



Partnering with SGS to help eliminate the need for confined space entry

Recently, we partnered with leading global inspection company SGS in Pakistan to carry out a Level 3 inspection and UT testing of horizontal, underground fuels tanks. Not only was the inspection safe – with no human entry into a confined space required – we got it done in under 4 days.

Safety first

The end client's requirements were clear: there was to be no safety risk whatsoever involved in the inspection of a fuel holding tank that had been sunk into the ground 15 years previously. A Level 3 inspection and UT testing was required to determine the condition of the 5m x 15m horizontal tank. Using a robot to carry out such an inspection ensures maximum safety for the inspectors involved, as no human entry into the tank is required.

However, their large 1-meter-wide robot for UT testing was deemed unsuitable by SGS. Such a robot would be unable to measure surface thicknesses around vessel furniture such as nozzles and pipes, in extensions or of uneven tank surfaces. So, SGS turned to Invert Robotics to conduct the inspection using our Hybrid 2220 robotic platform.

Minimizing inspection time

An added benefit of using our robotic platform is the minimal inspection time it takes to get all the required readings. Whereas a traditional human-entry inspection method would have taken up to 2 weeks with multiple people involved, we were done in under 4 days.

API inspector

SGS brought in their own API inspector to ensure all our readings and findings were fully in keeping with their client's requirements. After measuring the vessel's thickness, we checked the condition of

the internal epoxy coating by way of spark testing. Our robotic platform was equipped with a 300mm brush that swept the coating.

Partnering for mutual success

For us, a successful partnership equals true added value to all partners. Our technology helped SGS Pakistan fill in the gaps where their (larger) robot was not able to reach vessel areas that we were. In doing so they were able to offer value added inspection services to their clients, thereby boosting their competitive position as service provider.



Technical Information

Vessel type	Aviation fuel tank
Vessel size	5m x 15m
Vessel material	Steel with epoxy internal coating
Robot platform	Hybrid 2200
NDT	UT and spark testing