



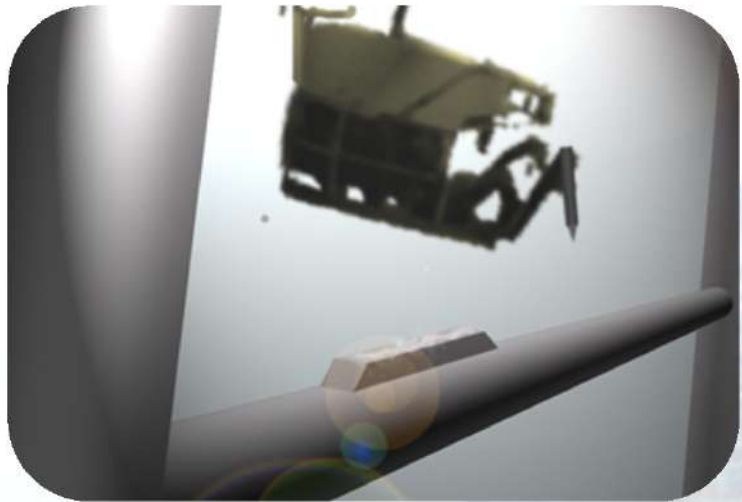
OFFSHORE CATHODIC PROTECTION PLATFORM SURVEY

CP-DAS (Cathodic Protection Data Acquisition System)

The CP-DAS (Cathodic Protection Data Acquisition System) has been developed based on the experience and expertise gained from conducting thousands of pipeline and platform surveys over the past twenty years.

ISES has used this knowledge to develop the most advanced and cost effective structural CP survey package available on the market today.

With our worldwide experience in successfully undertaking survey projects, coupled with our commitment to customer satisfaction, we are confident that the services we offer will match the highest expectations of our Clients.



CP-DAS Subsea CP/FG Monitoring System

A twin Ag/AgCl contact probe is literally the sharp end of the system. The probe is designed to be used in the manipulator of “work class” ROV and is designed to be robust and reliable with a sharp stainless steel stabbing contact tip, used in conjunction with the Ag/AgCl remote half cell continuous potential profiles can be recorded.



Two high sensitivity Ag/AgCl half cells are housed within the probe body with ports around the probe open to the surrounding seawater allowing continuous potential, contact and field gradient measurements to be taken. The raw analogue potentials from each of the cells are converted to a digital output.

The acquired data can be transmitted in a variety of formats for example; RS 485 & RS232 . The data conversion is undertaken in a sub sea electronics pod, which is rated to 3000msw depth.

Power for the sub sea digitiser is supplied from the ROV via a 24 V DC Power supply.

The topside interface unit also has a built in power supply to allow surface testing of the system.

Depending on the requirements, data can also be digitised at the surface for input into the CP-DAS logging computer.



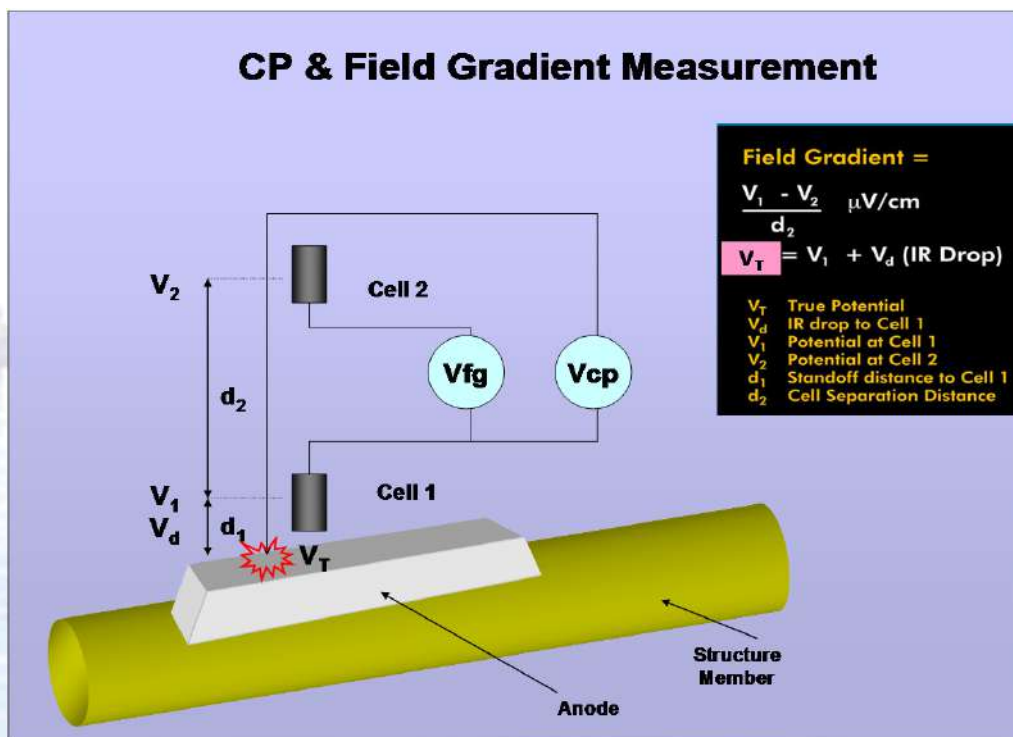
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The CP-DAS probe can be used to take contact measurements on sacrificial anodes on sub sea structures and platforms. By measuring field gradient & the potential drop between the measuring cells it is possible to estimate the anode current output and from this calculate the remaining life of the anode based on the activity measured.

A Silver/Silver Chloride remote half-cell can be deployed over the side of the survey vessel, and this can be used to provide additional continuous potential measurements for example from the base of the platform to the splash zone

Cathodic protection data is logged using the ISES online logging component of the CP-DAS package

CP survey information; cathodic potential & field gradient can also be output via RS232, to allow data to be displayed on the survey video overlay.



Communication protocols can be set to a variety of configurations using easy to operate drop down menus. The data input and output strings can also be modified to accommodate different Client information requirements.

A further feature of the online logging system is that it has a fully functioning event logging module that can be used to log features and anomalies on the structure *together with the unique ability to capture video input from the ROV which can be used to provide a visual reference for CP events in the form of real-time video clips or screen grabs.*



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System Specifications – CP-DAS

SUBSEA DIGITISER

Pressure resistant electronics housing for sub sea digitisation of analogue signals.

Multiple data transmission protocols .

Rated to 3000m water Depth.

32 Bit Analogue Digital converter.

Sampling rate 200,000 times/second. averaged output ranges 1/10 to second to 1 data set per second

Accuracy 0.001 mV.

Length 37 cm

Diameter 10 cm

Weight in Air 5 kg

Five Pin Sub con c/w whip

Power Requirements 24 V DC

Communication Protocols RS 485, RS 232.

COMBINED CP/FG CONTACT PROBE

Robust CP & Field Gradient Twin ha1f Cell contact probe.

Comprises of stab tip and two Silver/Silver Chloride half cells to monitor cathodic protection potential and field gradient. Tough construction utilises 5-pin Subcon connector for connection to survey ROV.

Length 70cm

Diameter 7cm

Weight in Air 1.5kg

COMPUTER DATA ACQUISITION

Windows based logging. post processing & charting system.

Multiple interfacing with a variety of survey companies.

Instantaneous back up on multiple data storage devices. utilising desk top or laptop PC.



EUROPE

ISES Technical Services Limited

First Floor Block 7

The Altec Centre

Minto Drive

Altens Industrial Estate

Aberdeen AB12 3LW

Tel: +44 (0) 1224 874440

Fax: +44 (0) 1224 8732211

ASIA PACIFIC

ISES Technical Services Pte Ltd

Trinity Offshore Building,

No 4 Loyang Drive, Unit No. 01-00,

Loyang Industrial Estate,

Singapore 508979

Tel: +65 6546 7228

Fax: + 65 6542 7077

MALAYSIA

Inspection Survey & Integrity Services Sdn Bhd

CT-10-07, Subang Square Corporate Tower,

Jalan SS15/4G,

Subang Jaya,

Selangor,

Malaysia. 47500

Tel: +6 03 5635 9500 / 9850 / 9750

Fax: +6 03 5635 9655