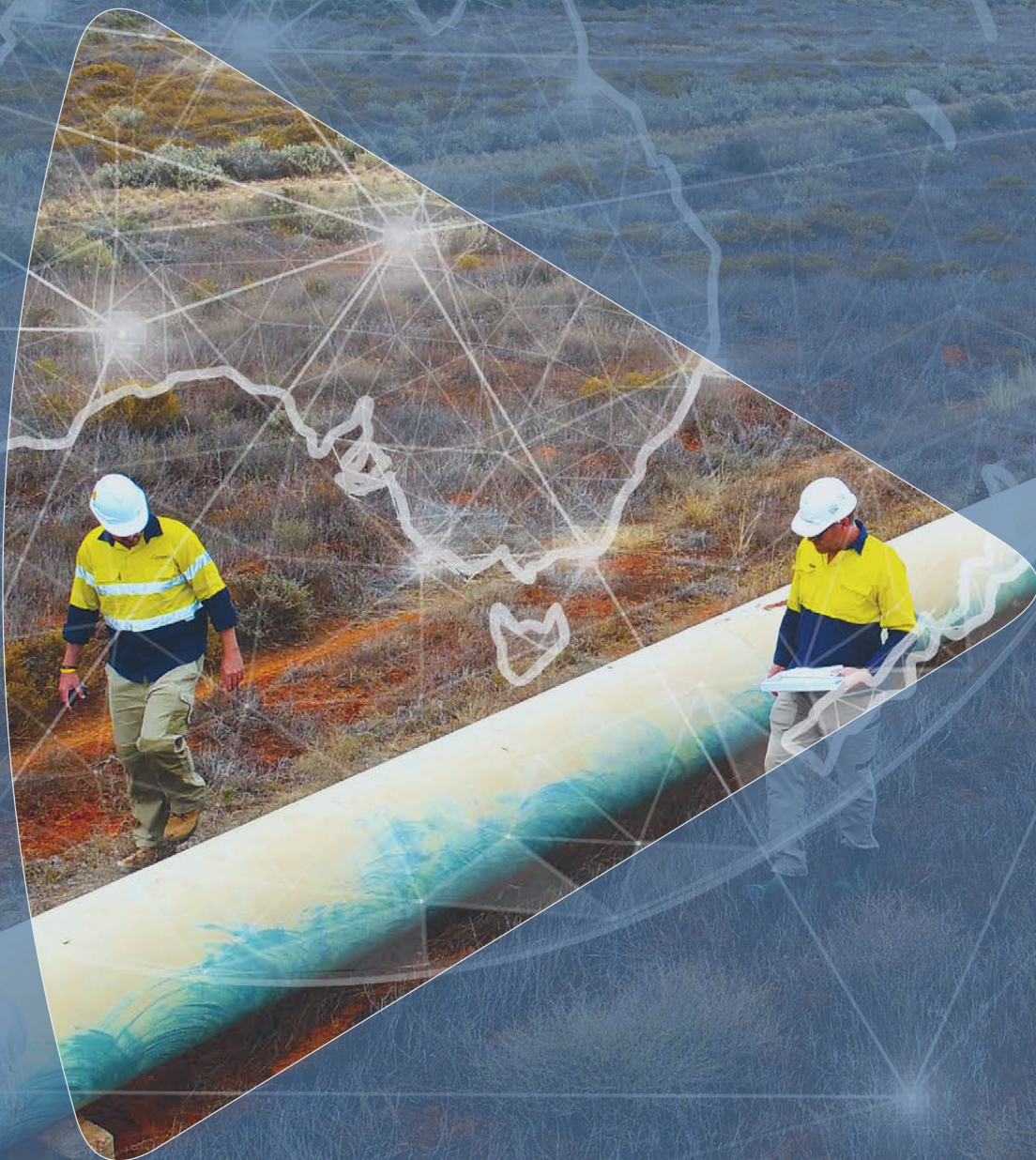


ROSEN Group

TOP SOLUTIONS FOR THE PROTECTION OF PEOPLE
AND THE ENVIRONMENT

in australia



TOP IN THE REGION. WORLDWIDE.

ROSEN

empowered by technology

company profile

About the ROSEN Group

The ROSEN Group is a globally leading provider of cutting-edge solutions in all areas of the integrity process chain. Since its origins as a one-man business in 1981, ROSEN has rapidly grown and continues to do so. Today, the business is still privately owned and consists of a team of more than 3,800 employees, operating in more than 120 countries.

The key to our highly innovation-driven approach is listening carefully to the specific needs and challenges of our customers. "Empowered by technology" is the promise that ROSEN systematically delivers by enhancing the operations of our customers and making them safe, cost-effective and more efficient.

In today's markets, efficient asset integrity management is gaining in importance within a wide range of industries, such as oil and gas, energy, process, mining, manufacturing, telecommunications, and transportation. ROSEN offers the know-how and technology to ensure that customers comply with legal standards and safeguard people and environment, while gaining maximum profit from assets as diverse as pipelines, tanks, vessels, wind turbines, trains, and telecommunication towers.

ROSEN's Products and Services

Broad application-oriented research, development and manufacturing of market-oriented products, tools and services with high added value for the market in a timely manner.

Diagnostics of industrial assets using equipment developed and manufactured in-house to ensure safe and reliable operation according to the highest demanding standards for the protection of people and the environment.

Individual engineering and consulting services to help operators of industrial assets to enable efficient integrity management.

As a family business, we do not lose sight of our colleagues as we complete our daily work. We place great importance on direct, personal contact. We keep our doors open across all levels and cultures – including for the families of our staff. One example are our regular Family Days, when we celebrate together and show our families our workplace.

vision and mission

We are an international family business that is organized into a group structure, but financially independent and not publicly listed. The owning family always has an eye on market requirements and determines the sustainable long-term direction of the group of companies.

Vision

With our motivated staff we want to create ultimate value for our customers by advanced products and integrity service solutions as the world's undisputed leading provider — most reliable, competitive and flexible.

Mission – empowered by technology

It is our continuous objective to be the world's most competitive provider of a wide range of corresponding products and services especially around the integrity continuation of complex engineering structures like oil and gas pipelines, plant and infrastructure facilities etc.

Founder and President

Immediately after finishing his studies of measurement and regulation technology, Hermann Rosen started an engineering company for electrical planning solutions in Lingen, Germany, next to the home of the Rosenfamily.

After a few years he identified a growing demand within the market for inspection solutions to ensure the integrity of pipelines of the oil and gas industry. In 1981 he founded the Rosen Engineering GmbH that is today known as the ROSEN Group.

As president and chairman of the family board, Hermann Rosen is responsible for the long-term company strategies of the ROSEN Group.



products and services

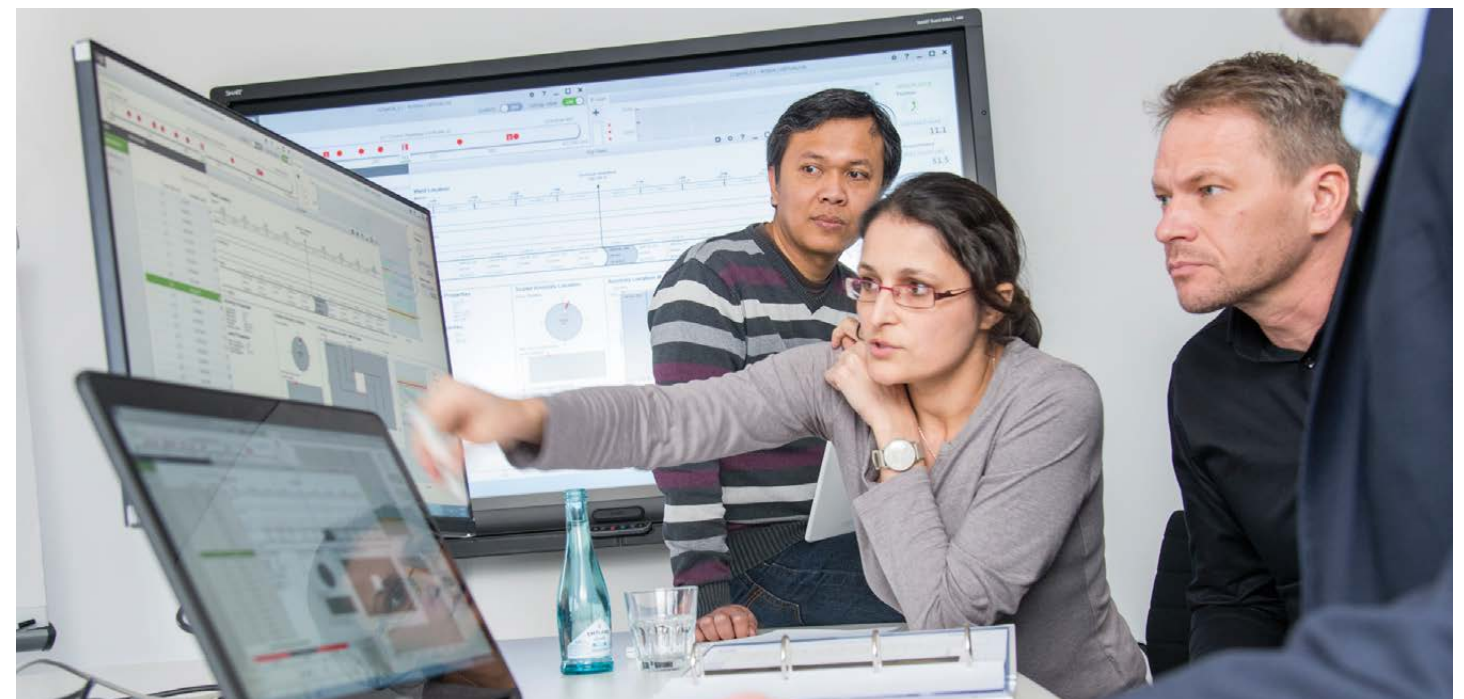
»empowered by technology«

As a worldwide provider of cutting-edge solutions in all areas of the integrity process chain we at ROSEN are »empowered by technology«. Technology is what drives us and determines our business. Innovation, know-how and a strict orientation on customer needs are the key factors of ROSEN's success story.

Based on the trust of our customers, we want to build long-term partnerships and offer the best of technologies and services which we design reliable, cost-effectively and efficiently. Doing so, we achieve our goal of being the market leader in the respective field.

At ROSEN, we recognize the necessity of sustainable action and apply clearly defined values to all aspects of our daily business. Our company philosophy is based on ethical principles and the protection of people and the environment.

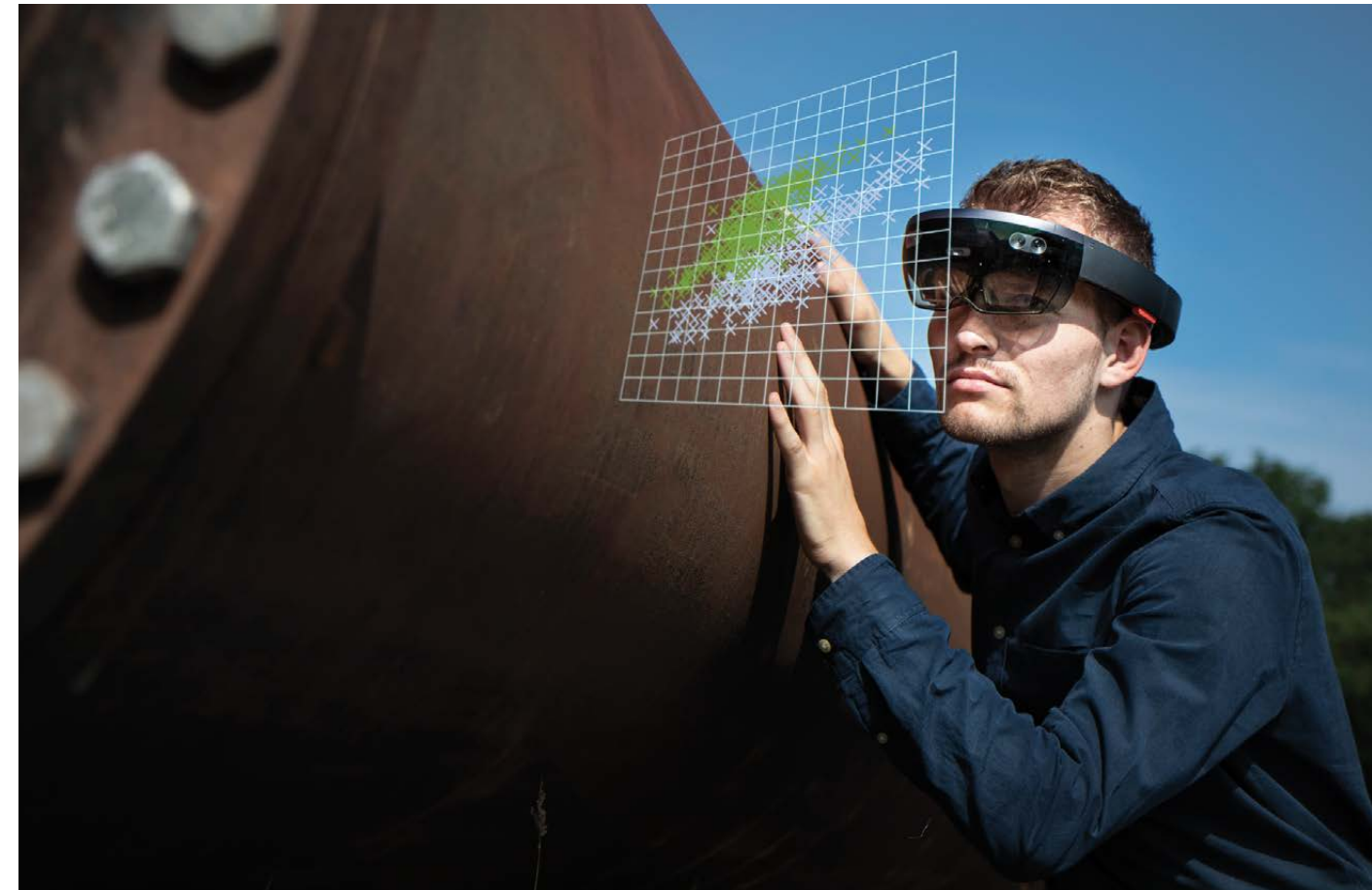
We research, develop, produce, and market products and services for the inspection, diagnosis, and monitoring industrial systems. In our core business, we inspect industrial assets and evaluate the collected data to provide our customers with a comprehensive inspection report. We also offer software solutions with which the operator can assess its systems' condition, taking into account such environmental influences as earthquakes.



A Comprehensive View

For operators of industrial plants it is becoming increasingly important to obtain a comprehensive understanding of their assets. This is no longer just about oil or gas pipelines. With our state-of-the-art technologies we inspect all types of industrial plants – whether it is pipelines, tank silos, refineries, wind turbines, or trains.

We comprehend that asset management is much more than a simple inspection. It is a comprehensive understanding of an asset's current and predicted condition. We realize that to ensure sustainable, safe, efficient, and reliable operation, action is required. Ultimately, the goal of asset management is to prevent failures and incidents. To ensure the safety of the public and the environment, to avoid repairs and interruptions in operation, and to extend the lifetime of an asset — we help the operator achieve zero incidents.



Investments in the Future of our Industries

At ROSEN, we are constantly evolving instead of standing still. Since the early 1990s, we have had a very substantial digital base in all areas, such as data storage and processing. We see digital change as an opportunity and actively respond to its challenges and new technologies. As a service provider, we collect valuable data and information with our tools which then form the basis for important decision-making processes. We are also breaking ground when it comes to expanding competencies in our industry and invest in research and development, e.g. with a comprehensive program of practical and well-structured training courses as well as multiple qualification levels.

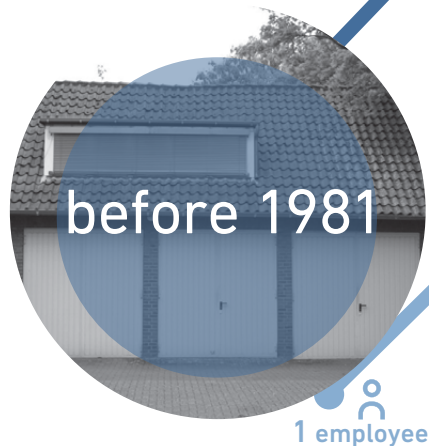
history of the ROSEN Group

Challenger

The 1990s were a fast-paced decade for us. We challenged the established companies in the pipeline inspection business and repeatedly drove ourselves to increase performance. The results were visible in the global expansion of our SME. We founded our first branches in the U.S., Australia, and Mexico. By the turn of the millennium, the number of people working for us had more than quadrupled.

Adventurer

1981 marks the birth of the ROSEN Group as we know it today. The small company moved to the building in which founder Hermann Rosen was also living with his family. The adventurers recognized the growing market demand and the technical challenges of services for the oil and gas industry. ROSEN became a pipeline inspection company. In 1988, the company moved to its current premises in Lingen (Am Seitenkanal, Industriegebiet Süd).



before 1981

1 employee



1981-1990

more than
60 employees



1990-2000

more than
400 employees



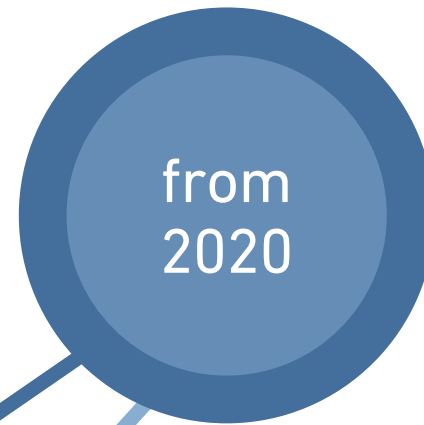
2000-2010

more than
1,850 employees



2010-2020

more than
3,800 employees



from
2020

Accelerator

The beginning of the next chapter: We accelerate towards a large range of new solutions, for a wide variety of industries, to enable intelligent decisions for a sustainable future. Agility and collaboration are taken to a new level through transformative technologies and by living the corporation mindset.

Competitor


At the beginning of the new millennium, our SME had become a technology group that was active all over the world. We established new branches and were represented throughout the world. We worked hard to develop new methods and improve old ones. We also developed integrity management software and innovative materials. We became a technology leader. At the same time, our market share increased.

Leader

In 2010, we made our breakthrough. Having secure technology leadership, we became the market leader as well. We inspected more than two thirds of the pipelines in the oil and gas industries inspected worldwide. But our business had long expanded beyond just pipelines. More than 25 branches all over the world keep us active in 120 countries, and we are constantly conquering new markets. We combine our expertise with new ideas that go far beyond our core business, ensuring safety in trains and wind farms.

locations worldwide

90%
of our employees have a technical education/ background


more than 3,800 employees worldwide

#1 we are technology and market leader in the main areas we serve

we work in more than **120** countries



more than **25** locations world-wide

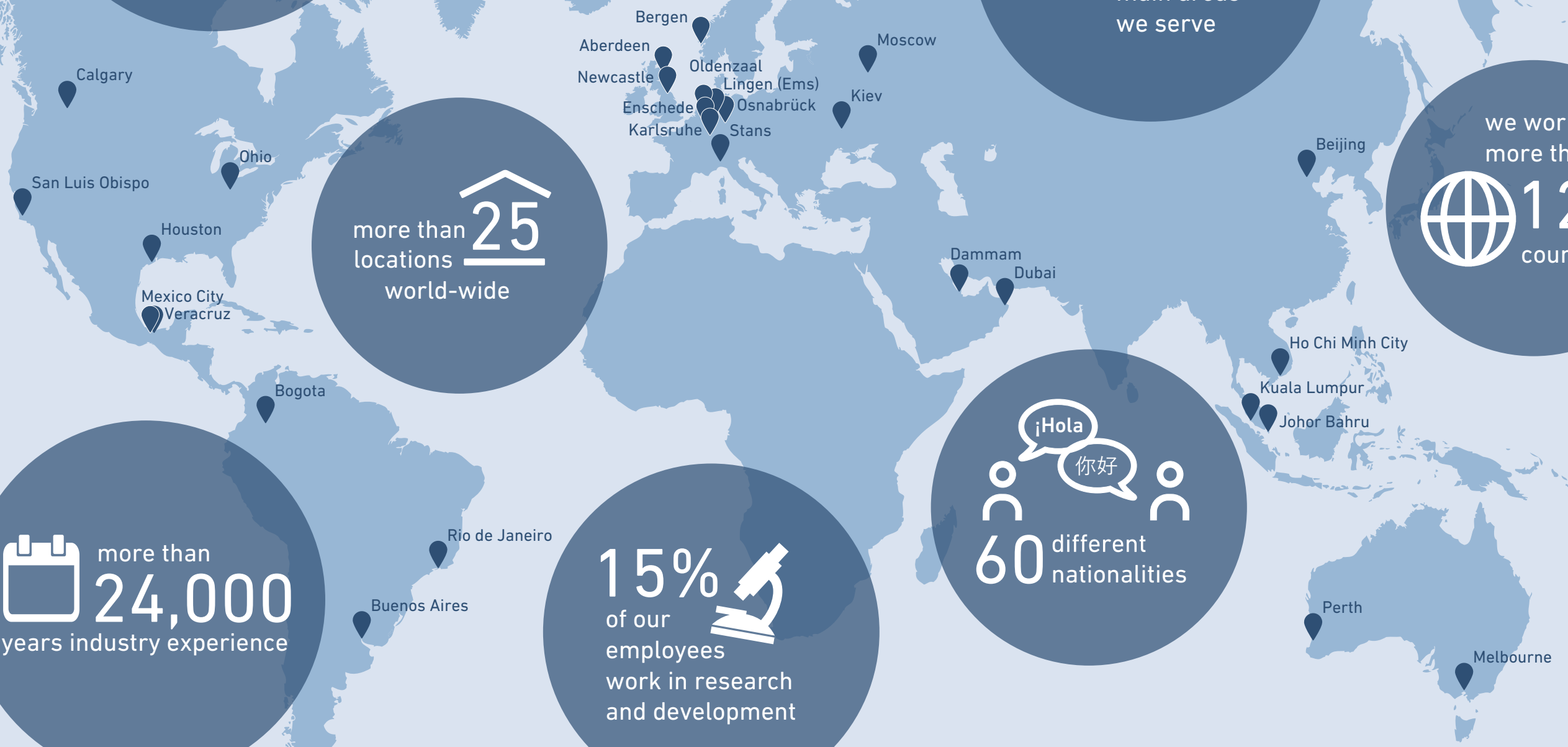


 more than **24,000** years industry experience

15% of our employees work in research and development




60 different nationalities



network of resources

Research and Development

ROSEN invests significantly in further refining products and services and develop groundbreaking new technologies and products. We employ a large number of engineers and scientists worldwide who focus on developing solutions that help decreasing operating costs, increasing production efficiency, lower the environmental impact of production and, of course, improve the performance of products.

We ensure we enable engineers and scientists to have the best results by providing the equipment they need to succeed: Working together with the right partners around the world, including universities, allows us to broaden our horizons and address solutions holistically.

ROSEN Technology & Research Center

ROSEN has established Technology & Research Centers (RTRCs) in Europe, the USA, Saudi Arabia, Asia and South America. These centers occupy an advanced technology environment designed to stimulate communication and teamwork, creativity and innovation.

Extensive research, product development, software simulation and testing are conducted in the RTRCs. Our in-house research center provides a core capability to support all technology and manufacturing requirements for our subsidiaries worldwide. When developing new products and services, close cooperation between the customer, ROSEN engineers involved in actual inspection applications, and the RTRC is essential.



Manufacturing

Part of the ROSEN's ability to create solutions needed by the market comes from the complete in-house manufacturing ability. The so-called 'ROSEN Factory' encompasses this process in the areas of mechanical fabrication, sensor fabrication, electronics fabrication, assembly of tools, products, spare parts and other needed components, plastics fabrication.



Testing Facilities

Suppliers and operators want reassurance in the predicted life and integrity of their products under the stresses of a real installation in the field. To address this need, ROSEN has established various testing facilities and capabilities to deliver customized testing services. Testing capabilities include:

Pressure Testing – acceptance testing, test to failure, fatigue testing, or evaluating the effect of pressure drops across assets is possible for both flexible and rigid assets.

Mechanical Testing – purpose-built rigs enable vibration testing, the application of agitation of time, bending of pipe and vessels, and strength testing

Environmental Exposure – sealed environmental units can operate at continuous pre-set air temperatures, dedicated chambers can simulate carefully controlled UV light, humidity and corrosive atmospheres to determine long-term effects of weathering

Metallography – in conjunction with experts in welding and materials we can take pipe of any dimension to perform testing and conclude investigations on metals and welds at both microscopic and macroscopic levels

Site Verification Services – testing can be taken out of the lab and into the field for real-life verification.

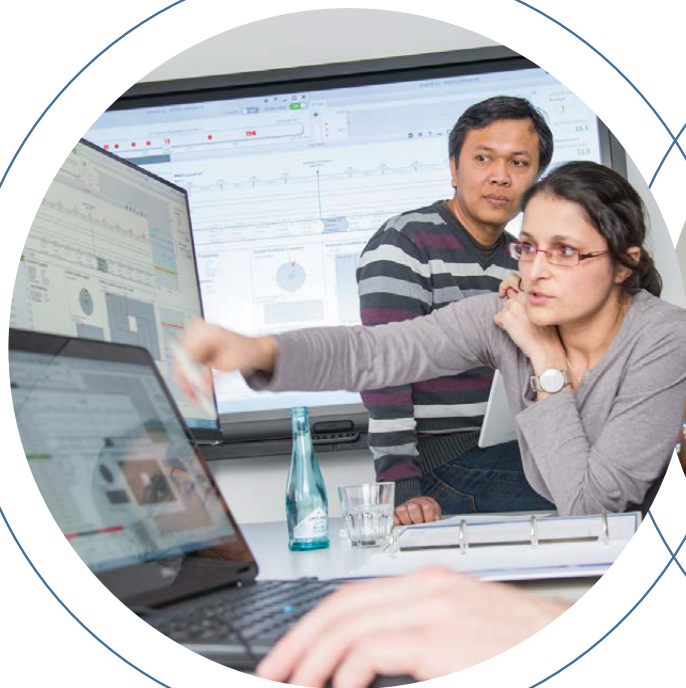
Operational Testing – in-line inspection tools are tested on the ROSEN hosted test field which encompasses 6,500 meters of test pipeline and a dedicated team capable of recreating any scenario. Both pump and pull tests are possible.



business portfolio overview

Asset Care

Diagnostic Solutions



Integrity Solutions

New Business

Education Systems
and Services



Flow Metering
Solutions



Intelligent Plastic
Solutions

Enhanced
Materials

threats we address

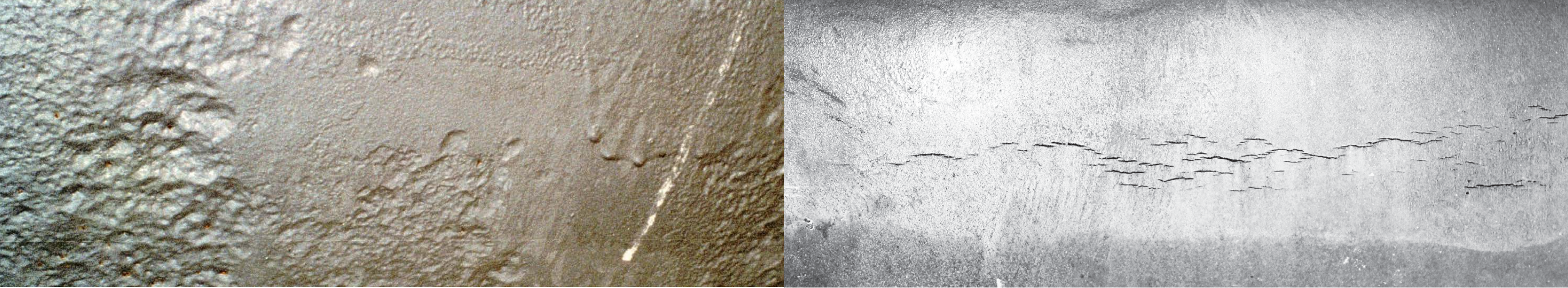
Ultimately, the goal of asset management is to prevent failures and incidents. To ensure the safety of the public and the environment, to avoid unnecessary repairs and interruptions in operation, and to extend the lifetime of an asset — we help the operator achieve zero incidents.

Geometry and Mapping

ROSEN operates the largest fleet of geometry and mapping tools in the industry, paired with a variety of integrity assessments. The following detection services, individually or in combination, assist in managing the risk presented by this threat:

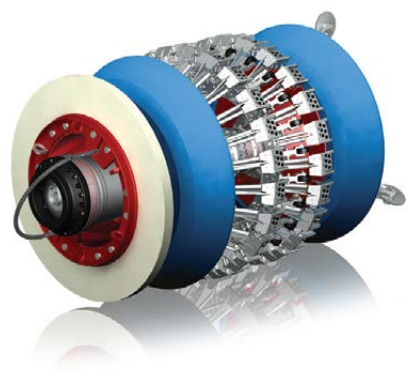
RoGeo MD Service	In-line basic geometry and passage analysis using a mechanical caliper technology
RoGeo XT Service	In-line high-resolution geometry and dent analysis using an extended mechatronic caliper technology
RoGeo XYZ Service	High-resolution mapping service using a gyroscopic inertial measurement unit
RoVisual Service	In-line high-resolution optical inspection technology using high-quality camera with built-in lighting
Integrity Assessments	<ul style="list-style-type: none">○ Strain and stress assessments○ Bending strain and pipeline movement○ Depth-of-cover mapping○ Geohazard mapping○ Fatigue assessment○ Finite element analysis○ Soil loading models





Corrosion Management

Corrosion threats can occur in many ways and at any point in an asset’s lifecycle, creating a constant need for monitoring and detection methods. It flourishes in a variety of environments, from general wall thinning/erosion to gouging to complex corrosion clusters. ROSEN offers a wide range of measurement technologies capable of detecting, classifying and sizing corrosion, and the competency to apply them individually or in combination. Coupled with dedicated integrity assessments, ROSEN assists in managing this threat.



RoCorr MFL-A Service	In-line high-resolution circumferential metal loss detection and sizing using magnetic flux leakage technology
RoCorr MFL-C Service	In-line high-resolution axial metal loss detection and sizing using magnetic flux leakage technology
RoCorr IEC Service	In-line high-resolution internal metal loss detection and sizing using internal eddy current technology
RoCorr UTWM Service	In-line high-resolution metal loss detection and sizing and wall thickness measurement using ultrasound technology
RoCorr MFL-A Ultra	In-line ultra-high-resolution metal loss detection and sizing of pinholes
Integrity Assessments	<ul style="list-style-type: none"> Corrosion Growth Assessment Corrosion Control and Management Risk Assessment Root Cause Analysis Susceptibility Analysis

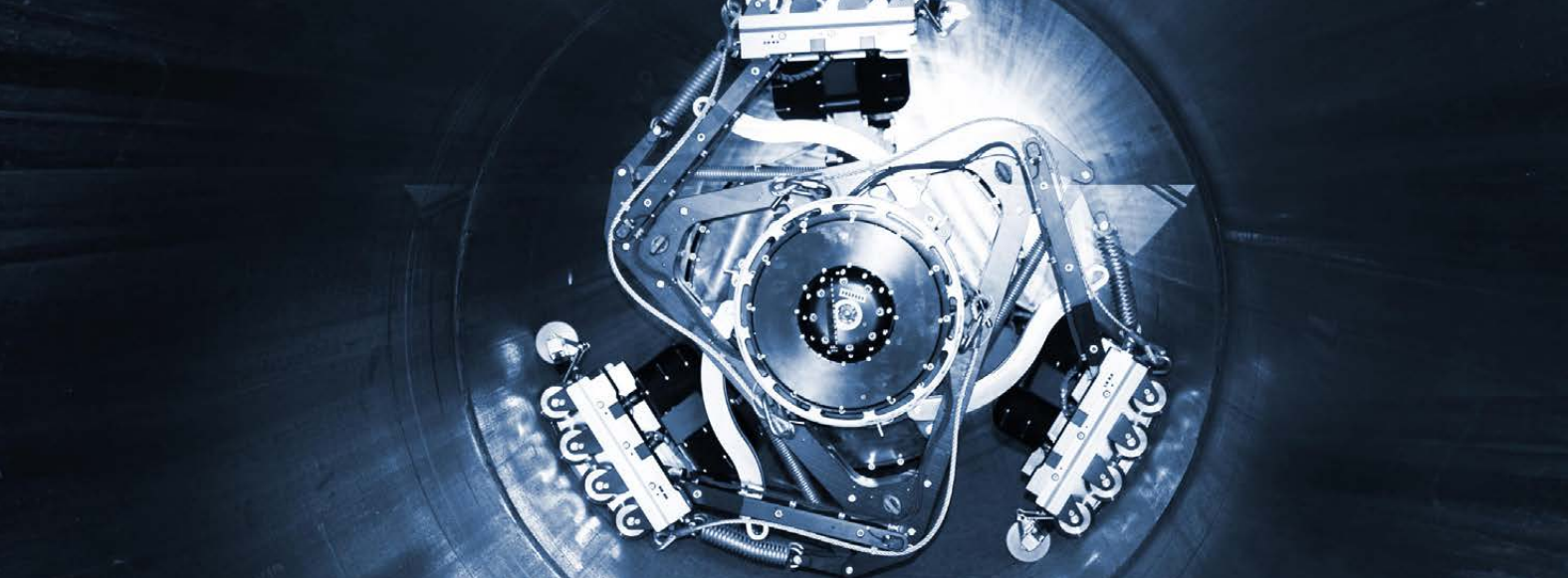
Crack Management

ROSEN’s Crack Detection Services identify a variety of crack formations, including cracks in the pipe body and cracks located in the complex geometry of girth welds and seam welds. Our technologies detect cracks with a very small physical footprint. They also address manufacturing defects and cracks caused by environmental factors.

From inspection requests to the rehabilitation of pipelines, ROSEN allows customers the flexibility to choose from a collection of service options tailored to their individual needs. Our integrity group has unrivaled experience in interpreting in-line inspection

data, providing fitness-for-purpose (FFP) assessments and crack growth analysis. ROSEN helps its customers minimize costs – without compromising operational confidence and quality.

RoCD EMAT-C Service	In-line high-resolution axial crack detection and sizing using electro-magnetic acoustic transducer technology
RoCD UT-A Service	In-line high-resolution circumferential crack analysis using ultrasonic testing technology
RoCD UT-C Service	In-line high-resolution axial crack detection and sizing using ultrasonic testing
Integrity Assessments	<ul style="list-style-type: none"> Immediate Crack Assessment Complete Crack Assessment Risk Assessment Crack Management Plan Root Cause Analysis Susceptibility Analysis



Challenging Pipelines

Since the introduction of in-line inspection tools, there have been pipelines that cannot be inspected using traditional methods due to a combination of challenges typically related to design, operating conditions and characteristics of the medium. By utilizing tailored solutions equipped with proven technology, many of these so-called “unpiggable” pipelines can, in fact, be inspected.

Our key to the ideal solution is the “ROSEN Toolbox,” which consists of complementary units from ROSEN’s comprehensive technology portfolio that enable our experts to optimally address each challenge. Decades of developing and deploying optimized sensor technology for the detection and sizing of geometric anomalies, metal loss, and cracks give us the flexibility to act upon your expectations.

We overcome challenges associated with the following characteristics:

- Access or passage restrictions related to pipeline design, e.g. bends, length, T’s, absence of launchers and receivers, etc.
- Condition of the pipeline, e.g. pressure, flow, cleanliness, etc.
- Properties of the product being transported, e.g. temperature, liquid, gas, multi-phase.

Our solutions include:

- Engineering studies and project management
- Comprehensive pipeline preparation, cleaning and sediment profiling

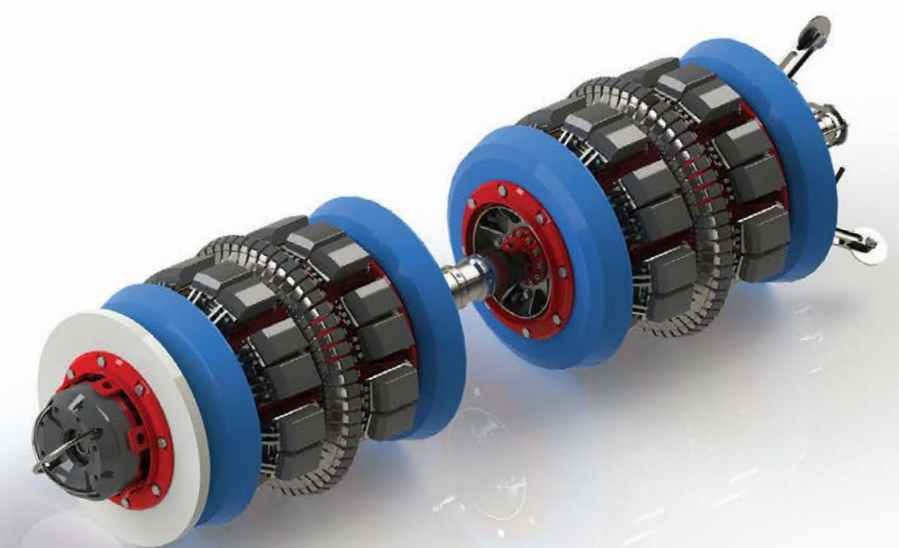
- The most suitable sensor technology, including MFL, UT, EMAT, EC, etc.
- Specialized tools and methods, including free-swimming, robotic, tethered, etc.
- All necessary auxiliary equipment, including temporary traps, pumps, etc.
- Tool tracking and monitoring systems
- Best-quality data collection under adverse inspection circumstances

Material and Pipe Properties

ROSEN’s in-line inspection service suite, RoMat, has been developed to address pipe and material properties, putting an end to incomplete pipeline construction records. RoMat is the solution for pipe grade determination, local hard spot detection, and long-seam categorization, delivering all data needed to fulfill the requirements of M(A)OP (Maximum (Allowable) Operating Pressure) validations comprehensively and holistically.

The suite consists of the following services:

RoMat PGS Service	ID determination of pipe grade
RoMat DMG Service	Detection of volumetric hard spots



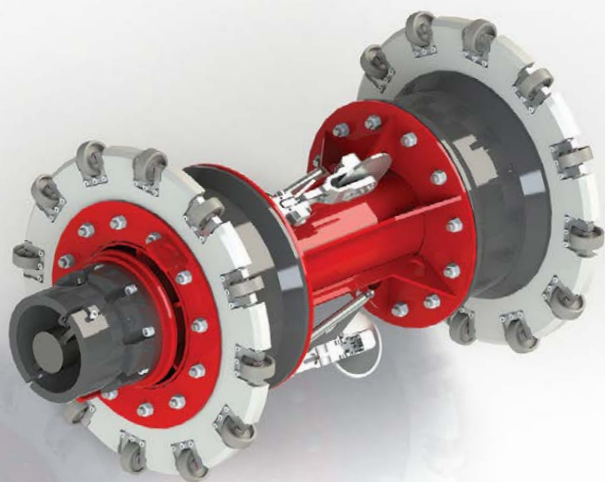


Leak Detection

When a pipeline leak occurs, the liquid moves from a high-pressure area to a low-pressure area and a turbulent flow is created. This flow generates a characteristic sound which can be picked up by a specially designed hydrophone. Using sophisticated algorithms, the Leak ACO tool detects this signal, analyzes it, and evaluates the measurement results to provide identification and location of a leak.

Our Leak Detection Service is based on acoustic measurements. Leaks cause characteristic leakage noise signatures. The RoLeak ACO Service reliably detects leaks, as it uses spectral analysis to filter out disturbances such as noises from pumps, rivers, highways, "singing power poles," etc. The ACO tool is pressure sealed and ATEX certified. It runs in a chassis that adapts to the diameter of the pipeline.

The tool accommodates various pipeline operating conditions. It is designed for robust and easy use, supported by intelligent software to automatically evaluate measurement results with the least possible effort for the pipeline operator. The tools' compact and robust design enables easy launching and receiving, and as it is propelled by the pipeline medium, pipeline operation is not affected and no additional external efforts are required.



Pipeline Cleaning

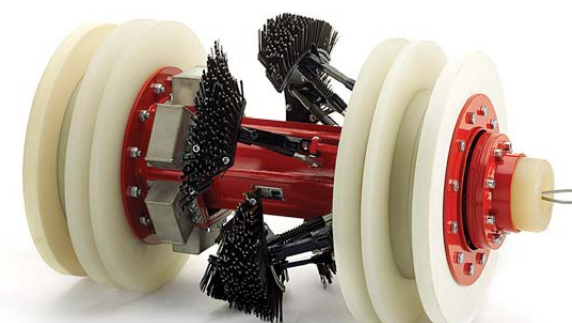
Cleaning is a vital aspect of the integrity management of pipeline networks and necessary at every stage throughout the lifecycle of any pipeline. We recognize that each pipeline is unique and that cleaning needs may vary depending on its operational purpose and lifecycle stage. Failure to clean your pipeline at regular intervals leads to reduced efficiency and may result in damages that affect its integrity.

Cleaning Products

Our pipeline cleaning tool fleet provides the highest degree of flexibility for all applications, including batching, gauging, heavy-duty cleaning, debris removal, and dewatering. Thanks to their slender multi-bolt design, customers can rely on excellent pipe passage and outstanding performance.

Pipeline Cleaning Services

Our customers can rely on Intelligent Pipeline Cleaning Services backed by our considerable in-house expertise in sensor and data acquisition technologies. By using high-quality electronic measurement instruments, data analysis software, and integrity management systems, we will make sure you maximize pipeline uptime and sustain, or even increase, product throughput.

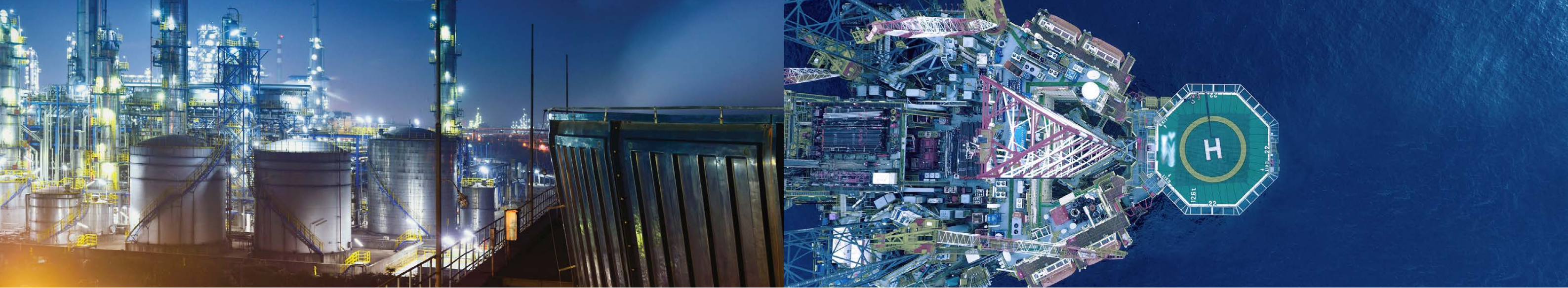


Maintenance Cleaning Solutions

- RoClean Easy – used for general cleaning applications such as batching, removal of liquids, light debris removal
- RoClean Ultimate – used for demanding cleaning challenges and recommended for cleaning prior to in-line inspection
- RoClean Heavy Duty – used for heavy cleaning needs, specifically to remove stubborn deposits comprising of e.g. paraffin, wax, asphaltenes, scales, etc.

Advanced Cleaning Solutions

- RoClean Active – used for black powder removal, controlled liquids removal, and the provision of speed and bypass controlled cleaning solutions.
- Multi-diameter pipeline cleaning
- SMART (pipeline condition monitoring) cleaning solutions



Non-Destructive Testing

For many industries, storage of liquids and gases is a critical part of their business. The potential for environmental impact and the value of the stored materials mean that the integrity of storage facilities is crucial. We help operators address all kinds of integrity questions through diagnostic inspections and holistic integrity management programs. Our extensive expertise, the state-of-the-art services, and software help to minimize risk and increase the lifetime of storage facilities.

Our current strengths closely fit to the following markets:

Tank Integrity Services

- Fitness-for-Service assessment (API 579)
- Tank assessment (API 653/EEMUA 159/STI SP001)
- Scanning asset structures by 3D laser
- Tank bottom corrosion inspection and assessment
- Shell and vessel scanning
- Tank repair plan
- Risk-based assessment (API 580,581/EEMUA 159-2)
- Tank engineering assessment services
- Tank calibration

Piping Integrity Services

- Piping integrity services range
- Piping assessment (API 570/API 2611)
- Fitness-for-Service assessment (API 579)
- Risk-based assessment (API 580,581/EEMUA 159-2)
- Corrosion screening and mapping
- Long Range UT (LRUT) inspection
- UT ime of flight diffraction (TOFD) phased array (PA)
- Repair plans
- Generation of isometric drawing
- Handheld 3D corrosion scanning

Monitoring

Operators need solutions that provide long-term information on their assets to make integrity management both more effective and more efficient. Targeted. Precise. Reliable.

An inspection can only provide knowledge about an asset's current integrity status. Some findings may be classified as critical, yet not severe enough to merit immediate mitigation. In these cases, precise and reliable monitoring targeted to previously identified defects may be of great benefit to the operator. Our monitoring solutions utilize state-of-the-art sensor systems in robust packages.

Services include:

- Structural natural frequency monitoring to identify changes that may result from damage
- Wall thickness monitoring to identify corrosion issues
- Monitoring of anti-abrasion coatings to identify thickness reductions
- Systems to monitor the buildup of internal deposits in a pipeline

The detailed, real-time information collected by these monitoring systems enables the operator to immediately make critical asset management decisions.



Pipeline Rehabilitation

Extending Life – Significant and widespread damage may develop over time, threatening the long-term integrity and safe operation of a pipeline. Operators need to make carefully considered decisions when taking measures to extend the operating life of their pipeline. Replacement of the damaged pipe section is often neither necessary nor reasonable due to high costs and disruptions of the pipeline's operation.

The Solution

ROSEN's integrity engineering consultancy and rehabilitation services help operators fully identify the type, root cause and severity of the features, and to determine the timing of required actions. For damages that require immediate attention, ROSEN considers the feasibility of rehabilitation vs. replacement, the type of rehabilitation and the rehabilitation schedule.

- identifying, understanding and mitigating potential failure modes associated with pipeline repair
- extending the life of in-service repairs

This way, ROSEN assists operators in extending the operating life of critical pipelines in a cost-effective manner.

Drawing on their combined expertise in various integrity disciplines, ROSEN supports operators in:

- implementing emergency pipeline repair systems to respond to any damage in the shortest time possible
- reviewing and validating repair methods
- developing repair manuals to ensure optimal interaction of all parties involved in pipeline repair

Education Systems and Services

ROSEN offers learning programs of different technical levels that enable professionals in the oil and gas industry to continuously deepen their expertise. Operators who give their employees access to these programs can be sure of a constant increase of certified competence within their company.

Competency Standards

In close collaboration with industry authorities, we have developed industry-recognized competency standards in pipeline engineering that detail specific knowledge, skill and experience requirements based on the industry best practice and regulatory needs. The competency standards are published in the Competency Standards Manual for Pipeline Integrity Management.

Assessment

Our subject matter experts are available to assess one's individual level of competency in a specific area of expertise against a competency standard. Successful completion of an assessment will allow engineers to demonstrate their competence to the public and regulators.

Training and Learning

Following an assessment, gaps may be identified that will need to be filled with a training and learning

program. We offer a variety of online and face-to-face training courses as well as coaching in pipeline operation, inspection, integrity, and risk to fill these gaps.

Qualification

We have developed a comprehensive qualification process, involving learning and assessment, to help pipeline engineers acquire required competencies that are certified, validated and demonstrable.

The Competence Club

The Competence Club is a competency management system and learning platform that allows members to manage their competency development by granting access to a wide array of certified learning resources in pipeline engineering. With the access to an extensive network of experts and practitioners in all areas of expertise, the Competence Club supports members in assessing their individual level of competency, and formulate the right learning program to qualify themselves for a specific job qualification.



Integrity – Going beyond the Data

Although each threat has specified integrity assessments created to full utilize collected and diagnosed data, additional services allow for predictive integrity management and better understanding of an asset's true condition. Integrity Solutions has access to an extensive global network of in-house engineering and consultancy experts who work closely with the operators of oil and gas production facilities, pipelines and utility systems to reduce risk, maintain integrity and extend the service of assets.

AIMS and Compliance

Asset integrity management systems (AIMS) provide the integration between engineering and management processes needed to meet stakeholder requirements and ensure that the asset is able to perform its required function effectively and efficiently whilst safeguarding life and the environment. ROSEN has developed an integrity management framework which is founded upon a broad set of international standards which incorporates the quality management principles of ISO 9001 in addition to the asset management philosophy of ISO 55001.

Data Management

Risk-based inspection programs, integrity assessments, and integrity management plans heavily depend on the accuracy and reliability of numerous and varied input parameters to produce optimum results. ROSEN helps operators to identify, verify and analyze integrity-relevant datasets to pave the way for successful integrity management.

Risk Management

Risks occur because of incomplete and uncertain information. Risk Management means to overcome this uncertainty through the early identification, evaluation and prioritization of potential threats to asset integrity. This helps operators to optimize their integrity management system, reduce risks to an acceptable level and thus increase safety in a cost-effective manner. ROSEN offers a broad range of Risk Management Services across multiple asset types. The combination of both qualitative and quantitative risk assessment methods and our expertise in associated disciplines, such as corrosion management and stress analysis, will help operators gain an understanding of susceptibility of threats, failure probability and consequences.

NIMA

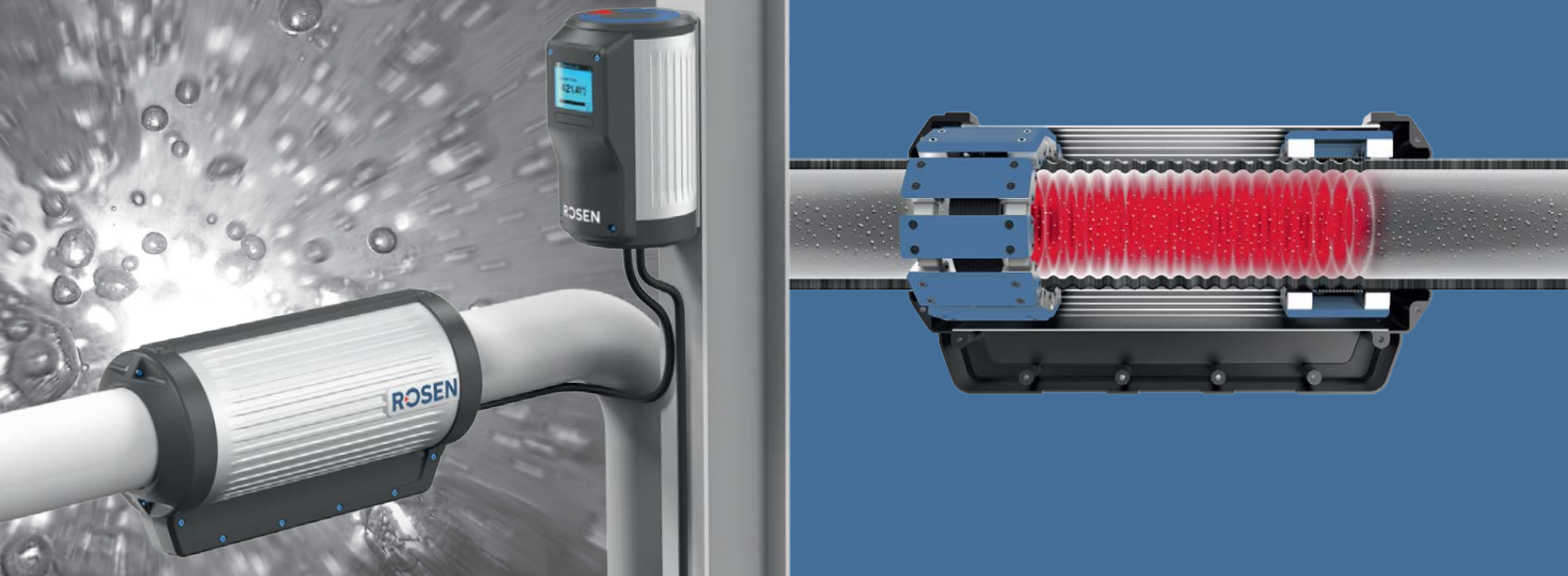
ROSEN's digital solution for asset integrity management, NIMA, provides operators with a basis for secure decision-making through intuitive data integration, systematic workflows and unlimited options in terms of adaptation to individual requirements. Backed by the expertise of ROSEN's specialized, multidisciplinary integrity management team, NIMA provides customers with different levels of support, ranging from instant remote execution of tasks straight on their cloud platform instance to expert advice on a specific integrity issue to the training of their personnel.

Integrity Assessment

Inspections provide indispensable data for understanding an asset's condition. Inspections identify anomalies at the time of measurement, therefore the results are always just a snapshot, and many questions may still go unanswered. Knowing the answers to these questions is critical to make integrity management decisions. ROSEN's combined expertise in both the underlying integrity issues and the inspection systems allow the most accurate assessments and well-balanced recommendations and help operators to prioritize features, define multi-year repair and maintenance plans and implement prevention and control measures.

Engineering Consultancy

ROSEN provides a broad range of specialist technical engineering consultancy and testing services to help our customers in the energy industry manage their assets safely, comply with regulations and maximize operational efficiency. Our multidisciplinary team has a vast experience across all types of assets and stages of the asset's lifecycle. We work close with the customer from the earliest possible stage to make sure that their integrity management plan is set up right from the start. This includes, but is not limited to, decision and design support during front-end engineering design (FEED), risk assessment and implementation of risk-based inspections, failure investigation, remaining life assessment and strategies for extending asset life. A substantial research and development team that is always ready for a new challenge supports tailored solutions.



Flow Metering Solutions

ROSEN has a long history of using Electro-Magnetic Acoustic Transducers (EMAT) for the inspection of oil and gas pipes. We now refined this technology to create an industrial flowmeter for liquid, gas, steam and multiphase applications. We use broadband ultrasonic waves to insonify an entire pipe section in a unique manner.

This enables highly accurate and stable measurements even under difficult conditions and in the face of disturbances for a wide range of applications. The EMAT Flowmeter comes as a non-intrusive, retrofittable meter. It is easy to install – no need for process interruptions, shutdowns or coupling-media preparations.

Wide range of applications:

Oil & Gas	<ul style="list-style-type: none"> Exploration (offshore/onshore) Production Management (offshore/onshore) Natural Gas Processing (LNG/CNG)
Petrochemical and Refining	<ul style="list-style-type: none"> High Temperature Applications Low Pressure Gas Flare Gas
Power Plant / Steam Distribution	<ul style="list-style-type: none"> Power Plant Operation HP/LP Steam Saturated and Superheated Steam
Other Industries	<ul style="list-style-type: none"> Food Industry Water Industry Pulp and Paper Industry Chemical Industry Pharmaceutic Industry



ROSEN Group in asia pacific

History of ROSEN Asia Pacific

ROSEN established a regional office in Kuala Lumpur on 17 May 1993, H. ROSEN Engineering Sdn Bhd. It was the first day of a long period of investments, locally and regionally. The establishment of a ROSEN company in Asia Pacific provides more focused ROSEN Group activities in the region. Five years later ROSEN opened an office in Australia to serve the Australian and New Zealand market. In 2016, ROSEN opened a facility in China decided to serve the Chinese customers. Since 2014, Kuala Lumpur is the regional head office supervising the Asia Pacific region. Using the regional headquarter structure allows a more concerted effort in the acquiring and transfer of technologies in highly specialized inspection business. A close support and a strong work relationship between ROSEN Asia Pacific and the RTRCs are required to ensure the consistency and continuous technological advancements within the group.



Our Office in Australia

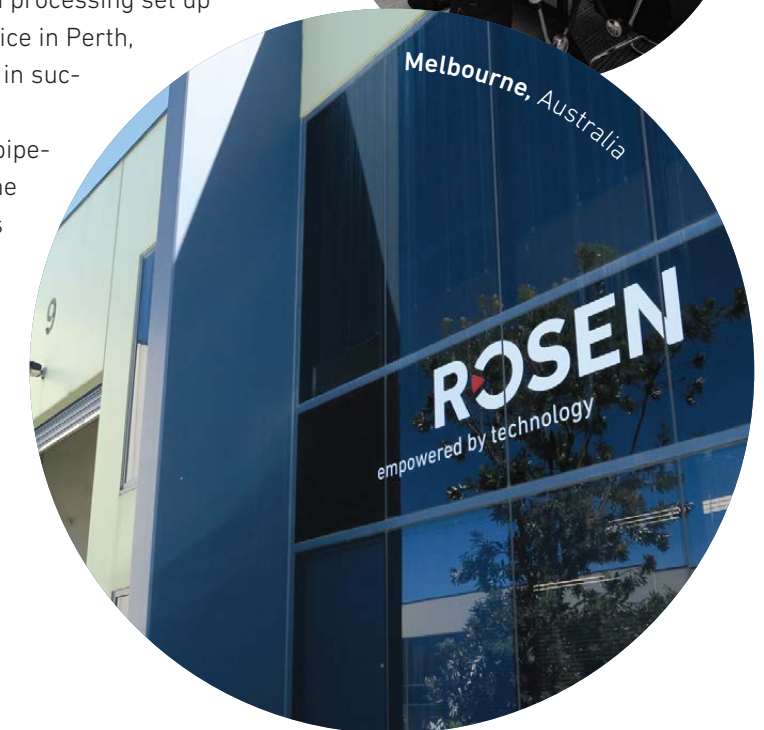
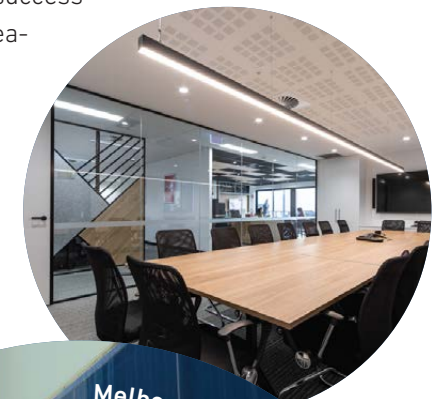
ROSEN Australia Pty. Ltd was established on 20 August 1998 with the first office located in Victoria. With access to large pool of talented and experienced professionals, Australia was a natural choice for business growth in the region. Given the stable political and economic environment, culture diversity and also a strong oil and gas market, the ROSEN Group believed that the Oceania region would be well positioned for further growth in the future.



Following the business expansion in early 2000, ROSEN Australia moved to a bigger facility in Adamco Park. A few years after its establishment, ROSEN Australia, besides maintaining business in Australia and New Zealand, took over responsibility for all business in Indonesia. In 2002, ROSEN Australia moved its offices to a very modern new office location with a state-of-the-art workshop in Canning Vale, Perth, Australia while the Melbourne office remained in place to support the business across the Oceania sector. A solid foundation had been truly established.

ROSEN Australia continued its success that allowed for Far East and Oceania offices to be merged in 2008, forming ROSEN Asia Pacific with the regional headquarter in Kuala Lumpur.

Each pipeline inspection is unique, there is no repetition, and there are always many lessons learned. Also the creation of new ideas requires multiple disciplines/specialists to sit down and work together in small and dedicated teams. Equipped with a full data processing set up and maintenance facility our office in Perth, Australia has played a vital role in successfully completed inspection projects of over 100,000 km of pipelines in most countries within the region. With more than 20 years of experience, we find the suitable solutions for our clients. Because we want to help our customers use their valuable assets safely and at the best level, we integrate these concepts as our core values.



our customer values

For more than 25 years, ROSEN Asia Pacific has a proven positive track record and is committed to deliver support and services to the Oil & Gas and associated industries in the region effectively.



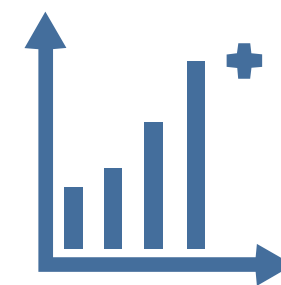
Safety and Conformity

To ensure safety and compliance of our customer's assets according to the regulation.



Lifetime

To ensure maximum service life of our customer's assets.

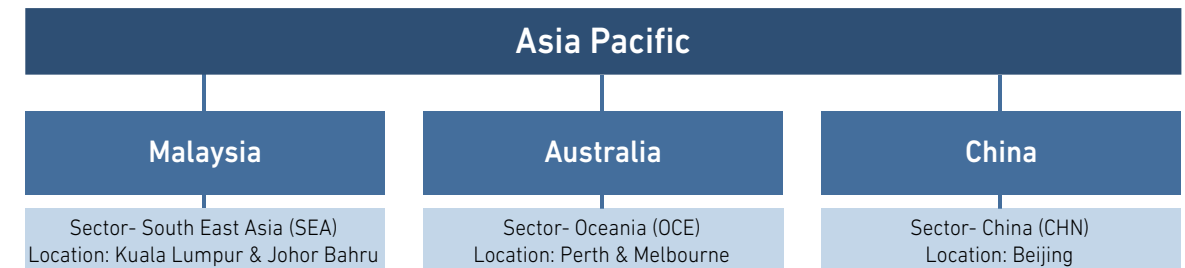


Performance and Efficiency

To achieve high performance and efficiency in completing projects.

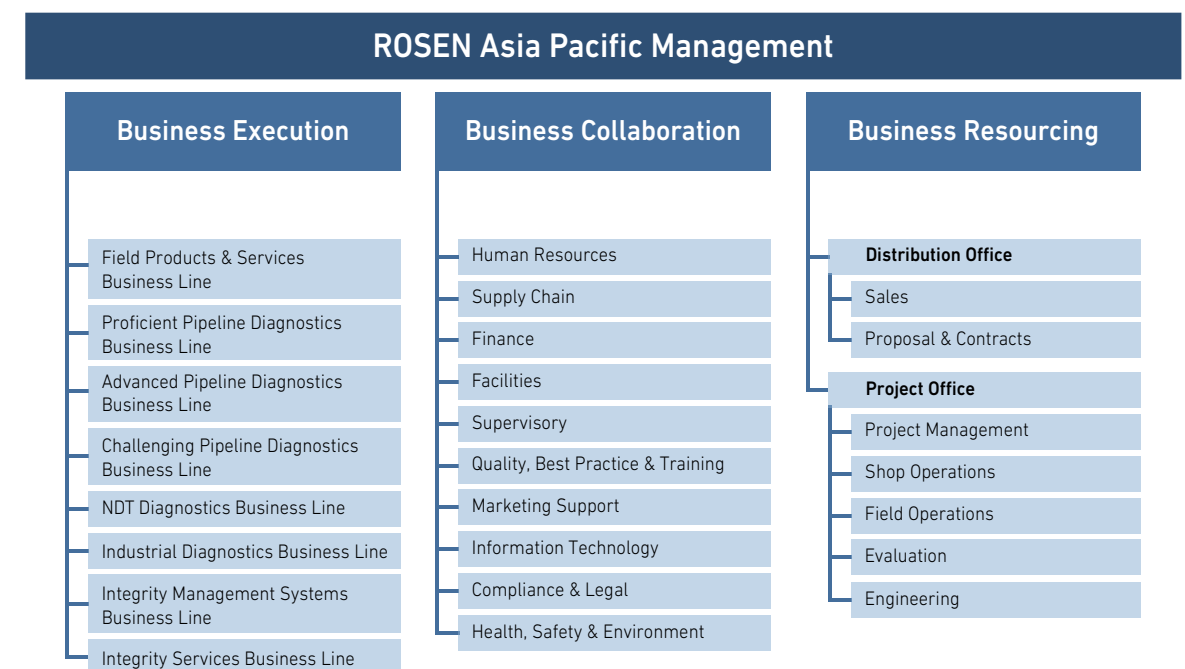
regional organization

ROSEN Asia Pacific is an enterprise with offices in Malaysia, Australia and China. Each location represents the individual sectors in the Asia Pacific region.



Through our offices in the region, we practice a structural and close relationship with our customers to ensure the highest level of efficiency through improvement processes in achieving customer satisfaction.

Regional Organization Chart



Management Team



**Data as per September 2020*

All offices in our Asia Pacific region are interconnected on working for all projects as and when required.

A stylized map of Australia is shown on the left side of the page, overlaid with a blue network pattern of lines and dots. The map is light blue and semi-transparent, set against a darker blue background.

ROSEN Australia PTY. LTD.

Established Date/ Registered Date

20 August 1998

Company Registration No.

ACN: 083995180

ABN: 87083995180

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Myles Edward Youngs

Hernando Jose Caceres Ordonez

Management Team

Floris Verhagen

Hernando Caceres

Myles Edward Youngs

Company Auditor

Pricewaterhouse Coopers

Brookfield Place, 125 St Georges Terrace, Perth, WA 6000

Company Banker

Westpac Banking Corporation (WBC)

BSB Name: 409 St Kilda Road

BSB Number: 033-079

BSB Address: 409 St Kilda Road, Melbourne, VIC 3004

Company Secretary

Myles Edward Youngs

4 Palmerston Street, Mosman Park, WA 6012

Company Lawyer

Legal Vision

Company Registered Address

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