



NON-DESTRUCTIVE TESTING

FULL SCOPE OF INTEGRATED NDT SERVICES





RIGHT SERVICE – MAXIMUM RETURN

Whether it is in fabrication, pipe manufacturing, pipeline, plant construction, chemical, petrochemical plants, shipyards or offshore industry, in conventional and nuclear power plants - our non-destructive testing services provide quality assurance and process safety. SGS has a world wide track record with proven performance on new construction, pipeline installation, in-service inspection and expansion projects as the total NDT solution provider. SGS' scope of services covers

both, conventional and advanced NDT systems, provided by qualified inspectors to international standards. SGS understands better than most that the excellence of any service commences with quality and the implementation of detailed and effective inspection procedures, state-of-the-art equipment and most of all our professional people. SGS' fast growing network of NDT inspectors is suitably trained, multifunctional and prepared to be available whenever our services are required. SGS creates added

value to your business by applying improved technologies, looking for the fastest inspection methods, integrating our workforce into your daily activities, combining technologies and carefully listening to your needs. When you need to save overall costs, improve quality and want to be sure of reliable production or operating processes, NDT is the toolset you need. In every stage of the life cycle of your assets SGS can contribute with added value NDT services.

CREATING ADDED VALUE WITH INTEGRATED NDT

Integrated NDT to SGS means seamless cooperation with your organisation to help you to get the best out of your processes and correct any deviations from your desired standards before they lead to non-compliance. SGS will supply all necessary data for Asset Integrity Management (AIM) programmes, Integrity Services, and Risk Based Inspections. SGS offers a fully integrated service pack combining conventional NDT, advanced technologies, inspection and AIM. You will be provided with KPI's to effectively manage your assets. All

field inspection coordination and data management can be handled by SGS. Integration also means we will challenge your service requests when there is room for improvement in terms of costs and or quality. You can count on SGS when you need to control and improve process safety and reliability. SGS provides the correct NDT techniques to locate and size defects in your assets, and this will lead to the highest reliability of your assets. SGS trains and certifies NDT Inspectors all over the world to support and protect your assets including

production, processing plants, piping systems, pressure vessels and other process related equipment.

By integration and setting the same requirements for inspection personnel and systems throughout the life time of your assets you get the most safe and reliable operations.

**SGS IS YOUR RELIABLE PARTNER,
PRESENT IN ALL MAJOR INDUSTRIAL
COUNTRIES AROUND THE WORLD.**

PROTECTING YOUR ASSETS THROUGHOUT THEIR LIFE CYCLE

DESIGN

Already in the design phase it is important to select relevant inspection codes and levels that need to be met in future. In this stage you need to make sure NDT can be applied to your design to prevent future (monitoring) problems. SGS provides the most up to date NDT consultancy services in order to determine the most efficient inspection technologies stretching your design limits.

PROCUREMENT

During procurement a lot of NDT is required. The professional SGS network ensures the services in your home country are the same as the ones provided at the other side of the globe. SGS will verify the materials used and certificates supplied. SGS can perform 0-measurements in a stage where all components are still accessible. SGS also audits first party NDT results and reviews any NDT procedures.

DESIGN

PROCUREMENT

OPERATION

INSTALLATION

OPERATION

Once in operation you will need the highest quality NDT inspection services to ensure reliable and safe performance. Advanced NDT will support you saving costs and minimise intrusive inspections as much as possible. Our local approach ensures we speak your language and advise you on the best practices. Aligning the same level of quality in the procurement, installation and operation stage can prevent unplanned failures which can affect production.

INSTALLATION

During the installation phase NDT supports the welding processes and ensures that specifications are met. Our wide range of services allows us to select the most appropriate and efficient technologies. Therefore, we can assure that you meet your schedule. In this stage typically first preparations should be made establishing an Asset Integrity Management System or to integrate the NDT results into your existing systems.



INDEPENDENT AND IMPARTIAL TESTING

SGS continuously develops its services and applications. Our NDT services are not only integrated with our AIM solutions, but also with our Material Testing laboratories and seamlessly fit into our Supply Chain Services. Our services are packaged around your assets and production processes to be utilised whenever required and efficient. Our NDT applications are endless, but a summary of applied technologies can be found below.

STANDARD TESTING METHODS

- Visual Inspection (VI)
- Dye/Liquid Penetrant Testing (PT)
- Magnetic Particle Testing (MT)
- Manual Ultrasonic Testing (UT)
- Radiographic Testing (RT)
- Positive Material Identification (PMI)

ADVANCED NDT METHODS

- Ultrasonic Phased Array (PA)
- Long Range Ultrasonic Testing (LRUT)
- Automatic Ultrasonic Testing (AUT)
- Guided Wave (GW)
- Time of Flight Diffraction (ToFD)

- Corroscan (C-scan)
- Infrared Thermography (IR)
- Magnetic Flux Leakage (MFL)
- Remote Visual Inspection, Endoscopy/Videoscopy (RVI)
- Hardness Measurements (HT)
- Eddy Current Testing, Electromagnetic Testing (ET/RFET)
- Alternating Current Field Measurement (ACFM)
- IRIS Testing
- Acoustic Emission (AE)
- Leak Testing of tanks and pipelines
- Digital/Computed Radiography
- 3D Computed Tomography (CT)

EXAMPLE APPLICATIONS

- ASME pressure vessel and piping as-built inspections
- Fabrication inspections during and after manufacturing
- Piping and pressure vessel corrosion monitoring incl. data management
- Full Storage Tank Assessment
- Shutdown inspections (visual, NDT, advanced NDT incl. coordination)

- Non-Intrusive inspection
- ILI tool validation on pipelines
- Drill pipe inspection
- Electrical infrastructure assessment

ACCREDITATIONS

SGS holds ISO/IEC 17025 accreditation for mechanical lab activities and ISO/IEC 17020 accreditation for its inspection body type A activities.

SHARING KNOWLEDGE

SGS trains and certifies people to the highest inspection standards in all parts of the world. Wherever you are based, when you procure or operate equipment you deserve the highest standards of personnel and certification as a basis for Quality Assured Inspection. SGS will invest and improve continuously in its assets - its Inspection Workforce.

OFFERING A GLOBAL INTEGRATED NDT NETWORK

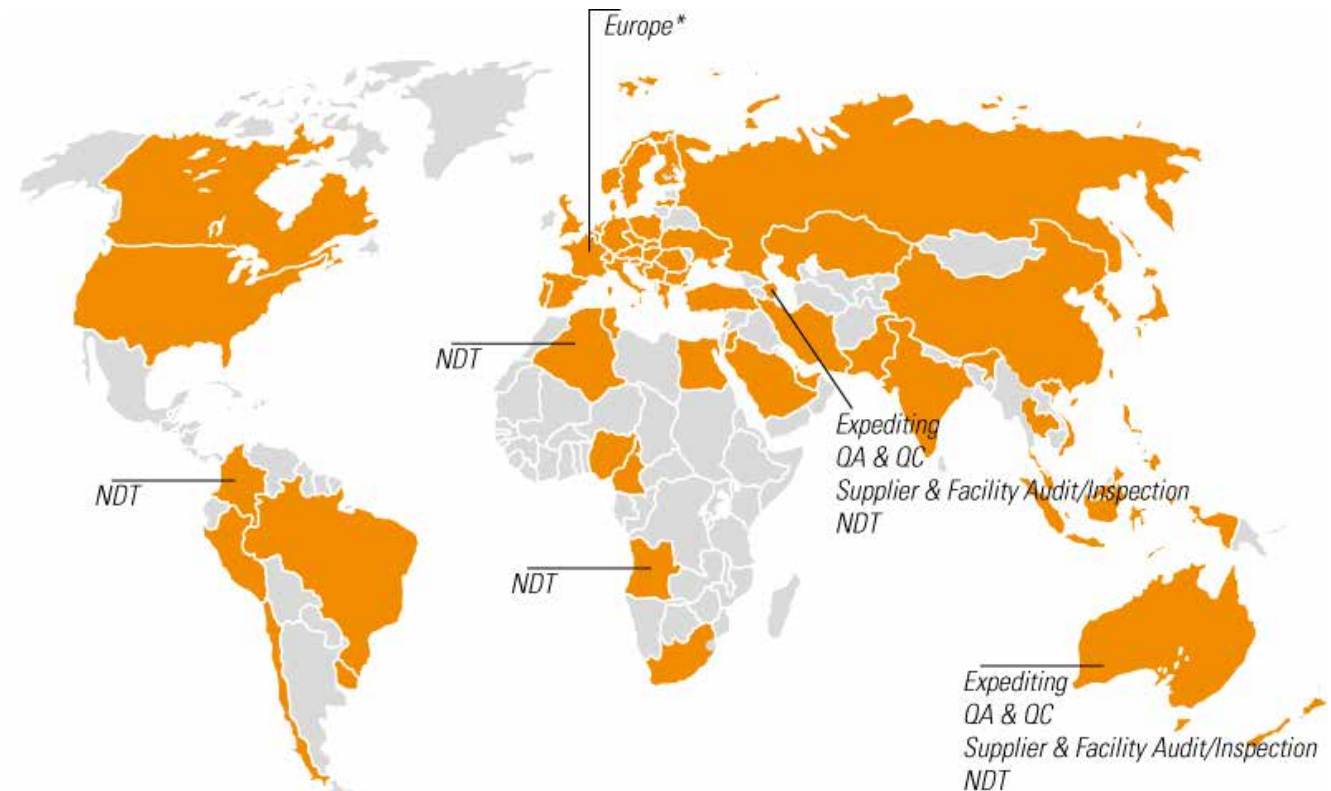
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SGS IS THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY

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WHEN YOU NEED TO BE SURE

