

## Function

- Our drone uses cameras, thermal cameras, and ultrasonic sensors to inspect materials, check flaws in heat distribution, and detect corrosion
- Our crawling robot compliments the drone as it's deployed along walls to check for corrosion where the drone cannot reach.

## Structure

- Our drones all use the same frame, however depending on the functionality of a particular drone it is equipped with different sensors or tools such as cameras, thermal cameras, and ultrasonic sensors.
- Similar to drones, the crawling robots all use the same frame and have different sensors based on their location/job. They carry out eddy current testing, magnetic particle inspection, and ultrasonic testing.

## Images



## Benefits

- Provides added safety to workers and ensures longevity of equipment
- Platforms can become more eco-friendly with more knowledge of carbon output and inputting ways to minimize it
- Would help the company be more time and cost efficient in unnecessary or postponed turnarounds
- Creates new job roles which leads to growth in the economy

## Sources

- Agbezuge, Lawrence. "5 Most Popular Inspection Techniques for the Oil and Gas Industry." Industrial Skyworks, 24 Aug. 2017, <http://info.industrialskyworks.com/blog/5-most-popular-inspection-techniques-for-the-oil-and-gas-industry>
- Gilbert, Daniel. "Oil Rigs' Biggest Risk: Human Error." The Wall Street Journal, Dow Jones & Company, 19 Apr. 2015, [www.wsj.com/articles/rig-safety-five-years-after-gulf-spill-1429475868](http://www.wsj.com/articles/rig-safety-five-years-after-gulf-spill-1429475868).
- Husseini, Talal. "The Future of Oil and Gas: Eight Bold Industry Predictions." Offshore Technology@2x, 28 Sept. 2020, [www.offshore-technology.com/features/the-future-of-oil-and-gas-predictions/](http://www.offshore-technology.com/features/the-future-of-oil-and-gas-predictions/).
- Kitwood, Dan, and Getty Images. "Getting Ready for Robot-Operated Oil Rigs." CNBC, CNBC, 22 June 2020, [www.cnbc.com/advertorial/2019/08/12/getting-ready-for-robot-operated-oil-rigs.html](http://www.cnbc.com/advertorial/2019/08/12/getting-ready-for-robot-operated-oil-rigs.html).
- "Please Enable Cookies." StackPath, 18 May 2019, [www.offshore-mag.com/drilling-completion/article/16790944/otc-2019-transocean-ceo-describes-future-drilling-rig-technology](http://www.offshore-mag.com/drilling-completion/article/16790944/otc-2019-transocean-ceo-describes-future-drilling-rig-technology).