DC Scientific

Petroleum Testing Equipment

ISO 9001:2008 Certified

Automated Reid Vapor Pressure apparatus—AutoREID

Innovation by AD Systems

- *Direct REID vapor pressure measurement*
- *Perfectly suited for testing crude oil*
- *Fully traceable, documented test results*
- *Two independent measurement positions*
- *Robust design requires little or no maintenance*
- *Automation reduces operator involvement*
- *Small foot print, quick warm-up, precise measurement*
- *User-friendly Windows® interface*

The AutoREID apparatus from AD systems is an automated Reid Vapor pressure instrument in full compliance with ASTM D323-B, ASTM 4953, and similar standards. These methods are for the determination of vapor pressure of gasoline, volatile crude oil, and other volatile petroleum products. The Reid method is particularly suitable for determination of vapor pressure of crude oil for transportation, storage and general handling purposes. The instrument directly measures the Reid vapor pressure without correlation or calculation.

Modern ergonomic design, fully automated interface, and convenient operation makes the AutoREID an excellent alternative to mini-methods for reliable and precise vapor pressure measurement.

The AutoREID is compact with two measurement positions allowing two simultaneous and independent measurements. An additional position in the bath allows for air chamber conditioning, increasing test productivity. The test pressure vessels with quick connections assure fast and easy operation. The AutoREID design allows testing of viscous and sticky samples or samples containing suspended particles without the risk of instrument damage. Vigorous mechanical agitation of pressure vessels accelerates pressure stabilization even on "difficult" samples such as crude oil. All components of the test pressure vessel are easy to disassemble and clean.

Specifications

Test method: ASTM D323, D4953, ISO 3007
Pressure range: Up to 250 kPa (36.25 PSI)
Resolution: 0.1 kPa (0.014 PSI)
Test time: Less than 15 minutes
Interface: 8" full-color touch screen
Results storage: Internal HD, USB, LAN
Communication: USB 2.0 (2), Ethernet
Printing: Graphic printer (optional)
Dimensions: 28 x 17 x 18 in.
Weight: 66 lbs.
Electrical: 230 VAC, 8 A, 50 / 60 Hz

Operation

The sample is prepared in accordance with the test method. The sample is poured in the liquid chamber which is coupled to the air chamber by means of specially designed quick coupling connectors. The assembled pressure vessel is completely sealed. The operator enters test identification in just a few keystrokes, places the pressure vessel in the water bath precisely maintained at 37.8°C (100°F) and connects the pressure link by quick connector. The test begins automatically. The pressure vessel is agitated by reverse rotation and the pressure curve is displayed in real time on the large color monitor. Two simultaneous measurements can be run independently and simultaneously. When the maximum stable pressure is reached, the test stops automatically and the saturated vapor pressure (RVP) is recorded.

Quality and Safety

During the test, the software monitors for leaks and prompts the operator if pressure drops. The watchdog system constantly monitors bath temperature stability, bath level, overpressure and overheating, assuring high quality results and increased safety. Transparent bath cover provides for visual inspection of the pressure vessels during the test. Special auto-stop drive system protects the operator without disruption of the test. Instrument calibration is easy to perform on-site via dedicated menu. Pressure transducers can be checked against a certified reference manometer at any time using the built-in T-connector. Bath temperature can be verified using a certified reference thermometer. All information related to the instrument calibration is stored to ensure complete traceability. The instrument calibrations are time stamped. Calibration intervals can be managed in the software.

For more information, contact:

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