# CORROSION MANAGEMENT SOLUTIONS



### Rohrback Cosasco Systems

### Leading the World in Corrosion Monitoring Systems

Rohrback Cosasco Systems (RCS) is the world leader in corrosion monitoring technology. Since 1950, RCS has provided leading-edge corrosion management solutions for such diverse industries as oil and gas, petrochemical, water treatment, chemical, pulp and paper, pharmaceutical, and utilities. Corrosion is an enormous cost to these industries as measured in equipment maintenance and replacement, leaks, and system failures. RCS helps dramatically reduce this waste by delivering corrosion management systems that accurately determine corrosion rates and ultimately extend asset life.

RCS provides a wide range of corrosion monitoring products to meet specific industry needs. These range from mechanical access systems to the most advanced instrumentation systems that can be adapted to the most severe operating environments.

### **QUALITY, RELIABILITY AND SAFETY**

The RCS quality assurance program is certified to ISO 9001:2008 and we were the first company in the industry to be ISO certified. We enjoy an unsurpassed reputation for quality and reliability within the corrosion monitoring industry. Many of our products are certified for hazardous locations including ATEX and CE approvals. Our primary objective is to produce the safest, highest-quality instrumentation systems that meet industry standards from design and manufacturing to installation, performance and service.

### MICROCOR® SYSTEMS

### **High Resolution Monitoring**



**MICROCOR Transmitter** 

MICROCOR Systems represent the greatest advance in corrosion monitoring technology in a decade, literally changing the way companies approach corrosion management. MICROCOR technology has the same universal applicability as Electrical Resistance (ER) systems, measuring in any corrosive medium and in extreme operating environments. Unlike ER this high-resolution technique computes corrosion rate in minutes. Corrosion can now be considered a "process" variable.

The speed of MICROCOR approaches the rapid response time of Linear Polarization Resistance (LPR) systems and provides data 50 to 100 times faster than ER. In one application, the use of a **MICROCOR** system allowed a chemical screening to be completed in less than 48 hours - and at 10% of the normal cost. Similar screenings previously took weeks with ER systems.

MICROCOR technology simply represents the fastest, most accurate, most cost-efficient and corrosion monitoring system available anywhere in the world today.

**MICROCOR** Systems feature:

- 50-100 times faster response than ER
- 256 times higher resolution than ER
- . Real-time process monitoring
  - Applicable in any corrosive environment
  - On-line or data logging systems
  - Hazardous location certified

### **CORRATER**<sup>®</sup> **SYSTEMS**

**For Water Applications** 



**Portable** Instrument

### **Probe Heads**



Corrosion rate measurements in water systems can be made utilizing CORRATER Linear Polarization (LPR). Resistance Α direct electrochemical measurement of corrosion rate is possible with just a single measurement by this electrochemical method. These measurements must be accurate in order to cost effectively apply chemical treatment to water systems. RCS has developed an advanced line of reliable and cost effective corrosion monitoring instruments and probes for use in most water systems. By combining LPR with our patented Solution Compensation Resistance (SRC) technology, RCS probes and instruments can quickly and accurately measure

corrosion rate and imbalance (localized corrosion tendency). This advanced technology allows accurate corrosion rate measurements to be made over the widest range of solutions conductivities, from seawater to condensates.

CORRATER systems are available with RCS data-logging, remote monitoring, and on-line systems, enabling flexible system design and reliable data collection and transfer. The hand-held CORRATER instruments are easy to use, so any water management engineer or technician can easily get a corrosion reading in moments. The CORRDATA Remote Data Collector (RDC-CAT) and CORRDATA Plus PC-

**On-Line Data-Logger** Instruments

based software provides full analysis and graphing capabilities of continuous data.

Through a wide range of instruments, CORRATER systems can offer:

- Advanced corrosion monitoring for water systems
- Hand-held instruments for "instantaneous" measurement
- Data-logging corrosion history
- Continuous on-line instruments
- Simple data transfer to PC or datalogger

### CORROSOMETER® SYSTEMS

### For Corrosion Measurement in Any Medium

The CORROSOMETER system is the most reliable and flexible system available in Electrical Resistance (ER) corrosion monitoring. By measuring the electrical resistance of an ER sensor, this system can quantify metal loss and determine corrosion rates in any liquid, gaseous or solid environment. CORROSOMETER instruments in hostile environments operate and CORROSOMETER probes can operate in extreme chemical media at temperatures reaching 850°F (454°C) and pressure of 6000 psi (41.3 MPa).

The CORROSOMETER measurement system offers a wide range of different probes as well as a host of data collectors, transmitters, remote communications modules, environmental monitoring instruments and software to meet a broad range of needs across all industries. From portable to integrated systems, and from periodic testing to continuous monitoring, RCS can provide a comprehensive corrosion monitoring solution for any situation.

Corrosometer Systems key features include:

- Applicability to any corrosive environment
- Low Cost
- Hazardous Location Certified



**Analog On-line Transmitter** 



**CORROSOMETER** Probes



**Portable Instrument** 

### CORRDATA® SYSTEMS

### **Remote Data Collection**

The CORRDATA line of instrumentation consists of battery-powered remote data collectors (RDC's) and handheld data transfer units (Checkmate DL and Mate II) that can measure, store and download corrosion data to a PC from either CORROSOMETER or CORRATER probes. The system also works through hard wire, cellular telephone and radio communications systems to import corrosion data from the field to the comfort of your office. The powerful CORRDATA PLUS Software provides graphing, analysis and long-term storage for the corrosion data.

This software is at the heart of various RCS systems, and it is one of the most powerful tools used in corrosion monitoring and management. After data is collected from any number of RCS probes and monitoring systems, it can easily be sent to the host PC directly, remotely, or through a network.

The software can plot up to six probes simultaneously, integrating the time stamped readings into easy-to-read graphs. All data and graphs can be easily exported into reports and presentations.

Key Features:

- Continuous Monitoring
- Battery powered autonomous operation
- Rapid Installation
- Maximum Versatility
- Qualified for hazardous locations



**Data-Logger & Data Transfer Unit** 

### COSASCO<sup>®</sup> ACCESS SYSTEMS

### **Access Under Pressure**



**RBS Retriever, Valve, Hot Tap Kit, & Fittings** 



Because shutdowns are expensive and frequently impractical, RCS provides access systems for on-line insertion and retrieval of probes without system shutdown at high pressures and temperatures. COSASCO access systems provide safe and easy insertion and retrieval of all corrosion monitoring coupons, probes or injection devices.

COSASCO access systems are adaptable to a wide range of piping and vessel configurations, ensuring safe operation and pressure integrity.

The system is a result of careful design and precise manufacturing which has been perfected over decades of in-the field operations. COSASCO access systems meet all manufacturing and safety standards, including the NACE MR0175/ISO 15156 and fire-safety to API6FA and API607. As the industry standard, COSASCO access systems are the safest, most reliable and most widely used access, insertion, and retrieval systems in the world.

COSASCO Access Systems offer:

- Operation at pressures up to 6000 psi (41.3 MPa)
- Operation at temperatures up to 450°F (232°C)
- Field-proven safety and reliability
- Components for high, medium, or low pressure systems
- High alloy fittings for the more stringent NACE MR0175-2003 standard
- Versatile usage including insertion and retrieval of coupons, probes, injection quills, and more

### **COSASCO® CERTIFICATION AND TRAINING**

RCS now offers comprehensive training and certification in the use of all COSASCO Systems equipment including Retrievers, Service Valves, and the Model 60 Retractor. Proper training in the use of COSASCO tools is recommended for any person who will be operating COSASCO equipment in the field on pressurized systems.

RCS Trainers have extensive practical experience in the manufacture, assembly, and field use of our tools, access fittings and other equipment. The RCS training program emphasizes personal safety and environmental awareness in the use of COSASCO tools.

RCS offers the following Cosasco Certification Courses at various locations including our Santa Fe Springs, CA, Aberdeen, UK, and Singapore Office Locations. RCS also offers COSASCO LEVEL I and LEVEL II Training & Certification at your location, including offshore. We can also work with your safety and training department to customize the courses to your specific needs.

Cosasco Training provides knowledge and understanding of the following key areas:

#### Level I

- Operation of RBS/RBSA and RSL retrievers under pressure
- Operation of Service Valves under pressure
- Operation of Model 60 Retractor
  under pressure

#### Level II

- Advanced Retrieval Operations, including assembly, disassembly, and servicing
- Operation of special service tools
- Tool overhaul and Repair



### COSASCO® WIRELESS SYSTEM

### High Resolution, Wireless, Corrosion Monitoring for all Process Media

The COSASCO<sup>®</sup> Wireless System offers high speed, wireless, corrosion monitoring in all process environments. With the same exceptional proven accuracy and quality that Online Corrosion Monitoring Systems are known for worldwide, the wireless link now adds simplicity, flexibility, and exceptional economy of installation to new or existing installations.

The COSASCO Wireless System is comprised of Microcor Wireless Transmitters (MWT), Quicksand Wireless Transmitters (QWT), Wireless Extenders (WE), and Corrater Wireless Transmitters (CWT). Just like the wired version of the RCS's online corrosion monitoring system, the wireless system measures metal loss, corrosion/erosion rate, and pitting tendency using high speed electrical resistance (ER), Linear Polarization Resistance (LPR), and Galvanic functions.

Each COSASCO Wireless device works as a node in a self-organizing network (mesh) to ensure consistent delivery of data. Secure and infinitely configurable, the self-organizing network ensures an adaptive, flexible approach to wireless data transfer that defies the "canyons of metal" which define most plants.

Unlike many approaches to in-plant wireless systems which require direct line-of-sight between the instrument and the communications gateway, the RCS approach ensures network integrity by allowing COSASCO Wireless devices to communicate with each other. Because every device serves as a network connector there can be no single point of failure. In the event a temporary obstruction blocks a direct connection, the network automatically reroutes the signal to an adjacent device, ensuring network reliability and data integrity.

COSASCO Wireless Transmitters use high resolution metal loss measurement providing 18 bit resolution, and are rated for operation in hazardous locations. Like its rugged predecessor Microcor which has performed well in both arctic and desert conditions, COSASCO Wireless devices have an allowable operating range of from -40°C to 70°C.

COSASCO Wireless The System is based on RCS's MICROCOR technology and will provide corrosion rates in any process media at speeds approaching real time. Microcor online systems are in use throughout the world and have proven that accuracy and reliability can co-exist. Correlating real time corrosion rates with other process parameters enables facility operators to realize unprecedented process control related to variables such as chemical inhibitor feed. Chemical inhibitor costs can be reduced without compromising plant safety, thereby ensuring a speedy recovery of the investment in the corrosion monitoring system. Continued use provides alerts to system upsets, lengthens the time between plant shutdowns, extends overall asset life, and gives peace of mind with respect to potential environmental mishaps caused by corrosion.



Microcor Wireless Transmitter

Key Benefits of COSASCO Wireless System:

- High Resolution Wireless Corrosion Monitoring
- Dramatically Lower Installation
  Costs
- Independent operation or seamless integration with Emerson's Smart Wireless Range of Solutions
- Operation in Hazardous Locations
- Ideal solution for hard to access areas

BASED ON MICROCOR® TECHNOLOGY WITH SPEEDS APPROACHING REAL TIME

COSASCO Wireless devices can be supplied as part of a complete corrosion management system comprising access fittings, probes, MWTs, QWTs, CWTs, WEs, gateway, corrosion management process and interface software. Alternatively, COSASCO Wireless devices can be added seamlessly to an Emerson Smart Wireless Network or via direct input from the gateway through Modbus Interface to virtually any Process Automation System.

The COSASCO Wireless System is installed quickly and easily without the time and expense required for wiring. Once installed metal loss and computed corrosion rate is read from the Gateway directly into your DCS system, an RCS ICMS3-Amulet Corrosion Management System, or a MICROCOR Tools software package for smaller scale systems. With its widespread capability and effectiveness, the wireless system is not only complementary to any process system but a guaranteed maximum return on investment, both in the short and long run, in terms of low installation costs, effective chemical inhibitor use, and asset preservation.

### HIGH SPEED WIRELESS CORROSION MONITORING FOR ALL PROCESS MEDIA



### ULTRACORR<sup>®</sup> SYSTEMS

### **Ultrasonic On-Line Thickness Measurement**

The ULTRACORR system provides very high sensitivity ultrasonic on-line thickness measurement of pipes and vessels. It represents a breakthrough for internal corrosion monitoring at locations that are difficult to access. Once installed, ULTRACORR provides years of continuous service without the need for replacement.

ULTRACORR will help solve the problem of monitoring in locations where sensor access is difficult, and will particularly suit buried pipeline operators faced with the problem of ICDA\* activities. After the initial dig to expose and ultrasonically examine HRHC (high risk, high consequence) locations, ULTRACORR sensors can be installed on the line, and the excavation backfilled. They can subsequently be accessed for measurement via a test post, located at ground level, adjacent to the line or in a "road" box. Readings can then be taken every 3-6 months to verify the corrosion behavior thereby minimizing or eliminating the need for costly future excavations.

\*ICDA - Internal Corrosion Direct Assessment

### **QUICKSAND**<sup>TM</sup>

### **Erosion Detection System**

Erosion causes major damage by sand production scraping away at protective metals and coatings reducing the wall thickness of piping, flowlines, valves, pumps, and other equipment. To address this problem, RCS developed the Quicksand Erosion Detection System.

The Quicksand System uses the same high resolution technology as our Microcor System. A typical Quicksand System consists of sand probes and transmitters that can be fully integrated with other digital loop transmitters manufactured by RCS, such as Linear Polarization (CORRATER), or high resolution electrical resistance (MICROCOR), to provide a comprehensive corrosion/erosion monitoring system. Sand flowing at high velocities produces a "sandpaper" effect scraping away layers of metal therefore producing the metal loss that is detected by the on-line erosion transmitter. Quicksand probes are positioned middle-of-the-line where velocity of flowing sand is greatest.



The RCS ULTRACORR features:

- Non-Intrusive sensors permanently mounted to the pipeline — no replacements required
- High resolution corrosion rates in a few weeks rather than years
- ICDA compliant
- Measures corrosion and erosion
- Simple analysis software stored readings can be easily uploaded to pc for data analysis



Vessel V105

**Portable** 

Reader

CORRDATA Graphical Display Rate Computation



**On-Line Sensors** 



### **INTEGRATED SYSTEMS**

### **Total Corrosion Data Management**

We know corrosion is just one of many process parameters you worry about. That's why we developed our integrated corrosion monitoring systems. Now, you can add corrosion to your list of variables— such as temperature, pressure, pH, oxygen level, and chemical inhibitor concentration — that you monitor with your existing system.

Our integrated corrosion monitoring solutions, the Intelligent Interface Unit (IIU) for small to medium-size systems, and the Integrated Corrosion Management System ICMS3<sup>™</sup> for medium to large systems, communicate through a direct wired and ethernet online connection to integrate into your existing DCS and SCADA systems.

#### A system designed for your application

Our corrosion sensor and transmitter systems are known to be extremely sensitive and accurate, and are available for such diverse industries as oil and gas, petrochemical, water treatment, chemical, pulp and paper, pharmaceutical, and utilities.

Our systems adapt to yours. From five corrosions transmitters across the road to 500 around the world, we can design a system that helps you monitor and manage corrosion in your systems.

#### Intelligent Interface Unit (IIU)

The Intelligent Interface Unit (IIU) provides low-cost entry to corrosion management. Perfect for smaller scale systems.

The Intelligent Interface Unit (IIU) computes metal corrosion and erosion rates from measurements transmitted



**Intelligent Interface Unit** 

from our MICROCOR and Quicksand sensors, and also provides instantaneous corrosion rates and pitting tendencies in aqueous media via our digital CORRATER transmitter. Eliminating the need for expensive custom software, the IIU cost-effectively illustrates metal loss and corrosion/erosion rates through the installed Microcor Tools software. This permits operation as either a blind interface to a SCADA or DCS system, or as a stand-alone corrosion data storage and analysis system.

#### Integrated Corrosion Management System ICMS3™

The Integrated Corrosion Management System the ICMS3 is most comprehensive and powerful online corrosion monitoring system available. It is ideally suited for medium to large scale systems, or for small systems with the need for future growth. The ICMS3 allows integration of all Rohrback Cosasco System corrosion, erosion, and cathodic protection products, with related process data, to provide correlation and generate key performance indicators (KPIs) and summary reports for proper system management.

The ICMS3 corrosion management server is the hub of the corrosion or

erosion monitoring system, integrating several forms of corrosion monitoring and process data into one complete online system, shared over a variety of communication links. Corrosion and erosion monitoring can be managed as process parameters with constant data streaming into your preferred system.



**Corrosion Management Server** 



The Integrated Corrosion Management System ICMS3 retrieves corrosion and erosion data from a variety of transmitters and can share that data with multiple systems, allowing remote, online access to critical process control parameters.

### **CHEMICAL INJECTION**

One of the most practical preventive maintenance methods for minimizing or controlling corrosion in product pipelines, vessels, etc., is to treat the corrosive environment with chemical inhibitors. Corrosion inhibition is a complex technology that remains an effective means of corrosion control. RCS offers a range of chemical injection equipment to optimize use of costly chemical inhibitors.

The COSASCO Injection System provides easy, reliable access for inhibitors to be injected safely and easily while under full operating pressure. In



Model 6330 Injection/Sampling Tube Shown With Various Nozzle Assemblies addition, a variety of injection devices and systems can be used to provide the most efficient delivery and dispersion for a given application. Most of the parts involved in the COSASCO Injection System are interchangeable with the COSASCO Sampling System. The COSASCO Sampling System offers a means of extracting samples from pipelines or vessels while under full system operating pressure.

To monitor the effectiveness of chemical injection pumps, RCS offers the RDC-CI Chemical Injection Data-Logger. The RDC-CI quickly determines chemical flow interruptions caused by low tank levels, pump failures, or hightemperature vapor locks.

The RDC-CI accurately monitors chemical flow through injection quills and nozzles using a positive displacement flow meter to calculate chemical delivery rates. The RDC-CI can be used with a wide variety of chemicals and in operating temperatures ranging from -40°F to 158°F (-40°C to 70°C). The Data Logger gathers data in 0.0005-gallon increments, yielding very accurate flow rates over user-selectable time periods ranging from two minutes to one day. Gain immediate, improved, and economical asset management with the RDC-CI Chemical Injection Data-Logger.



RDC-CI Chemical Injection Data-Logger

### CATHODIC PROTECTION SYSTEMS

RCS offers an extensive line of CP Monitoring Systems from GPS Current Interrupter to data loggers and remote monitoring units. RMUs can be linepowered or alternately with battery or solar power. The CORD-COM is a fully integrated instrument that includes the CRM Remote Monitoring Software package. This program can remotely program and monitor multiple field units with a few clicks of a mouse. The CORD-XL module can simultaneously monitor and record cathodic protection voltages and currents in a package that can be inserted in a standard CP test station. In addition, it is ideal for detecting and measuring stray currents produced by rail transportation systems.

For CP current interruption applications RCS manufactures the CORI GPS, a portable system utilizing GPS technology for unprecedented precision in interrupt timing. The interrupt timing is fully programmable in order to meet a wide range of customer requirements. Use a CP system for:

- Power failure detection
- Monitoring corrosion potentials and environment data
  - Tracking rectifier voltage and current
  - Detecting alarms and signaling alerts
  - Flexible data collection and transmission options
  - Modular expandability



**Rugged Data-Logger** 



**Remote Monitoring Unit** 



**Current Interrupter** 

### SERVICES

RCS provides a comprehensive range of engineering, technical and field services for all product lines. Through our team of professionals we are able to ensure successful project implementation and commissioning at any location. Our technical staff will also help you sustain your investment through retrofits and long-term maintenance.

RCS is a trusted leader in corrosion monitoring and integrated systems. Since 1950 we have designed solutions and supported the products we manufacture through a full range of included and optional services tailored to our customers' needs. With RCS, you can be sure you are getting the most from your new or upgraded corrosion management system, and thereby extending the life of your valuable assets.

#### **Asset Preservation Group**

With a global track record spanning fifty years, Rohrback Cosasco is uniquely positioned to counsel our customers on corrosion problems and pipeline maintenance of all descriptions. Through our Asset Preservation Group we are able to offer fully integrated corrosion monitoring strategies for combating the corrosion that constantly erodes the value of your assets. Some of the many areas in which we have successfully supported our customers are as follows:

- Internal corrosion monitoring surveys
- Specification writing
- Project planning
- Project engineering
- System design
- Internal corrosion monitoring
  system and corrosion data analysis
- Education and Certification
- Seminars
- Corrosion management articles and technical papers



#### **Remote Corrosion Monitoring Services**

The value created by a corrosion monitoring system can be substantially enhanced through remote monitoring. Productivity, reliability, and ultimately profitability will be boosted by seamlessly delivering information gathered by your monitoring system in the field to your personal computer in the office. Automatic alarms triggered by dangerous and destructive process upset conditions will allow you to respond quickly and effectively. Our remote monitoring services include:

- Communication from remote locations
- Data acquisition and analysis
- Periodic reporting
- Automatic alarms pertaining to upset conditions
- Provision and maintenance of web servers
- Data Management
- Management report preparation and presentation



#### **Field Services Division**

Our Field Services Division complements other products and services offered by Rohrback Cosasco in a way that enables us to offer turnkey corrosion monitoring systems. Our team of degreed and factory trained field engineers will ensure successful project implementation and commissioning. After completion, we can help sustain your investment through follow-up activities such as retrofits and maintenance. Some of the many ways in which our Field Services Division can help you are as follows:

- System and site surveys
- Installation and commissioning of RCS equipment
- Corrosion monitoring system
  troubleshooting and repair
- Coupon retrieval services and probe retrieval services, and processing
- Retrofits and hot tapping
- COSASCO® System training



#### **Corporate Headquarters**

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#### **RCS Sales Locations**

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Caracas, Venezuela Tel: +58 212 7712301

E-mail: sales@cosasco.com Website: www.cosasco.com

For the latest information on our products and services or to locate a Representative in your area please visit us online at www.cosasco.com.



Representative:	
	-

# Integrated Corrosion Monitoring Systems

### ICMS3™

Integrated Corrosion Management System for medium to large systems

### IIU

Intelligent Interface Unit for small to medium systems









### Measure, improve, and save!

With comprehensive corrosion monitoring and process integration, you can:

- Reduce risk from leaks and system failure
- · Optimize chemical inhibitor use
- · Reduce inspection and maintenance costs
- Reduce unscheduled downtime
- Reduce time spent on chemical screening trials
- Lengthen equipment life

And get a significant return on your investment! See the back page for a payback example.

## Convenient, online corrosion monitoring

### Integrate corrosion monitoring into your existing system

We know corrosion is just one of many process parameters you worry about. That's why we developed our integrated corrosion monitoring systems. Now, you can add corrosion to your list of variables— such as temperature, pressure, pH, oxygen level, and chemical inhibitor concentration — that you monitor with your existing system.

Our integrated corrosion monitoring solutions, the Intelligent Interface Unit (IIU) for small to medium-size systems, and the Integrated Corrosion Management System ICMS3 for medium to large systems, communicate through a direct wired and ethernet online connection to integrate into your existing DCS and SCADA systems.

#### A system designed for your application

Our corrosion sensor and transmitter systems are known to be extremely sensitive and accurate, and are available for such diverse industries as oil and gas, petrochemical, water treatment, chemical, pulp and paper, pharmaceutical, and utilities.

Our systems adapt to yours. From five corrosions transmitters across the road to 500 around the world, we can design a system that helps you monitor and manage corrosion in your systems.



ICMS3 System shown with Microcor<sup>®</sup> & Quicksand<sup>™</sup> Transmitters



Integrated corrosion monitoring systems can be installed to meet almost any application requirement. Shown here is the Intelligent Interface Unit hard-wired to several transmitter types. Transmitters can also be connected over an ethernet network.

## Corrosion management solutions for any application

### Intelligent Interface Unit (IIU)

The Intelligent Interface Unit (IIU) provides low-cost entry to corrosion management. Perfect for smaller scale systems.

The Intelligent Interface Unit (IIU) computes metal corrosion and erosion rates from measurements transmitted



Intelligent Interface Unit

from our Microcor<sup>®</sup> and Quicksand<sup>®</sup> sensors, and also provides instantaneous corrosion rates and pitting tendencies in aqueous media via our digital Corrater<sup>®</sup> transmitter. Eliminating the need for expensive custom software, the IIU cost-effectively illustrates metal loss and corrosion/erosion rates through the installed Microcor Tools software. This permits operation as either a blind interface to a SCADA or DCS system, or as a stand-alone corrosion data storage and analysis system.

The IIU is most commonly supplied in 19" rack mounted form, but is also available in a wall mounted NEMA-4 or NEMA-4X enclosure. Configuration is achieved through a local computer connection or over a LAN/WAN connection through PC Anywhere® or Windows® Remote Desktop® software.

### Integrated Corrosion Management System ICMS3

The Integrated Corrosion Management System ICMS3 is the most comprehensive and powerful online corrosion monitoring system available. It is ideally suited for medium to large scale systems, or for small systems with the need for future growth. The ICMS3 allows integration of all Rohrback Cosasco System corrosion, erosion, and cathodic protection products, with related process data, to provide correlation and generate key performance indicators (KPIs) and summary reports for proper system management.

The ICMS3 corrosion management server is the hub of the corrosion or erosion monitoring system, integrating several forms of corrosion monitoring and process data into one complete online system, shared over a variety of communication links. Corrosion and erosion monitoring can be managed as process parameters with constant data streaming into your preferred system.



Integrated Corrosion Management System server



The Intelligent Interface Unit (IIU) provides a graphical interface displaying metal loss and corrosion or erosion rates.



The Integrated Corrosion Management System ICMS3 retrieves corrosion and erosion data from a variety of transmitters and can share that data with multiple systems, allowing remote, online access to critical process control parameters.



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Aberdeen, UK Tel: +44 (0) 1224 825500

Caracas, Venezuela Tel: +58 212 7712301

E-mail: sales@cosasco.com

### www.cosasco.com



### Benefits of our corrosion monitoring systems

#### Significant return on investment

In appropriate applications, our corrosion monitoring systems deliver a rapid and substantial payback. A recent customer had installed ICMS3 systems at three of their main gas processing plants. Their initial investment was recouped within the first year purely on the basis of needed process improvements that became apparent after installation of the ICMS3 systems. Those savings were derived from reducing direct operating costs, however subsequent long term study of the ICMS3 output revealed corrosion trends that, if unchecked, would lead to premature aging and replacement of key plant components. A company-wide assessment was undertaken, and a mitigation plan based on the installation of ICMS3 systems at all eleven of the customer's plants was adopted. They estimate their savings will be \$50 million per year when the findings are implemented at all eleven plants.

#### Total corrosion data management

Our corrosion management systems deliver unmatched levels of capability. Probes are monitored continuously online, providing metal loss and corrosion rate graphs at the press of a button. Process information transferred from the SCADA system assists correlation of corrosion upsets with process parameters for identification of problems. Corrosion coupon data can also be input and stored on the system, along with any other corrosion related data, such as laboratory analysis data, chemical injection rates, computed water content, and ultrasonic probe readings. It is also a simple matter to generate Key Performance Indicators (KPIs) such as cost of inhibition, cost of corrosion per production volume, and many others. The systems can also allow for management of corrosion inhibitor supplies, can be set to produce reports automatically, and even to provide corrosion data to risk management software. Our software is designed by corrosion engineers for corrosion engineers, and provides features that are not available in other software applications.

#### Highly cost-effective asset management

Asset management ensures the timely maintenance of field equipment, delivering maximum performance and service life at minimal cost. Saving time and avoiding expensive equipment failures are key benefits of asset management programs. An effective online integrated corrosion monitoring system allows corrective actions to be taken quickly, before costly or catastrophic events occur, leaving plant operators with peace of mind.

#### **RCS** system support and service

RCS provides remote access and support for its systems, typically over the internet through the client's secure VPN network. Security is a major concern for IT departments of all corporations. Through a VPN connection to our secure maintenance server, we can offer a maintenance service that provides the client with rapid support and assistance with data interpretation or system maintenance questions. As staffing levels get lower and less experienced staff are available, the comfort and security of system support is essential.

Representative:		