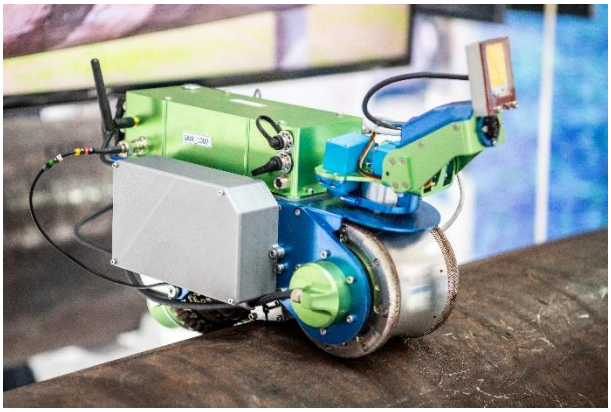
# Versatile and Effective Inspection Solution

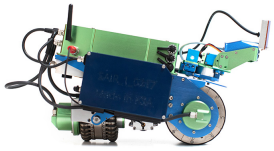
Designed to work on wide range of structures, SAIR is capable of measuring remaining wall thickness of tanks, vessels, pipes and other steel assets in difficult-to-access locations.

**SAIR** is a wireless magnetic crawler robot capable of conducting ultrasonic and visual inspection on various assets like tanks, vessels, pipes and elbows. Its unique and patented design makes it **highly maneuverable** on curved surfaces from **8" in diameter up to a flat plate**. In addition, SAIR is equipped with the gas sensors for detecting hazardous and flammable gases.

**Inspection of elevated pipes** and hard to access locations has never been more convenient. With SAIR, there is **no need for costly scaffolding** and the whole system weighs less than 15kg, which makes it ideal for **On Stream Inspection** (OSI) and also during **Testing and Inspection** (T&I).

The robot is controlled by **a rugged tablet** where reliable UT thickness data (A-scan and B-scan) can be collected and visualized in real-time on a **10.1" sunlight viewable touchscreen.**





SAIR was developed in Saudi Aramco and has been tested and piloted in several Aramco facilities.

## SAIR

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|---|---|---|
| **Dimensions** | Length<br>Width<br>Height | 325mm<br>180mm<br>215mm |
| **Weight** | 9.5kg | |
| **Max Driving Speed** | 140mm/s (8.4 m/min) | |
| **Gas Sensors** | $CH_4$, $CO_2$, $O_2$ | |
| **UT** | Dry coupled wheel probe<br>Thickness 4mm to 40mm | |
| **Camera** | 1 camera, adjustable pan & tilt | |
| **LED** | Adjustable brightness LED | |
| **Battery** | Typical life 2 hours | |
| **Communication** | Wireless up to 100m | |
| **Operating Temp** | 0°C … +50°C | |

## Control Module

| | | |
|---|---|---|
| **Dimensions** | Length<br>Width<br>Height | 192mm<br>283mm<br>21mm |
| **Display** | 10.1" (25.5cm) | |
| **Weight** | 1.3 kg | |
| **Battery** | 8-hours battery life | |
| **IP rating** | IP65 | |
| **Operating temperature** | -10°C … +50°C | |