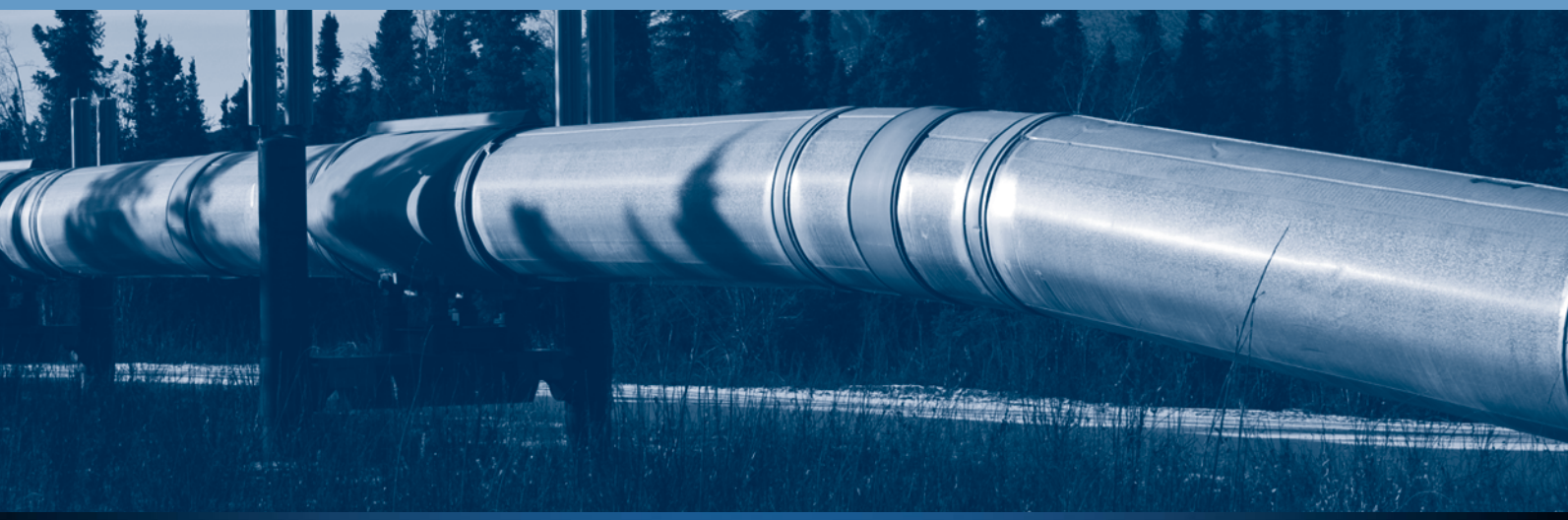
IKS-D



Cathodic Protection

Igel Elektronik GmbH

CATHODIC PROTECTION

Range 0 – 50A and 230 – 500V

IKS-D

Digital cathodic protection in heavy duty design

CE

ADVANTAGES AT A GLANCE

| Small dimensions
| Current and voltage adjustments „on line"
| Measure the potential while changing the current or voltage.
| Stable and step less current and voltage regulation
| Full GSM control and feedback
| GPS synchronisation (Option)
| 12 month change event recorder
| RS-232 and 485 Communication
| Real time clock
| Reference Potential control

DISPLAY (LED'S)

| LCD – 2 lines of 16 characters each
| Multilingual
| 3 LEDs – On, RUN and Fault
| Event Recorder
| Parameter setting and fault text in full

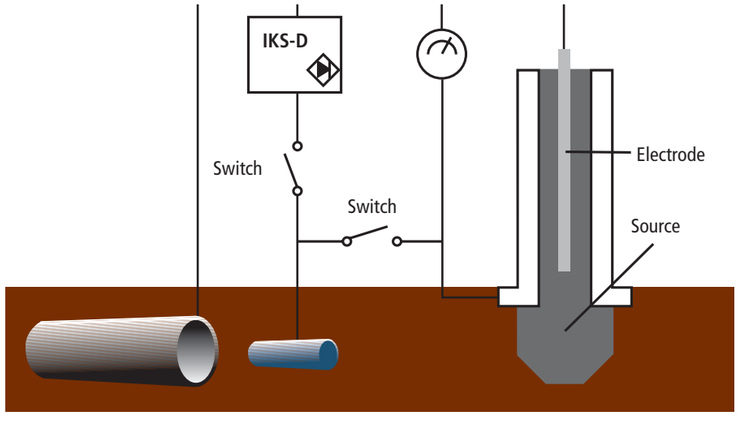
PROTECTIONS

| Incoming over voltage
| Outgoing over voltage
| Current limit
| Over current
| Reference potential error
| Low backup battery voltage
| Internal fault

APPLICATIONS

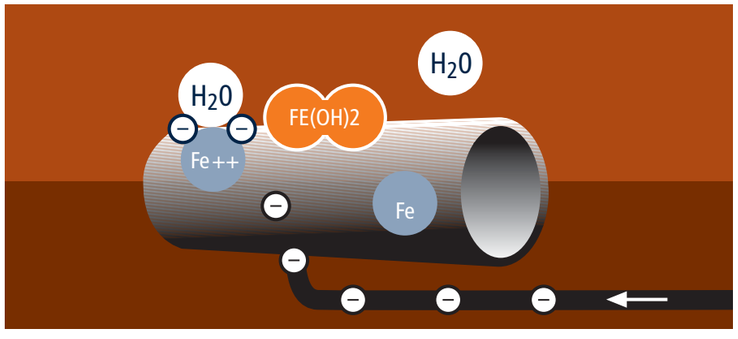
| Vessels
| Underground pip lines
| Underground container
| Oil Platform
| Harbour areas
| Industrial areas
| Coolant processing plant

ADVANCE REFERENCE MEASUREMENT



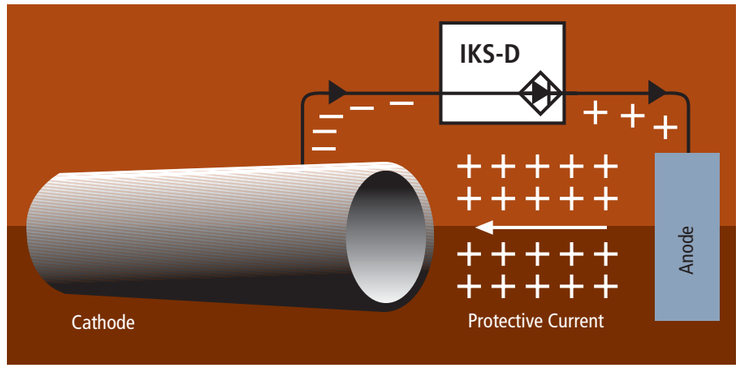
For the reference measurement a reference cell has to be installed in the ground. This reference cell must be of the same material and has the same potential difference as the protected object. By disconnecting switch S2 we can measure the actual potential on the reference cell in order to adapt the IKS-D to probable modifications. When using this procedure there is no need to disconnect the protected object from the potential and a constant corrosion protection is guaranteed.

CHEMICAL REACTION



From the chemical point of view a corrosion is an ion migration. Metallic objects which are in contact to the ground are subject to potential differences so that equalizing currents are flowing. This results in a material loss which is named corrosion. Without any ion migration no corrosion would occur. When the potential between metal and electrolyte is in balance, oxidation will die down.

CATHODIC PROTECTION



Cathodic protection effectively prevents corrosion of the protected object by active intervention in the electrochemical corrosion process. The structure-to-soil potential can be measured and influenced, allowing the protected structure to be set to a defined protective potential when connecting a rectifier current source (IKS-D). The IKS-D will be built-in between pipe and anode (anitpole). Then the current flows from the anode through the pipe insulation faults into the pipe wall out of steel. This will stop ion migration from the protected object and corrosion will no longer be possible.

Igel Elektronik GmbH

Industrieweg 13–15
48324 Sendenhorst
Deutschland

Fon: +49 (0) 25 26 93 89 - 0
Fax: +49 (0) 25 26 93 89 - 22

E-Mail: info@igelelektronik.de
www.igelelektronik.de