

Material Research



**Partner
for
Progress**

Material Research

Materials are the backbone for all asset intensive industries. The quality, installation and maintenance of materials define an organizations' performance. Therefore it can be crucial to gather qualitative and independent information regarding the state of your assets. As Kiwa Technology we like being your independent partner in material research. We have an extensive experience in material research and a unique array of testing facilities.

Testing Possibilities

Over the years we have gathered a unique array of testing equipment and we are constantly developing new tests. Our experts have a proven record of developing tailor-made testing equipment. Examples of our testing possibilities include:

Chemical and Physical Analyses

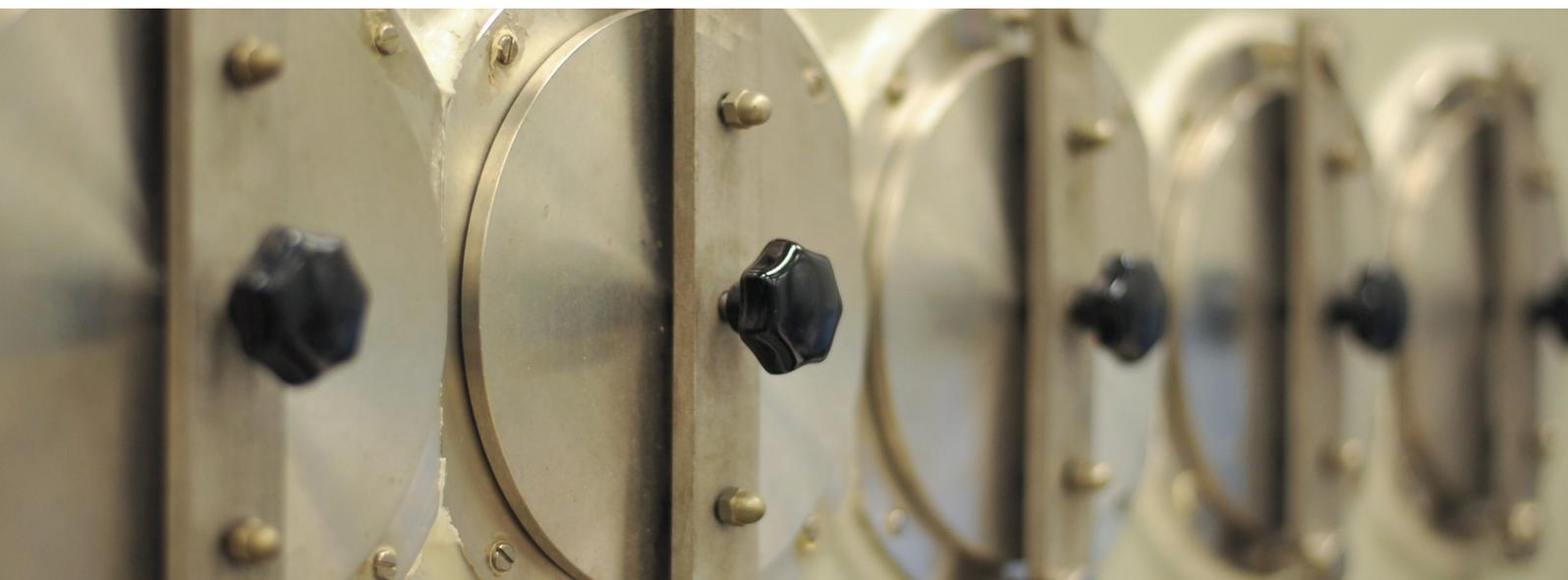
- FTIR spectroscopy (with more than 200,000 reference spectra) and ATR, Diffusion reflection, Pyrolysis-FTIR
- Gas Chromatography
- Extraction and identification of additives
 - hydrolysis of acetals, nylons, polyesters, etc.
- Permeation of gases and moisture through films or complete pipes (also multi-layer and RTP)
- Differential Scanning Calometry (DSC)
- Thermic Stability (Oxidative Induction Time, OIT)
- Thermogravimetric analysis or thermo balance (TGA)
- Viscosity and porosity
- Melt Flow Rate (MFR)
- Density
- Corrosion analysis

Mechanical Tests

- Tensile tests, at a variety of temperatures up to 150 °C
- Constant-load tests (relaxation)
- Dynamic tests (fatigue)
- Point Load Test (PLT)
- Creep tests
- Internal water pressure tests and burst pressure tests (up to 95 °C)
- Drop and bending tests
- (Slow) Peel tests
- Corrosion tests
- Welds testing
- Integrity testing
- Impact tests from -40 up to 60 °C
- Testing of rapid crack propagation (RCP)
- Testing of the resistance to slow crack growth
 - Strain Hardening Test (SHT)
 - Full Notch Creep Test (FNCT) and accelerated FNCT (aFNCT)
 - (Pennsylvania) Notch Test (PENT)
 - Cone test
 - Cracked Round Bar test (CRB)
 - Accelerated Notch Pipe Test (aNPT)

Microscopy

- (Stereo) light microscopy
- Scanning Electron Microscopy (SEM) with EDX analysis (X-ray Micro-Analysis)
- Microstructure determination
- Non-Destructive Echography
- Picture analysis
- Fracture surface research



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Standards

Although we are not a certifying body, over the years we have tested a variety of materials on a wide scope of (international) standards. Additionally, due to their expertise, our researchers are also actively involved in the development of new standards. Upon your request we can test according to any standard or procedure if desirable.

Custom-made Tests

Looking for another test or a custom-made solution? Our experts have a proven track-record in developing tailor-made tests based on your input. Together we can develop tests according to your demands or any (inter)national standard.

Contact

Interested in any of the above mentioned items or just looking for an independent and pragmatic material research partner? We are looking forward to live-up to our ISO 9001 accreditation and provide a quality solution to you.

We are looking forward to be your partner for progress. So let's explore the opportunities together.

Why Kiwa Technology:

- Independent analysis & high quality results
- Internationally acknowledged experts
- Prominent seats in various standardization committees
- Physical, chemical & mechanical tests
- Flexible & fast whilst accurate
- Metals, plastics, composites, etc.

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