The corrosivity of petroleum products (gasoline and other distillates) must be determined before transportation through pipelines in order to control the internal corrosion of pipelines. The NACE TM-0172-15 test for “Determining Corrosive Properties of Cargoes in Petroleum Product Pipelines” is considered a reference test and is the most widely used laboratory test for this purpose.

The CT10 performs an objective and accurate rating of the test specimen

A new instrumental approach for measurement of corroded surface area has been developed by AD Systems in which the exact percentage of corroded area is accurately determined by an automatic instrument reducing test subjectivity. The innovative CT10 instrument images the whole surface of the specimen. Operation is based on a homogeneous lighting source, CCD camera, specimen rotation system, and specially designed Windows CE® application software. The test can now be run unattended which reduces labor costs.

The CT10 test is simple and straightforward. The specimen is prepared according to the NACE TM0172 test procedure and is placed in the test chamber of the CT10. The operator enters sample information, using an intuitive graphical interface with touch screen panel, and starts a specimen scan. Specific light is emitted onto the surface of the specimen. The specimen is rotated and several images are taken. The software builds a flat image of the specimen surface, calculates the percentage of the corroded area and then translates it into a NACE rating. A detailed test report is ready in less than 5 minutes.

Applications

The CT10 is a versatile instrument for both research and routine applications at locations where NACE corrosion performance is evaluated:
• Refineries
• Pipelines and Terminals
• Research and Development

Benefits

• Quick, accurate and objective rating
• Automatic specimen diameter verification
• Compact design, robust construction, installed in minutes
• The results are saved in an internal database and can be printed, transferred to a USB memory stick and/or sent to a LIMS
• Every test is fully documented and traceable

The CT10 strictly follows the test method removing the subjectivity inherent to the manual test and significantly improving repeatability and reproducibility with a final evaluation which eliminates disputes between the shipper and receiver of the product.