



# COATINGS TESTING FOR PIPELINES

PROTECT YOUR PIPELINE PERFORMANCE WITH ACCURATE INSIGHT INTO COATINGS PROPERTIES





## DEFEND YOUR PIPELINE IN TODAY'S CHALLENGING ENVIRONMENT

The coating of your pipeline is the first line of defence against interruptions to the production and distribution of your product. Evaluation of your critical assets and quick identification of defects is vital in today's challenging environment.

SGS offer a wide range of protective coatings material and polymers testing services to the Oil and Gas industry as well as bespoke on-site testing which take the laboratory to the pipe. Our testing provides an accurate insight into the protection properties of coatings in relation to adhesion, corrosion, water penetration, heat, abrasion and chemicals resistance, ensuring they meet both client and regulatory requirements.

SGS deliver cost-effective solutions which enable customers to reduce risk, shorten time to market and test the quality and performance of products against relevant standards and project specifications. Our laboratory experts provide a fast turnaround time for tests whilst ensuring the health and safety of its staff and visitors.

SGS's expertise in both field joint and line pipe coating testing has been

enhanced in order to offer a competitive testing service for today's pipeline industry.

## FIELD JOINT COATINGS

SGS has repeatedly demonstrated their significant capability by working on major projects to meet strict timescales and are now widely championed as the leading test institute of choice.

SGS's laboratory experts will ensure the correct sample location is identified along your pipeline. Our experience spans an array of field joint coating technologies including injection, extruded, tape wrap and flame sprayed polyolefins, cast and spray applied polyurethanes, multi-component liquid coatings and heat shrinkable sleeves. As the industry shifts towards a focus on ultra-deep hydrocarbon resources, the technologies required have pushed the boundaries of current technology. This has resulted in a complexity in materials testing requirements. SGS is ready to assist in these new challenges.

## LINE PIPE COATINGS

In addition to providing traditional testing techniques, such as cathodic disbondment, impact and adhesion, SGS has invested heavily into 'polymer' type testing. This includes ageing (both

wet and dry; with or without pressure), coefficient of thermal expansion, thermal conductivity, tensile, flexural and compressive properties.

## TAKING THE LABORATORY TO THE PIPE

SGS has developed a field based solution for on-site, in-country short term projects, such as pre-production testing (PPT). A trained technician with the appropriate equipment will go to your site to prevent any delays in your pipeline production run.

## PREVENTION THROUGH FAILURE AND DAMAGE ANALYSIS

If you experience a failure it is essential to identify the mechanism of failure and establish the root cause with the aim of preventing the problem from arising in the future. SGS can collect and analyse data on your products in order to determine the cause of failure. We are able to draw on leading talent across many disciplines, including polymer and materials scientists, metallurgical engineers, corrosion engineers and chemists. Our team of experts are on hand to ensure you get the answers you need.



## SGS CAPABILITY

SGS offer a wide range of tests to meet industry specifications, a sample is provided below but contact us for full details;

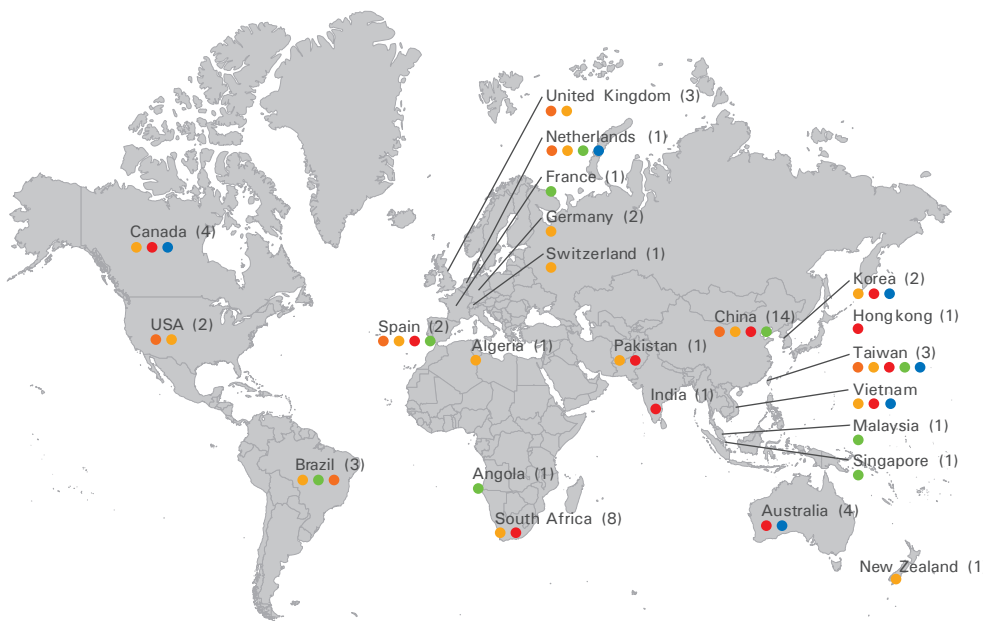
- Adhesion
- Atlas Cell
- Autoclave Exposure
- Axial Shear (Ring Shear)
- Buccholz Hardness
- Cathodic Disbondment
- Chemical Immersion
- Compressive Strength
- Cross-section Analysis
- Cure Time
- Decomposition Temperature
- Degree of Cure (Tg)
- Density
- Dielectric Strength
- Dry / Wet Heat Ageing
- Dry Film Thickness
- Durometer Hardness
- Environmental Conditioning
- Flexibility
- Flexural Modulus
- FTIR/ATR - Fingerprint Only
- Gel Time (Draw Down)
- Holiday Detection
- Hot water Resistance
- Impact
- Indentation
- Lap Shear
- Melt Flow Index
- Melting Enthalpy
- Microscopic Examination
- Moisture Content
- Oxidative Induction Time
- Peel Adhesion
- Specific Gravity of Epoxy Powder
- Specific Heat Capacity
- Strain Polarisation
- Surface Roughness
- Taber Abrasion
- Tensile Properties
- Thermo-gravimetric Analysis
- UV Radiation
- VOC Content
- Volume Resistivity
- Water Absorption
- Zinc Content % (DSC)



**89 TESTING LABORATORIES IN 57 FACILITIES IN 21 COUNTRIES WORLDWIDE**

### GEOGRAPHICAL FOOTPRINT OF INDUSTRIAL TESTING SERVICES

- Coatings/Polymer Laboratory (13)
- Metal Laboratory (35)
- Construction Laboratory (24)
- Calibration Laboratory (10)
- Geotechnical Services (8)



## WHY SGS?

SGS's centre of excellence for coatings and polymer testing is based in Manchester, UK with complementary laboratory capability in The Netherlands, China and USA.

Our laboratories are accredited to ISO 17025, ISO 18001 and ISO 9001 and perform testing in accordance with all major international standards, including ISO, ASTM, DIN and NACE.

Our highly qualified personnel, including NACE qualified coating inspectors, have

extensive knowledge of all relevant aspects of material protection; including materials science, application methods and failure mechanics.

## ABOUT SGS

SGS is the world's leading inspection, verification, testing and certification company. SGS is recognised as the global benchmark for quality and integrity. With more than 95,000 employees, SGS operates a network of over 2,400 offices and laboratories

around the world.

We provide competitive advantage, drive sustainability and deliver trust. At SGS, we are continually pushing ourselves to deliver innovative services and solutions that help our customers move their businesses forward.

## CONTACT US

To learn how SGS can help you exceed customer expectations, visit [www.sgs.co.uk](http://www.sgs.co.uk) or contact [gb.coatings@sgs.com](mailto:gb.coatings@sgs.com).

[WWW.SGS.COM](http://WWW.SGS.COM)

WHEN YOU NEED TO BE SURE

