



# CT10 – Automated Steel Corrosion Rater

## Methods:

ASTM D665, D7548  
NACE TM0172  
IP 135  
ISO 7120  
JIS K2510  
GB/T 11143  
GOST 19199



- ▶ Quick, accurate and objective rating
- ▶ Proven correlation with visual rating
- ▶ Automatic specimen diameter verification
- ▶ Compact design, robust construction
- ▶ Digital image of the specimen surface saved in color
- ▶ Every test is fully documented and traceable

There are several test methods that use the same cylindrical steel specimen to evaluate the corrosivity of petroleum products and lubricants. NACE TM0172 and ASTM D7548 are designed to evaluate the corrosive properties of cargoes (gasolines, diesel, other distillates) in petroleum pipeline. ASTM D665 (equivalent to IP135 and ISO7120) method is widely used to evaluate how effectively inhibited mineral oils (turbine, hydraulic and circulating oils) prevent rusting of ferrous parts in presence of water.

Driven by innovation and the industry demand, AD Systems has developed a unique automated solution offering an alternative to traditional visual assessment of the corrosion level on the steel specimen's surface after exposure to the oil sample in the oxidation bath. The qualification and quantification of rust by visual observation is subjective and highly depending from the operator expertise, his vision, and the lighting conditions. Powered by digital vision technology, the CT10 provides a fast, accurate, and objective corrosion rating, eliminating the subjectivity and significantly improving the reliability of the rating. Along with rust quantification in % of the total surface, the automated rater provides two digital pictures for test traceability: real color image of the test specimen surface, and a grayscale mapping of detected rusting area. Thus, the user of the CT10 benefits of fully documented test report which eliminates disputes between shipper and receiver of the product.

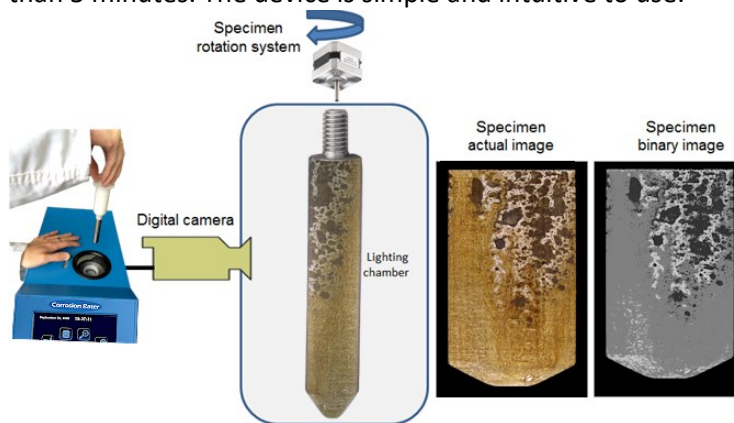
|                               |                            |             |            |
|-------------------------------|----------------------------|-------------|------------|
| Date                          | Thu, Jun 04, 2026 12:44:41 | Operator    | AD Systems |
| Sample ID                     | AD#7                       | Sample type | GASOIL     |
| Comment                       |                            |             |            |
| Corrosion (%)                 | 81.86                      | Real        |            |
| Rating                        | E                          |             |            |
| Specimen diameter             | 12.6 mm                    |             |            |
| Test Conditions               |                            |             |            |
| Method                        | NACE TM0172                |             |            |
| Temperature                   | -38 °C                     |             |            |
| Duration                      | :210 min                   |             |            |
| Additional Result Information |                            |             |            |
| CT10 N°                       | 1                          |             |            |
| Software version              | 2.0.0.6                    |             |            |
| Result status                 | 31 26/50 60/89 15          |             |            |



POWERED by INNOVATION

## Principle of Operation

Designed by AD Systems, the innovative instrumental approach for assessing the degree of corrosion is based on a homogeneous lighting source, a digital color camera, a specimen rotation system. The instrument captures an image of uniformly illuminated specimen's surface by rotating it 360°. A specially developed, proprietary imaging algorithm analyzes the surface image for presence of rust, calculates exact percentage of the corroded area to the total surface and converts it into a rating based on the selected method. A detailed test report including % of corrosion, the rating, and digital images is available in less than 5 minutes. The device is simple and intuitive to use.



The CT10 performs an objective and accurate rating

## Ordering information

AA230-001

CT 10 – Corrosion Rater  
Delivered ready for operation

## Technical specifications

|                 |                                                                                                                                                                |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test methods    | NACE TM0172, ASTM D665, D7548, ISO 7120, IP 135, JIS K2510, GB/T 11143, GOST 19199                                                                             |
| Corrosion range | In percentage: 0.00% to 100.00%<br>Rating scale: according to the test method<br>NACE: A, B++, B+, B, C, D, and E<br>ASTM/ISO: No rusting, low, medium, Severe |
| Resolution      | Corroded surface: 0.01%<br>Specimen diameter 0.1mm                                                                                                             |
| Interface       | 8" full-color touch screen                                                                                                                                     |
| Digital images  | Full color and grayscale images per result;<br>1000 x 1600 pixels each                                                                                         |
| Language        | English, French                                                                                                                                                |
| Results storage | Local database over 5000 results<br>Full report including images can be exported to a USB stick or send to LAN                                                 |
| Communication   | 2 x USB 2.0, Ethernet port                                                                                                                                     |
| Printing        | Graphic printer (optional)                                                                                                                                     |
| Weight          | 10 kg                                                                                                                                                          |

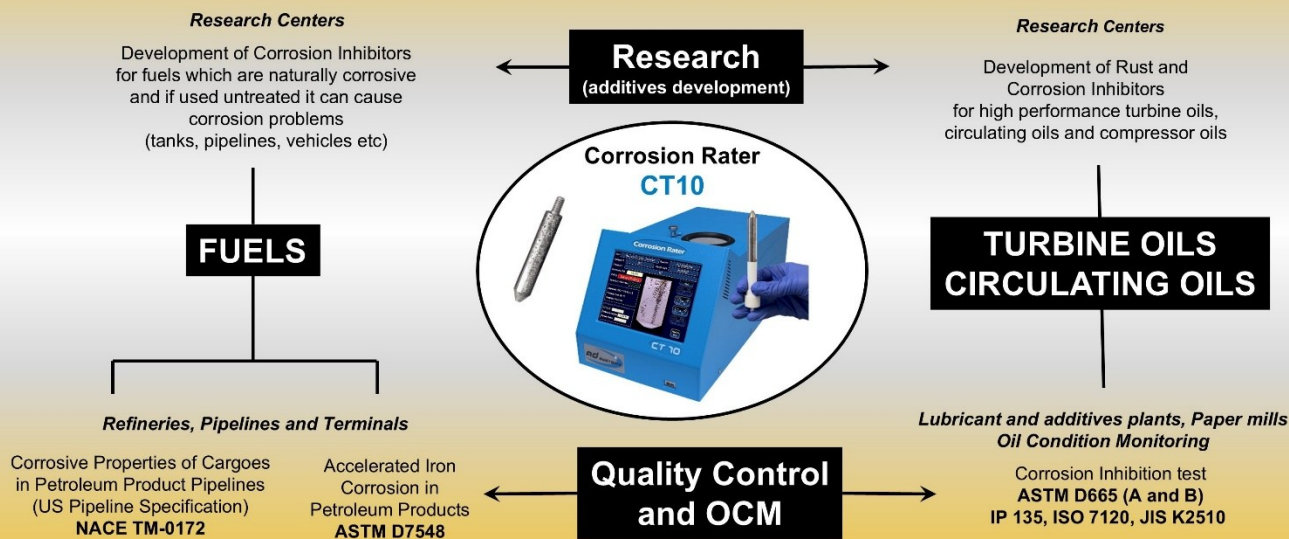
## Operation conditions

|              |                                                            |
|--------------|------------------------------------------------------------|
| Operation    | +15°C to +30°C<br>Humidity : 10 to 75% RHL, non-condensing |
| Power supply | 100/240V – 50/60 Hz – 50W                                  |

We reserve the right to alter specifications without notification

## Applications

# Steel Corrosion Testing



Your local distributor:

For additional information:

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