

CATHODIC PROTECTION PIPELINE SURVEY

Workscope

Stork was contracted to carry out a Cathodic Protection (CP) survey on a 22" oil pipeline, in the North Sea.

Solution

Stork utilised its in-house CP equipment and experienced technicians to carry out a continuous proximity profiling CP survey. The contact readings were used to gain valuable and accurate data on pipeline integrity, anode depletion and anode life expectancy.

The information gathered was entered into Stork's bespoke data analysing software. From this, essential data could be plotted on a user friendly format to compare with previous year's surveys, creating a picture of the pipeline's historical trend.

Results

The potential protection levels of the pipeline had decreased in protection over time, which is what you would expect as the sacrificial anodes deplete. With year on year survey, Stork could see this decline and suggest retrofitting options to help extend the asset lifetime. Stork's equipment was also able to identify CP decrease in certain areas of the pipeline, these areas were also noted to be surrounded by anodes with greater depletion values.

This indicated the sacrificial anodes were working harder to protect this area of pipeline, suggesting under protection and subsequently leading to increased degradation of this section.

Stork recommend regular CP monitoring and surveying to ensure optimum pipeline integrity by use of proactive CP management.

Project information:

When

- May 2013

Location:

- North Sea

Distance surveyed:

- 34km

Estimated pipeline lifetime:

- 65 to >100 years

Potential range:

- -1000mV to -1100mV

Safety:

- Project delivered safely with no lost time incidents

Workscope completion:

- The workscope was completed on time and on budget



Benefits:

- Stork's CP solutions allow clients to undertake preventative asset integrity works rather than corrective, which can potentially lead to high cost implications, downtime and environmental damage
- Comprehensive reports were produced, which included all data gathered and a detailed summary of results. All of Stork's CP reports are tailored to include client specific requirements and provide an accurate picture of the pipeline's historical trend
- Stork's CP department not only conduct CP surveys but can make recommendations and install CP systems for future protection

Pipeline historical data:

