

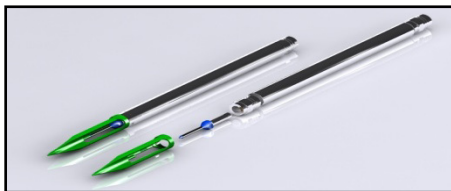
Downhole Corrosion Monitoring System

Request A Quote

DCMS™

Features

- **Records Corrosion Rate and Temperature Data**
- **Establishes Effectiveness of Corrosion Inhibitor Treatments**
- **Rated to 10,000 psi and 302°F (150°C)**
- **Setting and Retrieval at any Depth**
- **Battery life of 90 Days**
- **Easy Download and Graphing of Data via Cosasco Data Offline Software**
- **Available for Purchase or Rental**



The newly re-designed DCMS™ Downhole Corrosion Monitoring System provides continuous corrosion history of downhole tubing. The DCMS tool is another Cosasco innovation, and the only tool available which provides recorded corrosion and temperature data for the hostile conditions of downhole operation. The sensitivity of the system enables the film persistence of inhibitors to be evaluated in actual operating conditions, something that was not possible prior to the development of the DCMS.

The DCMS tool may be attached to a variety of wireline approved running tools for insertion into the production well at the start of testing and retrieval from the well at the end of the testing period. The DCMS tool can be set at any required depth — wherever the most critical corrosion regions are located. Several DCMS tools may be run simultaneously in a well, in order to obtain corrosion data for the different depths, while under the same operating conditions.

The DCMS tool is comprised of an electrical resistance probe, an electronic memory module and a battery pack. The body of the DCMS tool is a 17-4 PH stainless steel body treated to satisfy NACE MR0175 requirements. The body has a 1.25" OD with a 5/8" sucker rod connection for attachment to the wireline-run tubing hanger or lock. The design of the tool permits operation up to 10,000 psi and 302 ° F (150° C). The electronic module is powered by a lithium battery pack that will provide more than 90 days of data, when programmed to read once every two hours. Even if the tool is



left in the well beyond the battery life, the non-volatile memory protects the recorded data.

The probe sampling interval of 1 hour, 2 hours, or 4 hours may be selected as required to fit within the 1,024 reading storage capacity for the run time in the well. The probe measurement element, which is usually made of carbon steel, is electrically isolated from the DCMS tool body, to prevent galvanic action between the probe body and the probe element.

An optional coupon holder assembly consisting of up to nine metal loss strip, pre-stressed or tensile coupons for subsequent analysis of material degradation due to pitting and stress corrosion cracking, can be attached to the sucker rod connection of the Downhole Tool. It also acts a secondary corrosion rate measurement to compare with the ER probe measurement.

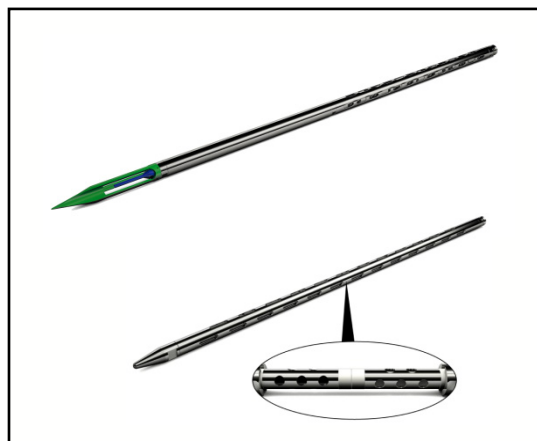
After retrieval from the well, the data is downloaded from the DCMS tool via a PC running Cosasco Data Offline Software. On the PC, the corrosion and temperature data is presented in a graph format which can be easily analyzed for identification of the real time corrosion characteristics.

COSASCO®

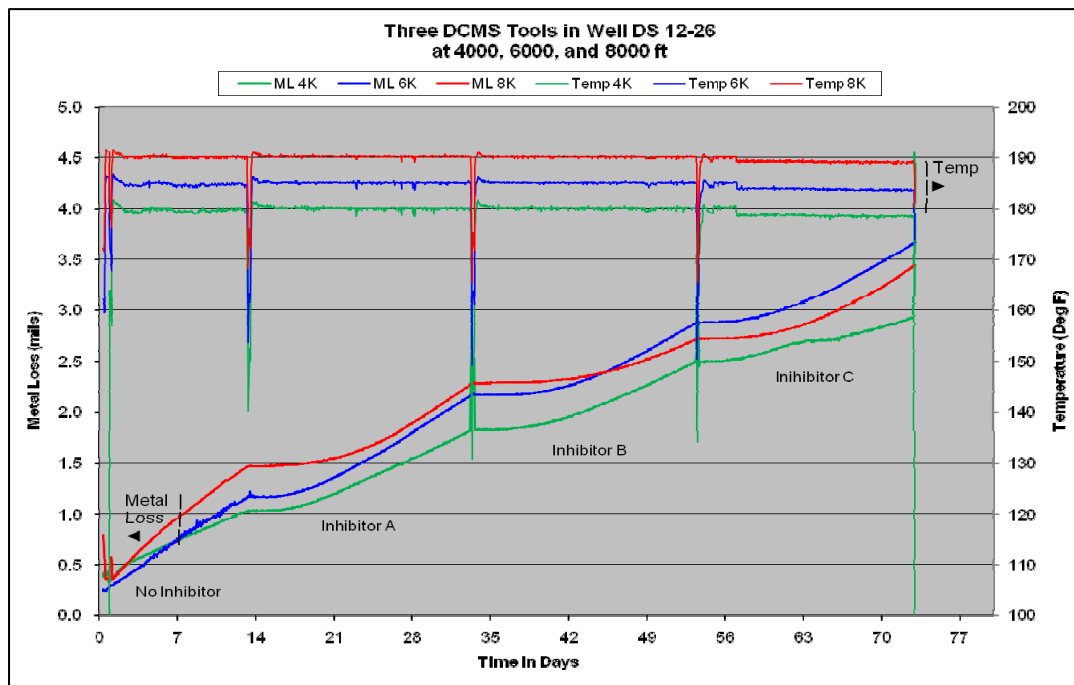
The DCMS system consists of the following:

- Downhole Tool (includes one 724050-T20-K03005 probe)
- Cosasco Data Offline Software
- DHT Communications Adapter
- Battery De-passivation Instrument
- Probe Monitor Instrument
- DCHA Downhole Coupon Holder Assembly (optional)

DCHA Downhole Coupon Holder Assembly is available for use by itself or in conjunction with the DCMS Downhole Tool. The coupon holder accommodates up to nine coupon holder assemblies. Coupon holders are available for stressed and unstressed strip coupons and cylindrical tensile test specimens for subsequent analysis. The coupons are typically made out of the same material as the downhole tubing. Coupons are available in the most common tubing types, including J55, L80, and N80. They are also available in other common alloys. When used with the Downhole Tool, the coupon holder attaches to the sucker rod connection of the Downhole Tool. The metal loss coupons provide both evidence of general and localized (pitting) corrosion. It also acts a secondary corrosion rate measurement to compare with the ER probe measurement. See DCHA Data Sheet for further details and ordering information.



DCHA shown independently and in conjunction with the DCMS Downhole Tool



Specifications

Probe Spans: T10 - 5 mils, T20 - 10 mils

Resolution: 0.1% of Probe Span

Power Source: Lithium battery

Typical Battery Life: 90 days, reading once every 2 hours

Maximum Operating Pressure: 10,000 psi (69 MPa) Maximum

Maximum Operating Temperature: 302°F (150°C)

Memory Capacity: 1024 Measurements

Shock Tested: 3 axes, 25g, 11mS pulses

Vibration Tested: 20-50Hz, 50 m/S², 30 min each axis

Measurement Intervals: 1, 2 or 4 hours

DCMS Weight: 30 lbs. (13.6 kg)

Installation, Setting, and Retrieval of DCMS Tool: Wireline Running Tools

With the appropriate wireline tools the DCMS tool can be set easily at any required depth. Customers should use their own preferred local wireline company for running tools and DCMS installation and removal. Cosasco can provide requirements for the necessary soft setting tools* and required running procedures.

*Soft setting tools are **(required)** for installation and retrieval to protect the electronics in the DCMS tool.

Ordering Information

<u>Part Number</u>	<u>Description</u>
724120	Complete Downhole Corrosion Monitoring Kit
724121	DCMS Support Tool Kit

Replacement Parts and Accessories

<u>Part Number</u>	<u>Description</u>
724089	Battery Assembly – Downhole Probe 7.4 g Lithium -40 to +150 deg C
724050-T10-K03005	Downhole Probe w/Carbon Steel Element
724050-T10-S31600	Downhole Probe w/316 SS Element
724050-T10-S31603	Downhole Probe w/316L SS Element
724050-T20-K03005	Downhole Probe w/Carbon Steel Element
724050-T20-S31600	Downhole Probe w/316 SS Element
724050-T20-S31603	Downhole Probe w/316L SS Element
724082	O-Ring Kit

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