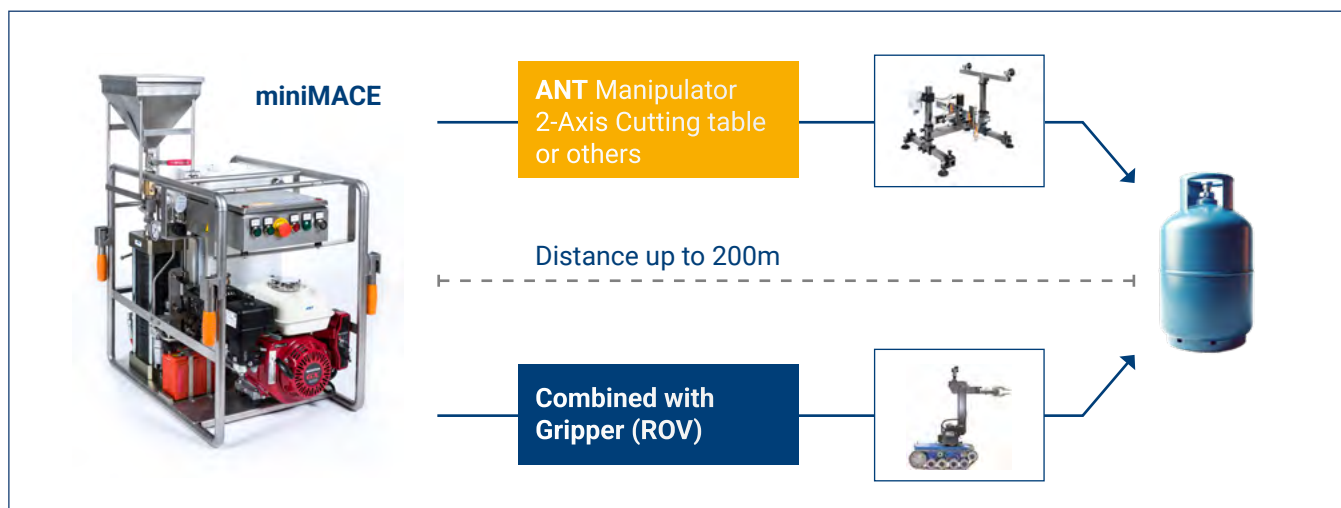
KEY ADVANTAGES

- /// **Significant risk reduction** – Eliminates the danger of uncontrolled gas release or explosion.
- /// **Remote-controlled operation** – Ensures safe handling from a distance using a control system.
- /// **Compatible with various ROVs and the ANT camera system** – Enabling precise monitoring and operation in hazardous environments.
- /// **Flexible setup options** – Adaptable setup and ready for use within a very short time.
- /// **Cold cutting technology** – No heat generation, eliminating the risk of ignition or additional hazards.

CONCLUSION

By precisely penetrating the outer wall of the gas cylinder using a high-pressure water-abrasive suspension, a controlled degassing or pressure relief can be achieved. Depending on the material and wall thickness, this process takes only a few seconds and can be carried out remotely using an advanced control system, ensuring maximum safety.

This innovative approach provides a **safe, efficient, and highly adaptable solution** for handling damaged or fire-exposed gas cylinders, significantly improving operational safety for emergency responders and disposal teams.



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