



146542 - Robotic Inspection and Predictive Maintenance for Industrial Assets

www.hibot.co.jp

Member of the Sprint Robotics and of the Deepstar



Industrial Boilers

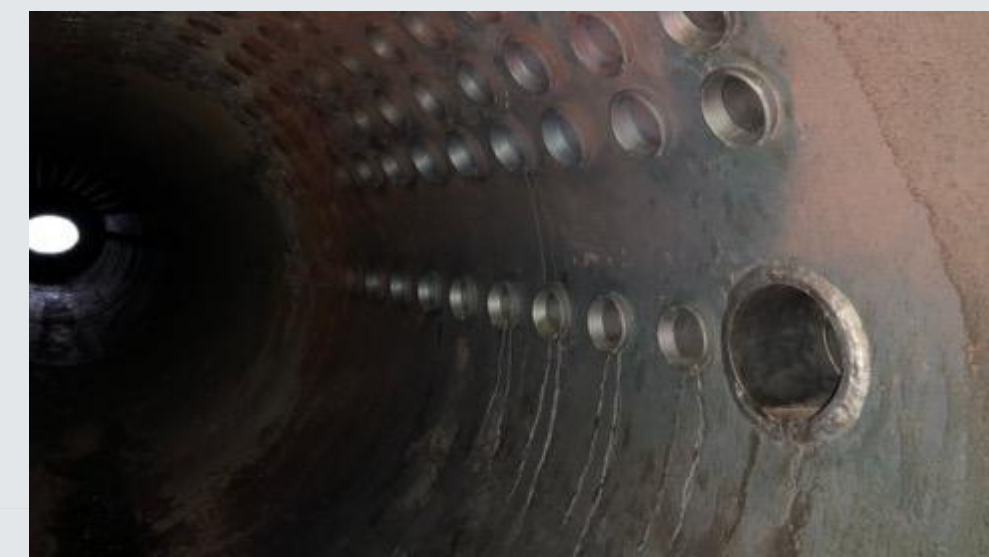
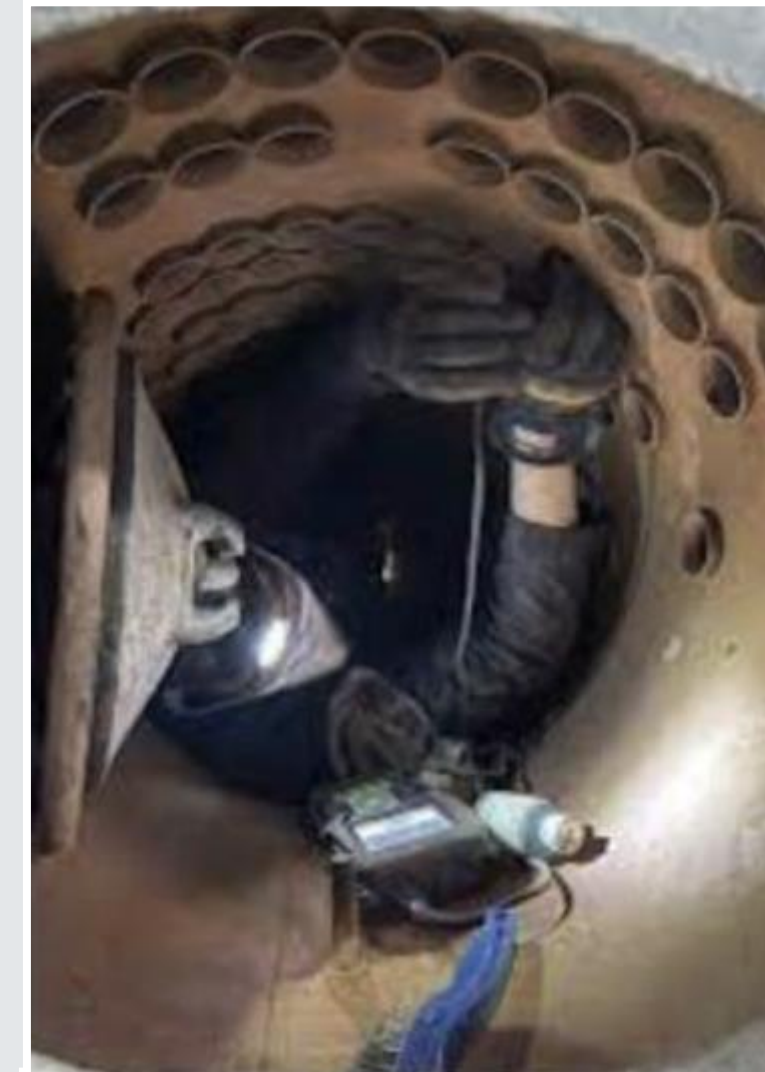
Industrial boilers, which are critical assets for chemical and oil and gas plants, energy generation facilities, and municipal waste-to-energy infrastructures.



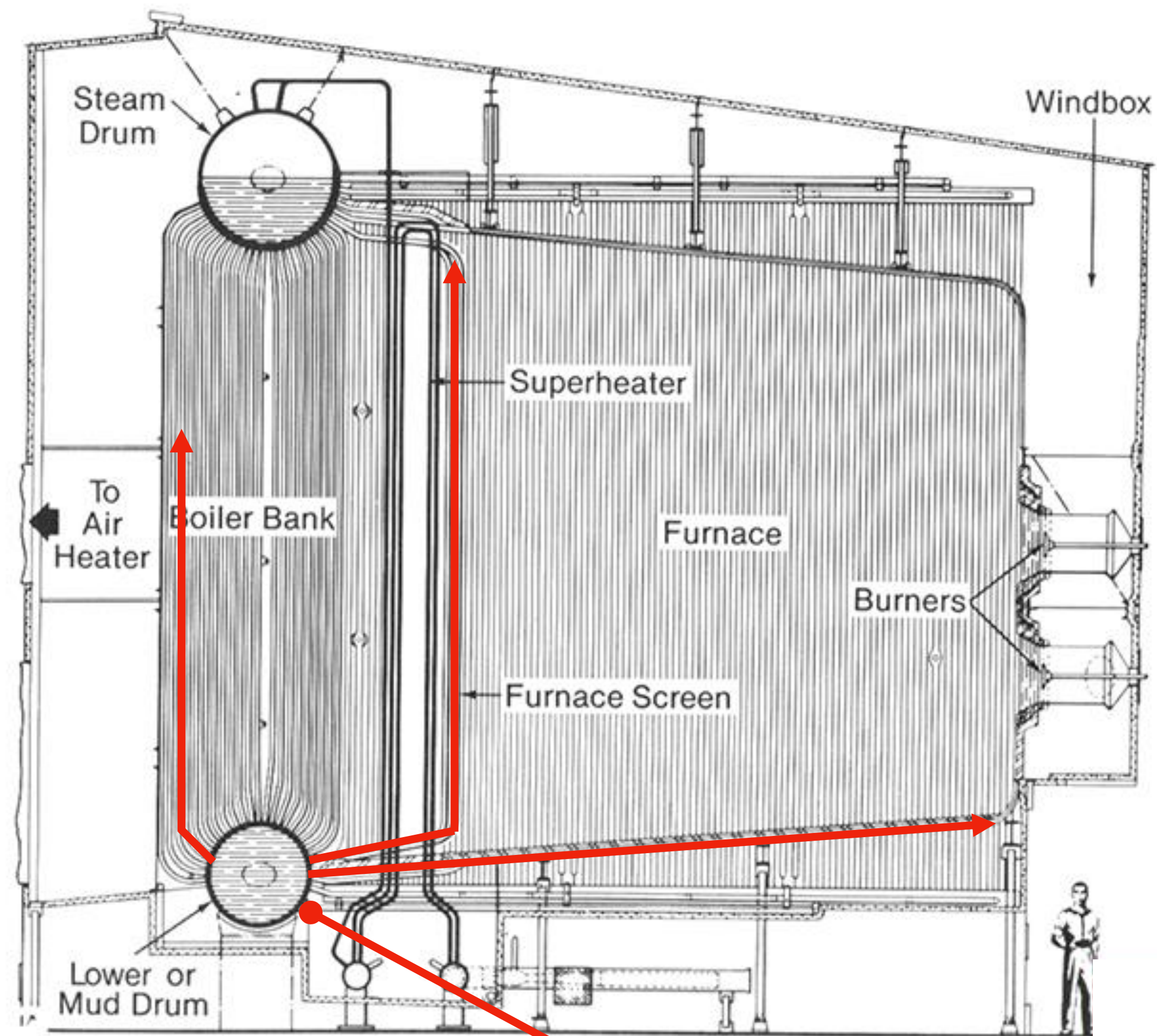
These assets need to be inspected regularly.

Strict regulations are in place for the inspection and maintenance of these assets, however operators are forced to enter confined spaces

Wall metal thickness of each pipe has to be carried out. However only a 10% of data can be collected

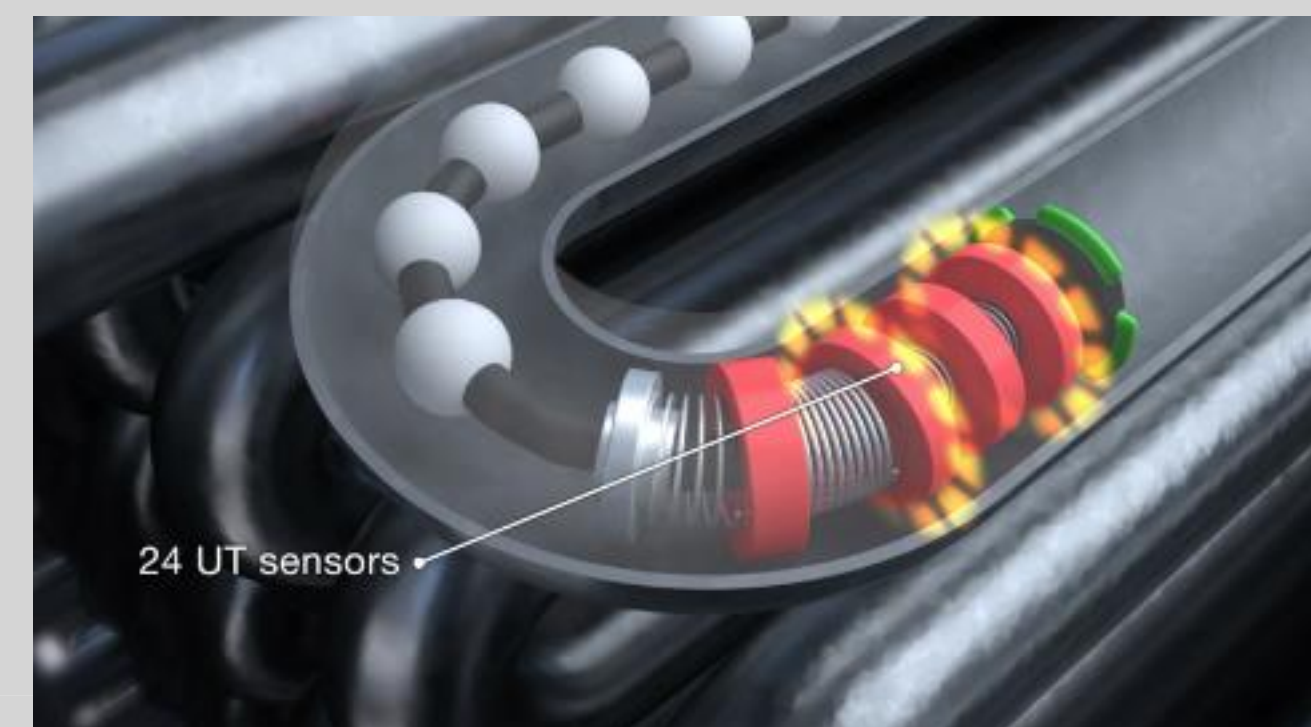
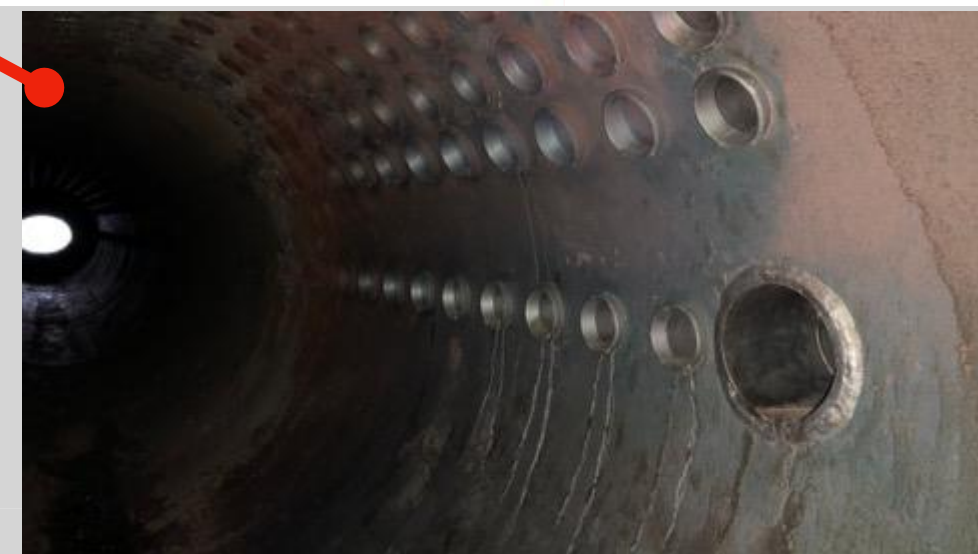


Project



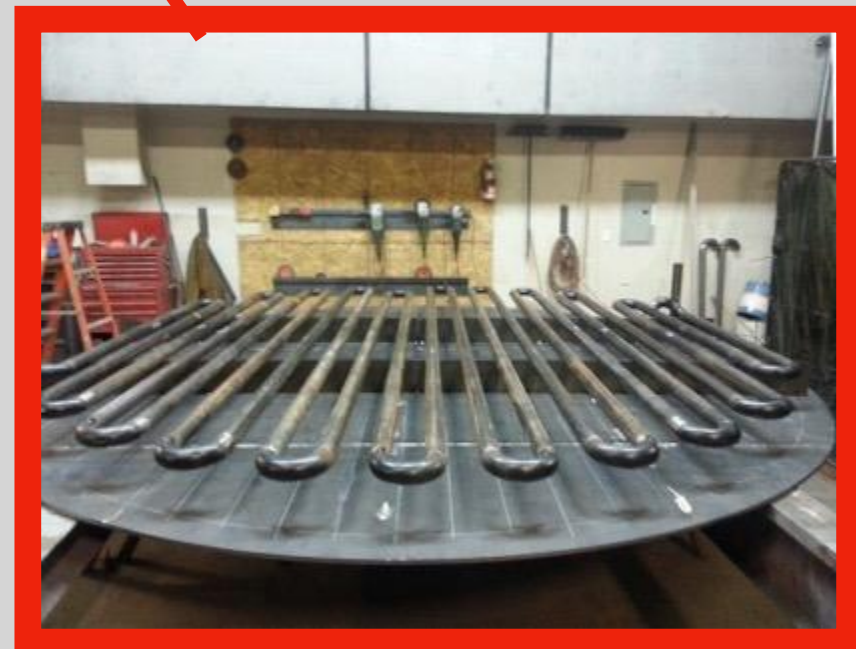
This project aims at the development of a system capable to measuring each pipe wall metal thickness accessing the asset from the lower drum or water drum

A mobile robotic platform operating inside the water drum deploys a specialized sensor probe capable of navigating tight bends while capturing internal pipe images and performing wall metal thickness measurements along each pipe.



Project

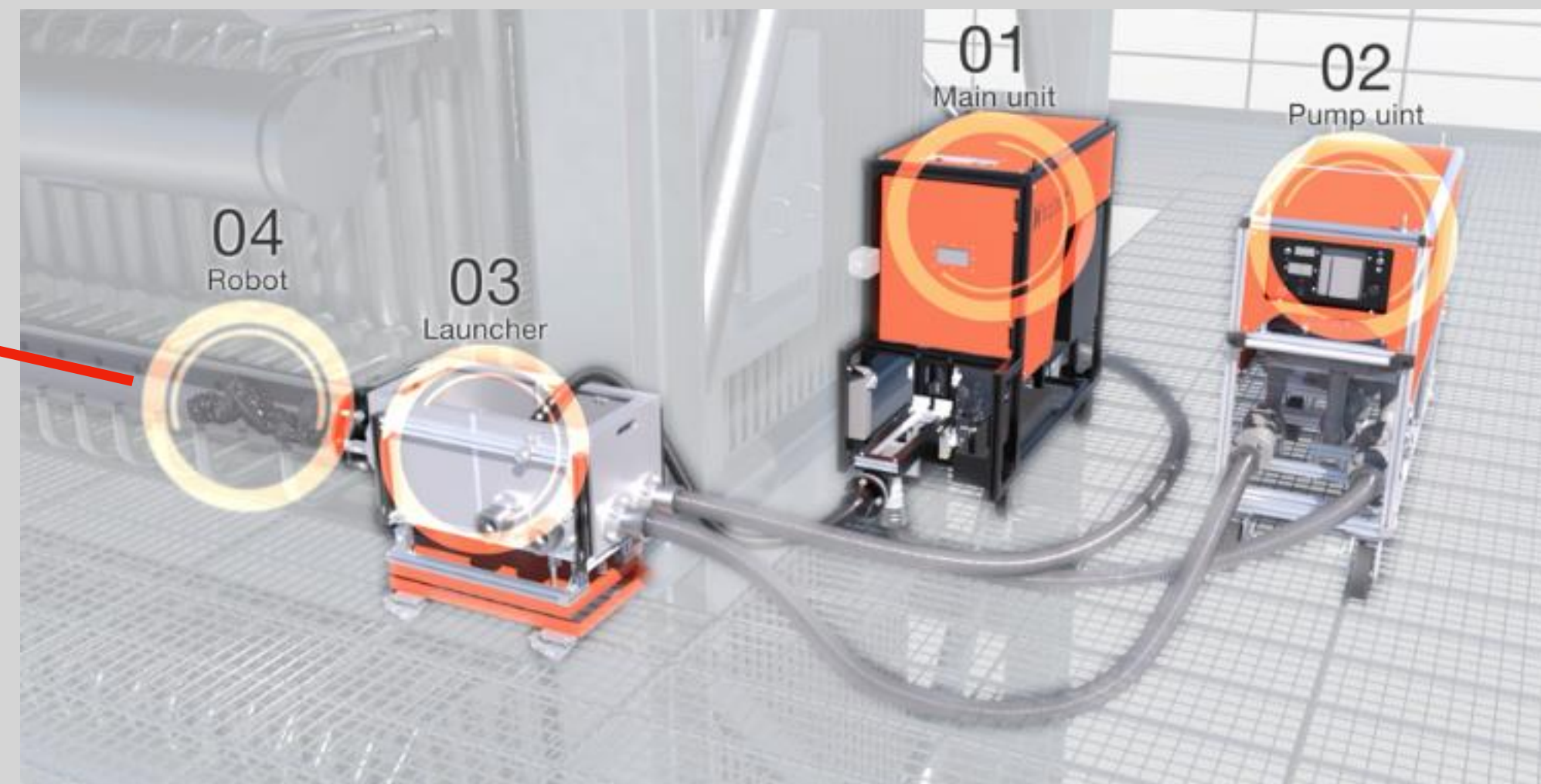
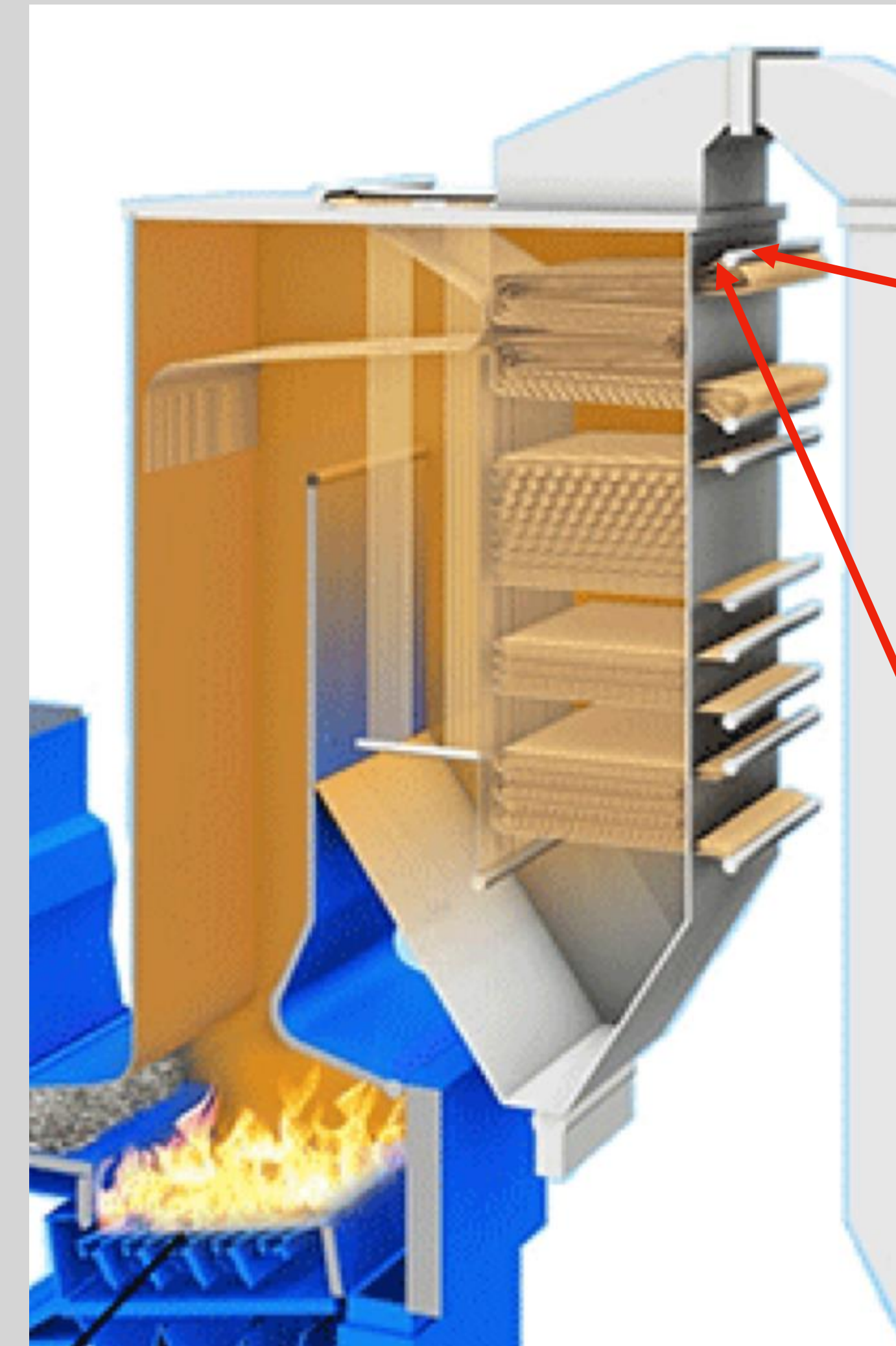
This solutions will open up the opportunity to inspect heating coils of storage tanks and heat exchanger assets



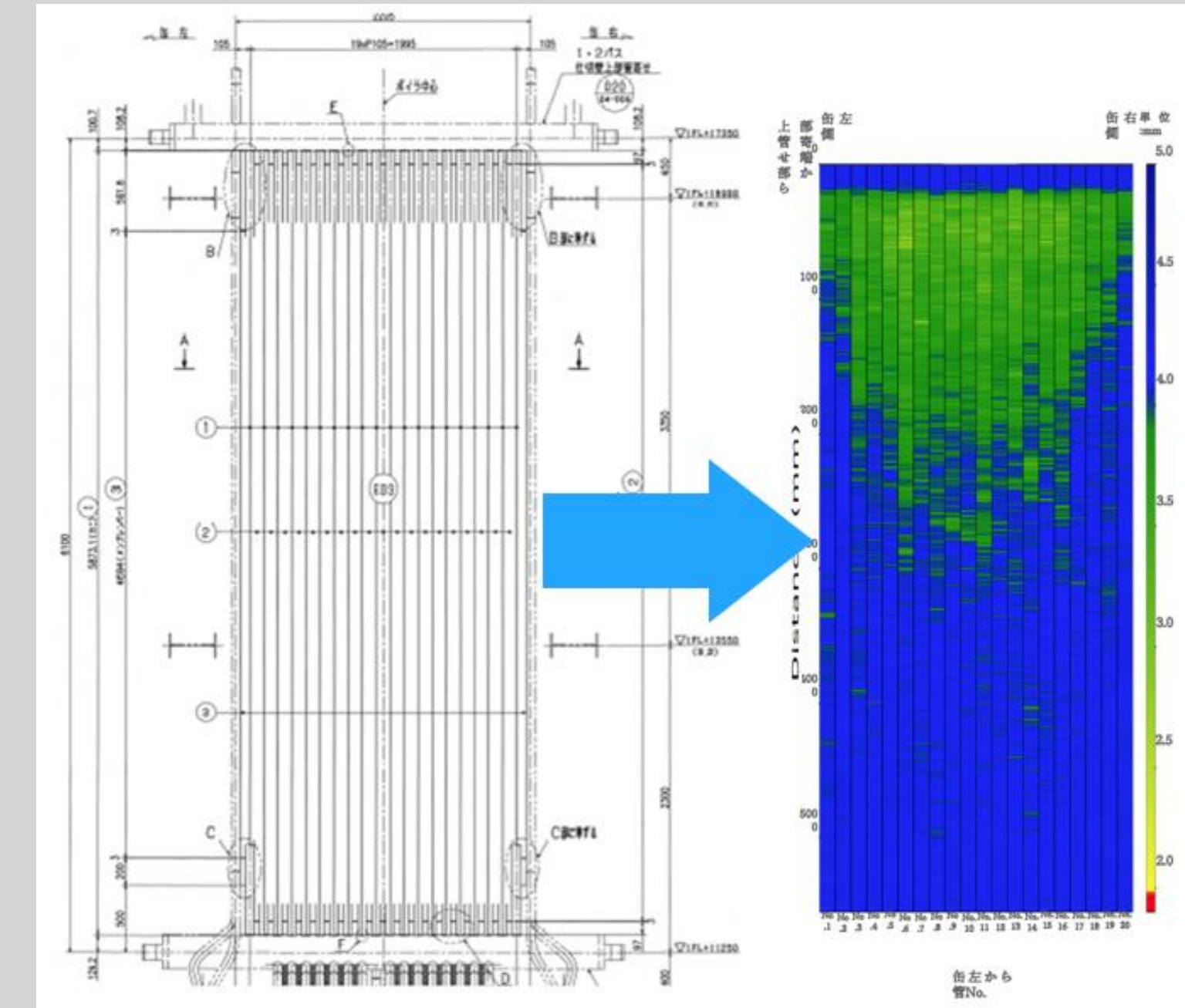
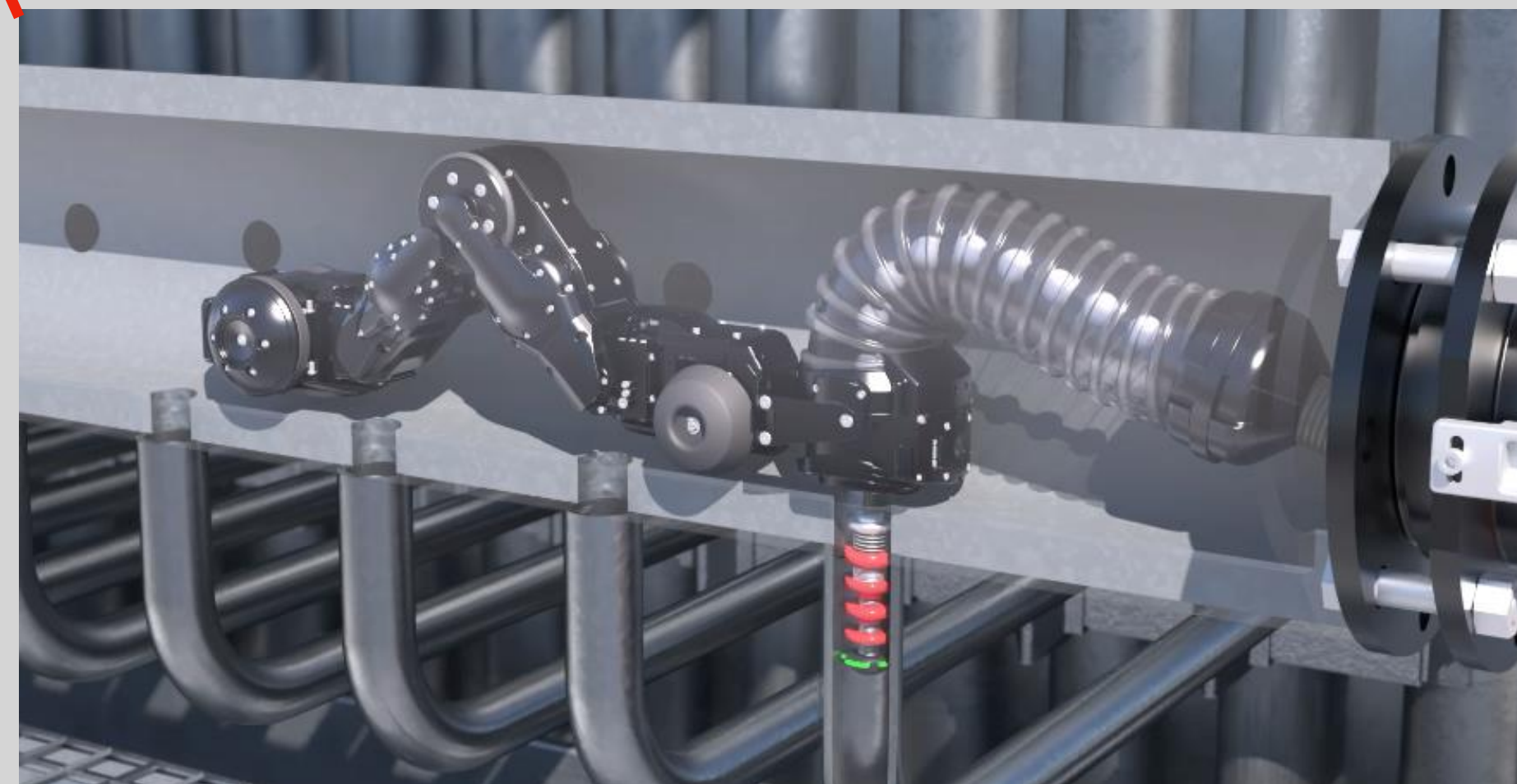
Heating coil inside storage tanks

Previous technology expertise

Hibot is already deploying as a service a system for inspection of industrial boilers



Console and robot platform which access the modules of boilers



Each pipe wall metal thickness measurement is mapped over the boiler drawing

Partners

Partners such as chemical and oil and gas plant owners, industrial boiler manufacturers, inspection and maintenance service providers, as well as municipalities operating waste-to-energy and industrial boiler facilities for waste treatment and energy generation. They would bring the know-how on what and why should be measured as well the support piloting and validating the developed solution in real ensuring relevance to safety, downtime reduction.

Technical partners working on sensing technologies such as ultra sonic transducers capable of costumizing them inline with the design needs.

Partners providing digital twin solutions would be a great addition to the consortium