



YOUR CORROSION PROTECTION

Tools, Techniques & Products

Part of the **tci** group



Twenty years from now you will be more disappointed by the things you didn't do than the ones you did. Mark Twain

Strategic Corrosion Management is a world leader in all aspects of corrosion, coatings, PFP and insulation management having developed a range of tools, techniques and products tightly integrated with the needs of our clients, whilst providing the back-up and support necessary to operate at maximum efficiency.

Our parent group, TCI Services was formed in 1980 to provide a range of consultancy and inspection services relating to all aspects of corrosion management and protective coatings.

Since that time we have steadily developed our range of services for existing clients and broadened our technical and operating scope to meet the diverse demands from many other industries. Strategic Corrosion Management now provides services to the oil & gas industry in the North Sea, Europe, Far and Middle East, Africa and the Americas and other industry sectors worldwide. Our Corrosion Management Tools and Concepts have now been implemented on more than 300 Client Facilities to date.

Track Record of Innovation

- 1987** First 'Fabric Maintenance Management System' Developed & Deployed
- 1992** First Application of Criticality to External Corrosion Management Process
- 1994** First 'Risk Based Fabric Management System' Developed & Deployed
- 2000** First 'Risk Based External Corrosion Management Systems' deployed
- 2010** First Fully Integrated 'Component, Corrosion, Fabric Management Systems' deployed
First Combined Fabric, Criticality & Corrosion Toolset made available.
First Corrosion, Threat and CUI Modelling Toolset made available.





However beautiful the strategy,
you should occasionally look at
the results. **Winston Churchill**



At the heart of our client-centred approach is the Strategic Corrosion Management Concept: 'cost effective management of corrosion and fabric maintenance'. Our ultimate aim is to determine where maintenance can be safely **reduced**, **deferred** or **eliminated** altogether.

The Strategic Corrosion Management Concept

Accurately define your plant condition

To gain maximum value from any maintenance work the degree of corrosion, corrosion protection degradation, corrosion mitigation active and insulation damage should be reflected in any philosophy and techniques you apply.

Control the work-scope

Tight control of your maintenance work-scope is essential to cost effectiveness. Recognising trends in plant condition, degradation, mitigation successes and work completions allows precise targeting of expenditure, minimising waste.

Select the right people, techniques and materials

Getting these elements right is the key issue in the life expectancy of your plant. We in SCM have all of the tools necessary to draw comparisons 'one against another' selecting the least expensive yet safest and most appropriate combination.

Maintain traceability and objective evidence

Objective evidence of inspections and work completed, its quality and value is essential if you are to use historical data to fine tune and improve future performance. Our Concept uses all and every available 'track record' to demonstrate 'objectively' your control of corrosion and its cost effective mitigation.

Ensure plant integrity

The primary aim of plant maintenance is to prevent failures. The SCM Concept helps to define the risk of failure and manages the maintenance programme to maximise plant up-time.

Plan cost effectively

By maintaining only those surfaces 'potentially at risk' we can create that fine balance between the benefits of a plant in perfect condition and the cost advantages of minimal plant maintenance.

Strategic Corrosion Management Quality Assurance

Strategic Corrosion Management deploy personnel qualified to NACE, SSPC, IQA and Institute of Corrosion standards.

Our expertise encompass corrosion, cathodic protection, coatings, insulation and passive fire protection inspection and we have also become specialist in the design, development and implementation of corrosion management, quality, safety and training strategies. Combining these services can bring the very best of technical support to you, your plant and your corrosion challenges.

Specialist Areas of Expertise

Within the Strategic Corrosion Management corporate structure we have a wide range of specialist expertise available. With highly qualified, experienced and well respected consultants and technologists available there is virtually no corrosion challenge or question that we and our associates would be unable to help with. In addition, the Corrosion Helpline is available for any corrosion question you may have and we have specialists in all of the following areas:

- Arbitration and Litigation**
- Condition Monitoring**
- Corrosion and Chemical Degradation**
- Education and Training**
- Failure Analysis and Laboratory Testing**
- LAMFIS®**
- Materials Selection and Specification**
- Paint and Coating Technology & Testing**
- Polymer & Resin Technology**
- Project Management**
- Paint Specification Development**
- Specification Appraisal**
- Paint Application Testing**
- Fabric Management System Development**
- Corrosion Strategy Development**

Strategic Corrosion Management have delivered training in the USA, Europe, Middle East and Far East, allowing our clients to become autonomous in many areas of the Corrosion Management and Fabric Maintenance process.

Training

Effective 'Skills Transfer'

Strategic Corrosion Management Training Services are both innovative and highly effective using on-site, classroom, video and online training techniques. We have been able to easily and quickly transfer the skills of Corrosion Management and Coatings Technologies to many companies around the world.

We can deliver training's to match your specific requirements in the topics listed below - either in UK or at your location worldwide.

Our training course topics fall under the broad headings of:

- Coatings & Fabric Management**
- Corrosion & Corrosion Management**
- Marine Corrosion**





A key strength is the ability of our consultants to adapt and lead in a rapidly changing and technically demanding environment. This professional flexibility is a cornerstone of our overall capability.

Specialist Corrosion Services (Strategic Corrosion Management - Lithgow Associates)

Our sister company, Lithgow Associates (LA) is a cooperative group of specialised corrosion consultants who provide professional advice and technical support to a wide range of clients, worldwide.

Our partners and associate consultants are acknowledged leaders in corrosion control management and this expertise is complemented, where required, by highly qualified specialists from other fields. Our clients include the oil, gas and petrochemical industries, shipbuilders, marine operators, fabrication yards, power generators, river and water authorities, manufacturing companies, rail operators, councils and government bodies, and the legal and insurance professions.

While our associate core business is primarily targeted at corrosion prevention, analysis and rectification, the consultancy has access to prestigious Research and Development facilities.

Corrosion Helpline

Our sister company, Lithgow Associates (LA) administer the Helpline under contract to the Department of Trade and Industry (DTI). The Helpline offers UK industry free and impartial advice on all matters relating to corrosion and LA extend that free support Worldwide. The Helpline is based at the National Physical Laboratory (NPL) UK.

Telephone or email contact can provide you with immediate advice and support on many corrosion challenges although some solutions will take time and further information in order to generate a sound and correct response.

Contact us directly and we will use the resources we have to help you. This is a Free Help Line Service

Advisory Help Line UK & Worldwide:
+44 (0)1633 413331 www.lithgow.co.uk

SafeMark™

SafeMark™ is a unique method of identifying pipes and their contents that can be fitted rapidly without special tools - they are extremely cost effective.

The pipe markers are specially formed from a "memory retaining" material, printed on its inner surface with colour coding - text - identification codes - icons - pictograms - and individual notes if required. The standard pipe markers are both UV resistant and for temperatures up to 80 Deg C - though higher temperature resistance is available with our specialist marker range on request.

SafeMark™ pipe markers fulfil the statutory requirements of typical Health and Safety Regulations around the world, which demands that all employers display appropriate safety signs to advise personnel of the type of gases, liquids and solids within pipes.

Pipes must also be clearly marked in critical areas, such as valves and joints - and signs on pipes containing dangerous substances should include approved style pictograms or hazard symbols on a coloured background.

SafeMark™ snap-around pipe markers comply with BS1710 and meet HSE and relevant statutory directives. Our markers include regulation symbols and text and we can print any other company specific data to order. Pipe cleaning is not always essential and the markers are fixed in seconds. They can also be removed easily for inspection, maintenance or substrate cleaning work.

SafeMark™ will not support flame and has a design life expectancy is in excess of 6 years though trials have shown no appreciable deterioration over 13 years. Ion chromatography tests prove SafeMark™ generates no significant levels of chloride.

Insulation Inspection Ports™ (IIP™)

The most cost effective solution for corrosion under insulation (CUI) inspection.

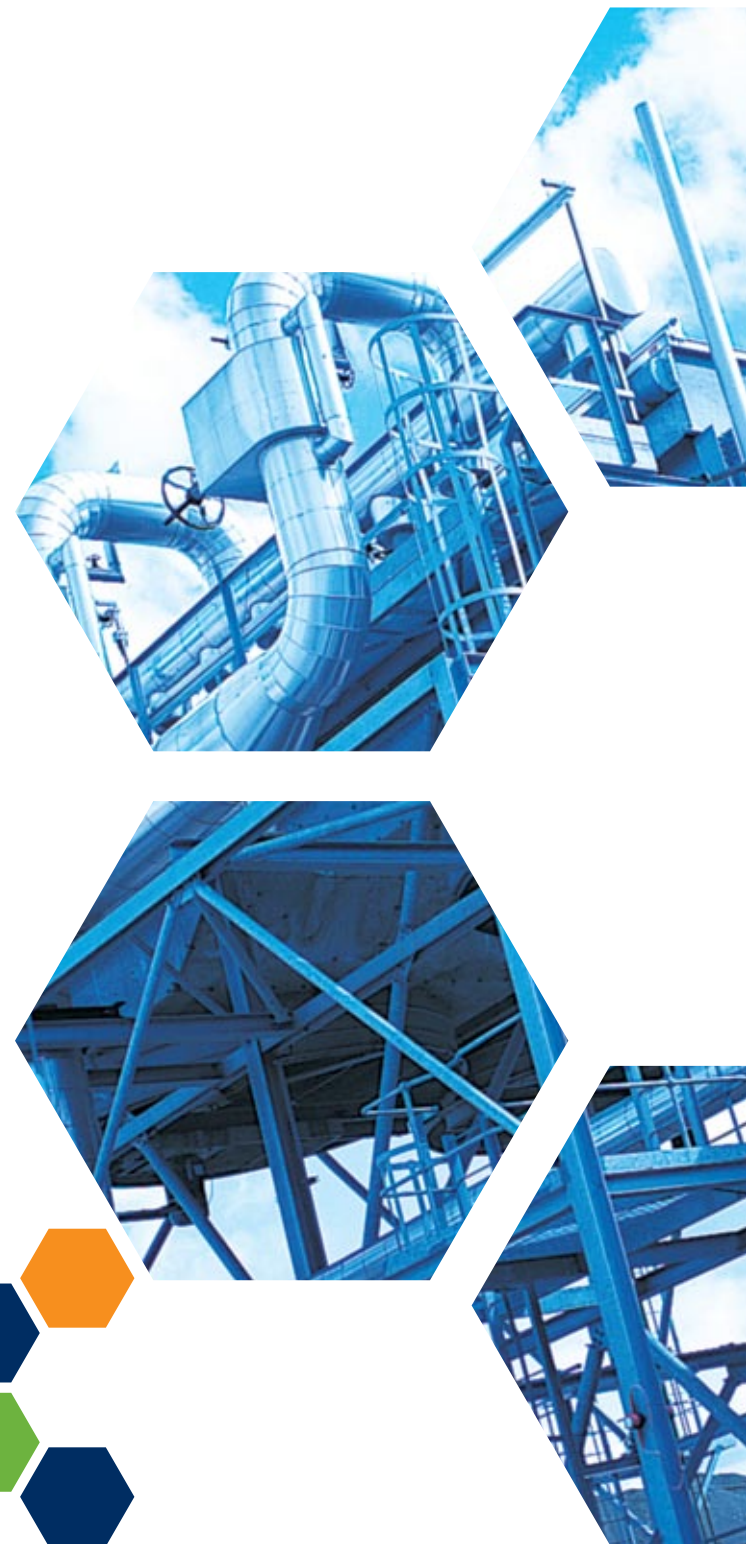
To help monitor the hazards of Corrosion Under Insulation (CUI) on pipes and process pressure vessels, the **INSULATION INSPECTION PORT™ (IIP™)** is designed so that engineers can quickly inspect lagged and insulated facilities without large scale insulation removal.

One type of IIP™ consists of a strong aluminium eyelet and 'O' ring seal which is permanently fitted into the metal cladding. A silicone rubber plug clips into the eyelet to provide rapid and easy access while ensuring a totally weatherproof seal.

The second type of IIP™ is a silicone rubber plug, formed to clip into a rigid or flexible insulation wrap system, to provide a rapid fit and weather proof seal.

In any well-planned corrosion and fabric maintenance programme, our IIP™s could dramatically reduce your inspection time and cut your costs. When the silicone plug is removed from either type of IIP™ you have rapid access for regular ultrasonic wall thickness, visual monitoring, gas testing or coupon / plug examination at precise and repeatable locations. With the plug refitted you have high-integrity weatherproofed insulated plant facilities.

Our IIP™ ports are used by all sectors of industry. The silicone plugs can operate at high temperature to ensure a long in-service life.





Worlds First Fully Integrated Component + Corrosion + Fabric Management System

RISCm Risk, Integrity & Strategic Corrosion management

The first 'truly' integrated Component, Corrosion and Fabric management system **RISCm™** is the 'next generation' set of software tools to support Engineers in the minimisation of Plant Corrosion. The system comes as a direct evolution of the widely deployed 'TCI Project Paint' software, first installed on working plant in 1987. **RISCm™** is completely integrated, linking Corrosion, Fabric Maintenance and **Objective-Evidence-of-Integrity** into one homogeneous toolset. In **RISCm** there is no divide between how we assess our plant integrity and the most cost effective way to undertake corrosion mitigation and fabric repairs.

Our ultimate aim is to determine where maintenance can be safely **reduced, deferred** or **eliminated** altogether.

This style of Management is of huge value when inspection resources are stretched or plant availability is low, at which point **RISCm™** can be used to determine where best to deploy resources most efficiently. A contemporary use for **RISCm™** is in 'Near Miss Analysis'— where failures on other facilities may be modelled to determine similar risks on current plant.

Tying together 'Component, Corrosion and Fabric Maintenance Management' we get the most attractive and effective means to implement a 'Corrosion Management Strategy' whatever that might be. There are few (if any) corrosion threats that cannot be modelled in **RISCm™** yet it requires a much reduced operator skill set than necessary for any other system.

RISCm™ delivers the ability to:

- Accurately define plant corrosion condition
- Manage plant integrity
- Plan and control the inspection and maintenance works cost-effectively
- Select the right people, techniques and materials for maintenance
- Maintain corrosion management traceability
- Implement, control and monitor the Corrosion Management Strategy
- Manage the Integrity/Cost model for targeted plant life

RISCm™ incorporates the following modules (available in combination):

- Component Manager
- Corrosion Manager
 - Wall Thickness & Corrosion Trending Retirement
 - Criticality Development
 - Flange/Bolts management
 - Corrosion / Component Inspection
 - Transits & Penetrations management
 - Temporary Repairs management
 - Saddles / Hangers & Support management
- Fabric Manager
- Threat Manager
- CUI Manager



Our expertise has led us to work with many organisations at the forefront of industry earning vast experience in diverse industry sectors including engineering, maintenance, marine manufacturing, aerospace, process, oil & gas and power.

Partners and clients

Strategic Corrosion Management has built an enviable reputation with a range of clients, including:



Past Clients have included: BP, Shell, Total, Phillips, Esso, Mobil, Amoco, Elf, British Gas, Gulf, Kuwait Oil, Ciba, Courtaulds, SLP Engineering, Vauxhall Motors, Heerema, ICI, British Steel, Dupont, GATX, British Sugar, Courage Brewery, Birds Eye Walls, Watson Petroleum, Dunlop, Rhone Poulenc, Fina, Dema Glass, Vandenburg Foods, Pfizer Chemicals, Kimberly Clark, Lever Brothers, Glaxochem, Ross Chemical, British Steel, Rigblast Energy Services, Cape Industrial, Salmis, Scottish Hydro Electricity

No two plant or process facilities are identical and engineering styles vary, so in determining the level of cost effective control right for your plant, we need to learn a little about your strategies, resources and objectives. We can then offer an opportunity to 'benchmark' your Maintenance Scheme with those of other similar organisations.

The Strategic Corrosion Management Effectiveness Audit™

An effectiveness audit can help to minimise trial & error, though more importantly, experience shows this type of assessment can offer maintenance cost reductions of 5% to 85% over the life-time of a plant.

The Strategic Corrosion Management **Effectiveness Audit™** is an Assessment, Review and Presentation package tailored specifically to your own company needs and considering your current 'external corrosion management philosophy'.

Over 1, 2 or 3 days our experienced consultant will document the significant aspects of your corrosion, painting & insulation maintenance management considering the following areas of business;

- Refurbishment and maintenance specifications.
- Business objectives.
- Plant life-expectancy.
- Capital refurbishment programme.
- Planned Plant-Changes.
- Past maintenance successes and failures.
- Process type, environment and legislation

- Financial and material resources.
- Analyse data collected during the audit.
- Develop a cost effective route forward.
- Present the findings to your Management Personnel.
- Recommend a growth path to realise all potential benefits.

Our assessor will talk with your site and managerial staff, in addition to reviewing your documentation and written procedures. We aim to identify each step in your maintenance process, comparing the results you achieve to what you expected. The plant is walked to compare current condition to that anticipated from documentary/personnel interviews.

Finally, we benchmark your programme against many other organisations who have developed effective fabric management processes, and consider the potential benefits to your scheme.





The Corrosion Centre

PO Box 38
Lowestoft
Suffolk NR32 3WB

t: +44 (0) 1502 530 525

f: +44 (0) 1502 531 014

e: scm@stratcorrman.com General Enquires
sales@stratcorrman.com Sales Department

The Corrosion Centre

PO Box 55
Blyth
Northumberland NE24 4WZ

t: +44 (0) 1670 351 886

e: scm@stratcorrman.com General Enquires
sales@stratcorrman.com Sales Department

w: www.stratcorrman.com

A large decorative graphic on the right side of the page consists of several overlapping hexagons in dark blue, light green, and orange. The text "Part of the tci group" is positioned at the bottom right of the page, with "tci" in a dark blue box.

Part of the **tci** group