



TECNOLOGÍA TOTAL
INGENIERÍA EN INTEGRIDAD Y CORROSIÓN

INTEGRITY AND CORROSION CONTROL PRODUCTS AND SERVICES



Mission

We are TECNOLOGIA TOTAL SAC, a company dedicated to the provision of engineering and integrity projects, and the commercialization of equipment and supplies for corrosion prevention. We have people who are trained and committed to the company, quality, safety and the environmental protection. By promoting continuous improvement and adjusting our processes, we want to achieve the sustainability and success of the company for the benefit of our clients and stakeholders.

Goal

Lograr la consolidación de las diferentes líneas de negocio de manera rentable y sostenible para el año 2020, construyendo relaciones de mutuo beneficio con nuestros clientes y partes interesadas.

Introduction

TECNOLOGIA TOTAL is a leading engineering company in Corrosion Control in Latin America. Our goal is to provide our customers with an integral portfolio of services for the control and prevention of corrosion. Our clients include the most important companies in the energy and Oil & Gas industry that operate in Latin America.

We have personnel trained and certified by NACE International. Our active membership with NACE allows us to be updated on corrosion control and integrity of industrial facilities.

We are confident that our services and experience provide an adequate profile to be taken into account in your projects.

Integrated Management System

Our Integrated Management Policy is to give engineering services, and commercialization of equipment and supplies related to integrity and corrosion control, seeking customer satisfaction, minimizing hazards and risks, providing the required resources to guarantee the highest quality standards in order to prevent occupational hazards and risks, within a framework of protection, pollution prevention and environmental friendliness.

We comply with current legislation, contractual commitments and other requirements to which the organization adheres, as it ensures the resources and proper equipment to ensure the provision of our services. We pledge to carry out a culture of continuous improvement in all processes, because our staff is trained, competent and committed to the sustainability of the organization.



Our Services

We have NACE certified personnel to support and advise you in the following areas:



Cathodic Protection



Integrity



Internal Corrosion



Direct Assessment



CIS/DCVG/
PCM



AC/DC Interference



Remote Monitoring



Laboratory



Failure Analysis



Ultrasound

Cathodic Protection:

We have NACE Certified personnel as Cathodic Protection Specialist (CP4), Cathodic Protection Technician (CP3), Cathodic Protection Technician (CP2) and Cathodic Protection Tester (CP1) available to customer's request.

We give support in all the process stages of the cathodic protection systems for pipelines, tanks, docks, platforms, and stations.

- Design
- Manteinance
- Installation
- Materials supply
- Start-up
- Inspections



Integrity Services:

In TECNOLOGIA TOTAL we can help you with the complete implementation of the integrity management program or at any stage of the program that your company needs. We have NACE certified professionals as Pipeline Corrosion Integrity Technologist. Additionally, all the inspections, analysis, and predictions of the asset life are performed in strict compliance of the applicable international standards like ASME, AWS, API, ASTM, etc.



Elaboration or audit of the integrity management program – ASME B318.S /
API 1160



In-line inspection validation – API 1163



High consequence areas (HCA) identification



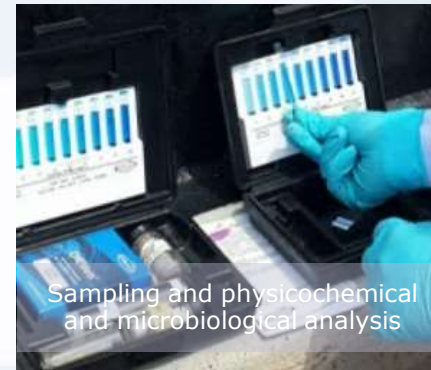
Risk based inspection (RBI) – API 580



Risk analysis

Internal corrosion:

TECNOLOGIA TOTAL provides a variety of services for internal corrosion control and monitoring, with the support of our NACE certified professionals as Internal Corrosion Technologist and NACE Senior Internal Corrosion Technologist.



Direct assessment:

TECNOLOGIA TOTAL offers its services to perform the following direct assessments:



External corrosion direct assessment (ECDA)



Internal corrosion direct assessment (ICDA)

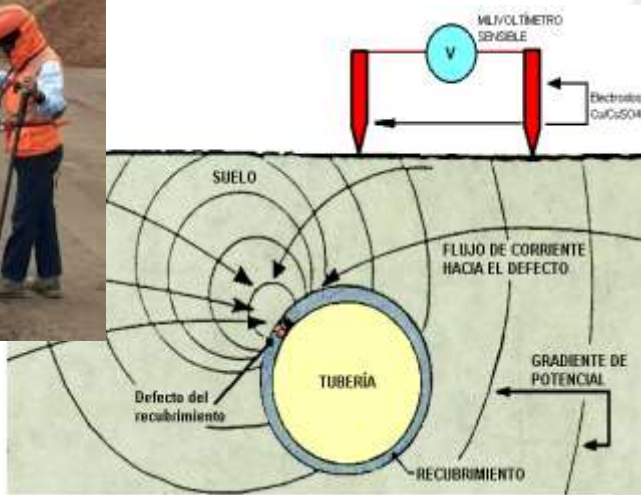


Stress corrosion cracking direct assessment (SCCDA)

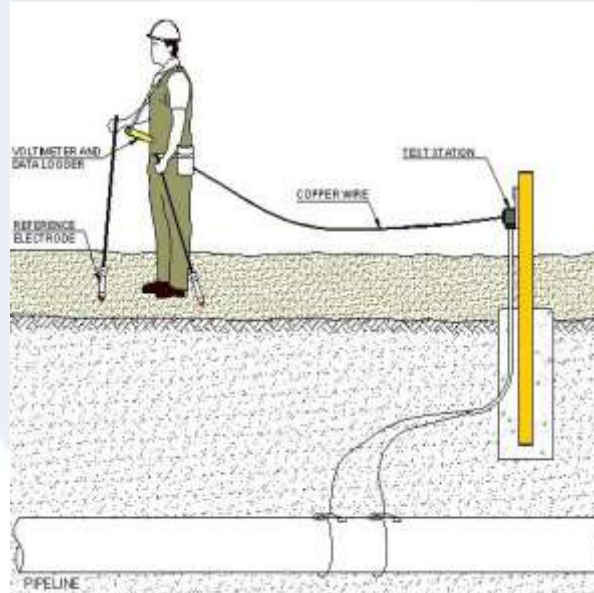
Indirect inspections:

TECNOLOGIA TOTAL offers indirect inspections using four main methodologies:

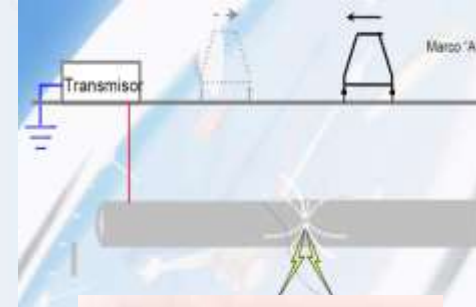
DCVG (Direct Current Voltage Gradient)



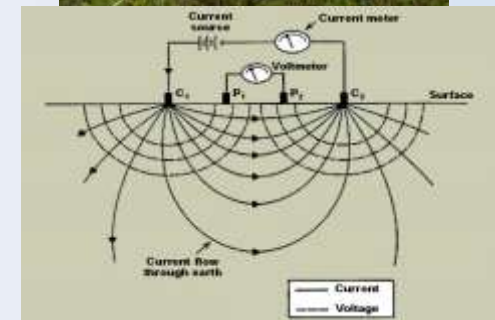
CIS (Close Interval Survey)



PCM (Pipeline Current Mapper)



Soil Resistivity Survey



AC/DC Interference:

TECNOLOGIA TOTAL has develop several DC interference studies in Latin America with DC operated trains, cathodic protection systems and telluric currents.



- Transport system currents analysis.
- Field tests for the influence of foreign pipelines.
- HVDC analysis.
- Computer modeling of eddy current interference.
- Interference mitigation design.
- Telluric currents analysis and mitigation design.

TECNOLOGIA TOTAL has the experience and specialized software for the monitoring, modeling, and mitigation of AC interference problems.



- Soil resistivity analysis.
- Grounding resistance measurements.
- Analysis of the electrical circuit transmission system.
- Computer modeling of induced AC interference effects and fault currents.
- AC interference mitigation design.
- Touch and step voltage analysis and mitigation design.
- AC corrosion mitigation design.

Remote monitoring:

TECNOLOGIA TOTAL has available units and strategical allies for remote monitoring, through three types of communication systems: satellite, cellular GSM, SCADA integration via MODBUS.

Applications:



Partnerships:



Laboratory:

We have a modern laboratory to perform physicochemical, microbiological, and electrochemical analysis of water, soil and hydrocarbon samples. Our services include:

- Water corrosivity analysis.
- Soil corrosivity analysis.
- Electrochemical analysis.
- Pigging waste analysis.
- Corrosion products analysis.
- Metallic structures failure analysis.
- THPS biocide residue.
- Bacteria count.
- Chemical oxygen demand (COD).
- Biochemical oxygen demand (BOD).
- Total hydrocarbon.



Failure analysis / Root-cause analysis:

In TECNOLOGIA TOTAL we have all the resources to develop studies that can determine the failure mechanism of pipelines or process equipment, in order to assist you in the decision of replacement, maintenance and corrosion control.

- Effective methodology.
- Specialized personnel in different areas of expertise.
- Complete laboratory and external lab assistance in case it is required.



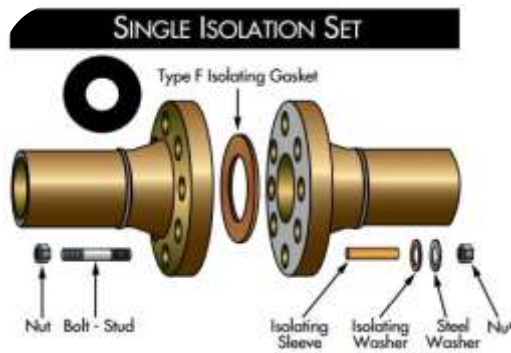
Industrial ultrasound inspection:

- Discontinuity detection and characterization.
- Measurement of thickness, degree and extension of corrosion.
- Physical characteristics determination such as metallurgical structure, grain size and elastic constants.
- Define bonding characteristics.
- Evaluation of the process variables influence on the material.



Our Products:

We have products to meet all your needs related to corrosion control and integrity, reinforced by our strategic alliances and with high quality standards:



Pipeline accessories



Cathodic protection supplies



Specialized and inspection equipment



Coating systems



Junction Box



TECNOLOGÍA TOTAL



Pigs for cleaning pipelines



TECNOLOGÍA TOTAL



Air and oil cooled rectifiers



TECNOLOGÍA TOTAL



Magnesium and zinc sacrificial anodes



TECNOLOGÍA TOTAL



Splice Kits



TECNOLOGÍA TOTAL



Impressed current anodes



TECNOLOGÍA TOTAL



MMO Anodes (titanium)



TECNOLOGÍA TOTAL



Calcined petroleum coke





Implements for exothermic welding



Tecnologia Total's Copper Sulphate



Handy Cap IP



HMWPE and NYY Cables



Split Bolt



Tecno lato



External Corrosion Coupons



Tecnosleeve





Data - Loggers



Resistivity meter



Portable and Permanent Electrodes



Current interrupter



Cathodic Protection Coupons



Digital meter



Insulation checker



Digital potential meter





Holiday detector instruments and electrodes



TINKER & RASOR



Portable reference electrodes of sulphate, silver and more.



TINKER & RASOR



Test Stations



TINKER & RASOR



Current supply instruments



TINKER & RASOR



Insulation checkers



TINKER & RASOR



Datalogger, resistivity meter and more cathodic protection instruments.



TINKER & RASOR



Current interrupters



TINKER & RASOR



Allegro Qx Datalogger



Remote monitoring and interruption of rectifiers, test stations and critical bonds



Current interrupter Micromax GPS 360



Dataloggers CorTalk UDL 1 & UDL 2



Portable reference electrodes, for burial, concrete, seawater and more



Power generators at remote sites



Geo-threats, monitoring and analysis of the right of way



Power generators in remote and high risk sites





Flange isolating gasket
INTEGRA II SSA



Electrical Insulation Kits



Flange safety spray shield



Remote Monitoring Equipment



Modular mechanical seals



Equipment and Supplies for
Cathodic Protection and
Corrosion Control



Non-metallic compounds for
structural pipe repair



Reference Electrodes





U-Bolt



Flange protective bands



Monolithic joints



Pipe support and insulation system



Solid state decoupler SSD



Polarization cell replacement PCR and PCRH



Gradient control mat GCM



Over voltaje protector OVP





Vapor phase corrosion inhibitor for tank bottoms

Zerust[®]
OIL & GAS



Vapor Phase Corrosion Inhibitor for shorted casings

Zerust[®]
OIL & GAS



Vapor phase corrosion inhibitor for pipeline preservation

Zerust[®]
OIL & GAS



CIS and DCVG inspection instruments



Coatings

TECNOLOGÍA TOTAL is please to present the official launch of its two coating brands: **tecnolato** y **tecnosleeve**. Additionally, we have trained professionals in every level of the NACE Coating Inspector Program – CIP to assist you with the selection, inspection, installation and maintenance of your coating systems.

tecnolato

The tecnolato coating system is specially designed for the protection of aerial, buried and submerged pipelines and accessories. This system consists of a tecnolato-primer layer, a tecnolato-tape layer and a finishing layer for mechanical protection with tecnolato-shield (polyethylene tape with butyl adhesive); It is also possible as a finishing alternative to apply tecnolato-rockshield (polyethylene mesh) that provides greater protection to the pipeline when the cover contains thick material.

tecnosleeve

The tecnosleeve coating system is specially designed for the protection of pipelines, curves, elbows and, in general, buried and/or submerged accessories. This system consists of a first barrier of tecnosleeve-epoxy and a second layer of tecnosleeve (thermo-shrinkable sleeve) of high adhesion and impermeability that makes the ideal system for the protection of the corrosion of ducts and welded joints with an excellent adhesion in transition zones with 3-layer PP and generally epoxies.



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Thanks for choosing us!

We are here for you.

