

Focus on materials technology for future demands

Aker Solutions is co-funding a research programme together with the Norwegian University of Science and Technology on the subjects of materials technology and mechanical engineering. The aim of the programme is to understand and assess high-performance materials for use in high pressure, high temperature and corrosive environments.

Materials technology is a topic that cuts across all business areas in Aker Solutions. With continuously increasing demands on our equipment in oil and gas fields, such as higher pressures and temperatures, harsher environments, and installation at greater depths, there is a need to evaluate high-performance material solutions which can withstand these challenging conditions.

“To be recognized as an innovative technology company means one has to understand the fundamentals as good as, or even better than the competition. In some instances the fundamentals are not well understood by industry nor academia, and research is required to take the subject matter to the next level. Aker Solutions is very happy to contribute to expanding the subject matter knowledge when this has a potential to help secure a technology leadership” says Kjartan Pedersen, adviser for Research & innovation in Corporate Technology.

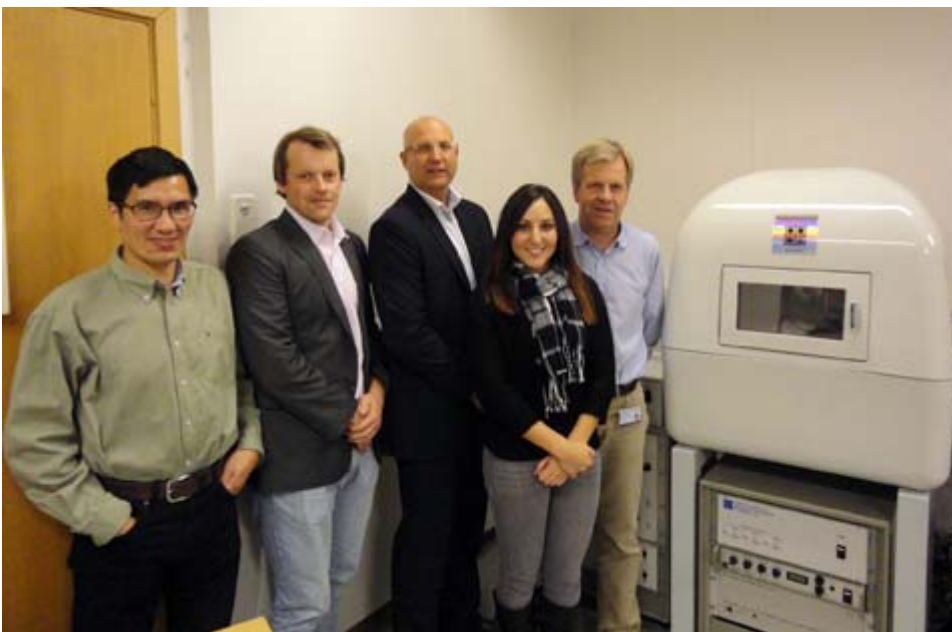


Photo: professor Zhiliang Zhang (NTNU), Jim Stian Olsen (Aker Solutions), Kjartan Pedersen (Aker Solutions), Krista Amato (Aker Solutions), professor Roy Johnsen (NTNU).

The collaboration

The research programme is titled “Integrity of Ni-Alloys for Subsea Applications (INASA)” and it is sponsored by Aker Solutions’ Innovation Board. The Materials Technology and Mechanical Analysis department in Subsea and the Norwegian University of Science and Technology (NTNU) are collaborating on the project. It will be executed at both the Department of Engineering Design and Materials and the Department of Structural Engineering at NTNU. The INASA research programme is organised as an activity under the frame agreement between Aker Solutions and NTNU. The intention is to educate two PhD candidates in the project.

The goal

The main goal of the INASA research programme is to gain fundamental knowledge on the mechanical behaviour of nickel alloys when they are subjected to high pressure, high temperature and corrosive environments, while developing tools to help our engineers assess performance and safe use of nickel-alloys for high performance applications. The results from the project are expected to help Aker Solutions position itself to meet increased demands from clients and the challenging conditions to which our equipment is exposed.