Robot heads for North Sea oil rigs in 'world first' scheme

Test to pave way for using autonomous machines for dangerous operations offshore instead of humans

An autonomous robot will be deployed to an offshore oil and gas platform in the North Sea later this year, in a first for the sector.

The £4m project's backers said the move was designed to take humans out of dangerous and dull jobs, and reinvent oil and gas as an industry of the future.

Under the pilot scheme, the robot will initially be deployed at the French oil firm Total's gas plant on Shetland before being sent to join the 120 workers on the company's Alwyn platform, 440km north-east of Aberdeen.

The machine, made by Austrian firm Taurob and supported on the software side by German university TU Darmstadt, will be used for visual inspections and detecting gas leaks.

Rebecca Allison, asset integrity solution centre manager at the publicly-funded Oil and Gas Technology Centre, insisted autonomous robots would not be used to cut the wage burden of offshore workers who are paid a premium for working in tough, remote conditions.

“It’s not taking their jobs. It’s giving people the choice to do different jobs. We will still need a human workforce. It’s about allowing people to move into onshore positions,” she said.

According to Allison, it will still be cheaper to send a human to a rig rather than a robot.

“We are not saying robots are going to take over in the next six months. This is a long-term investment in the industry,” she explained.

The North Sea oil and gas industry has already been hit hard by the oil price slump of 2014-16, and the number employed in the sector fell 4% last year to 300,000.
The prospect of an army of robots running Britain's oil and gas production is a long way off, for now. "This is not going to happen tomorrow," Allison said. She believes it will be at least five years until such robots become commonplace offshore.

The trial with Total will involve a single robot, to see how it handles the harsh environment and works alongside people. Unlike Daleks, it can manage stairs, though it will need maintenance and plugging in to recharge.

Oil and gas production ranked 22nd out of 40 industries based on their probability of being automated in a recent report by the OECD, which found automation will take fewer jobs than previously thought.