CASE STUDY

COS TANK 260 FEET – SONAR ONLINE

✉ sales@sonomatic.com

🖥 www.sonomatic.com

SONOMATIC

INTRODUCTION

An 80 metre Diameter Crude Oil Storage (COS) Tank was required to have an Online robotic Tank Floor Inspection conducted to extend the endorsement as the tank was due major overhaul but could not be removed from service due to operational ullage requirement.

OUTCOME

Just over 3 years later the tank was removed from service and internally inspected. The results of the two inspections were as follows:

Item	Out of Service	Robotic In-Service	DELTA
Tank Nominal	7 mm	7 mm	
Tmeasured April 2017		4.8 mm	
Statistical Prediction on Tmin		3.55 mm	
CR Conservative case	0.339 mm/yr.	0.323 mm/yr.	0.016
Tminimum Jul 2020	2.20 mm	2.53 mm	0.33
% Loss from Nominal	68.57 %	63.91%	4.66

The In-Service Robotic Inspection of the 80m Crude Oil Tank with sludge up to 1m provided data that when projected forward to the time of the Out of Service UT was deemed to be incredibly accurate and comparable. A difference of 0.33 mm could be considered to be within the uncertainty of a manual UT reading and the percentages difference between the two methodologies was less than 5% using the HOIS Statistical Analysis of Corrosion Data.