

Quantum[®] Pro

Oxidation Tester

ASTM D2272, D2112, D4742, D7098, IP229



Principle

Oxidation Stability: Test material, placed in a stainless steel pressure chamber, is exposed to oxygen at a specific test temperature and pressure. As the antioxidants are consumed, the sample reacts with the oxygen and the pressure drops.

History

Hot oil baths of varying sizes have long been used in the industry for running the Rotating Pressure Vessel Oxidation Test (RPVOT, formerly known as RBOT) and the Thin-Film Oxygen Uptake test (TFOUT). These bath types expose the operator to hot oil fumes and odors, are prone to leak, need regular maintenance, and are generally messy and potentially hazardous to operate.

As laboratory facilities strive to improve their workplace conditions and encourage healthy environments, alternative approaches to running these tests are necessary.

Innovation

Tannas Co. sets a higher standard by eliminating the hazards and mess of hot oil baths. The *Quantum[®] Pro* Oxidation Tester is **the sole source of supply for ASTM D2272** when running critical oxidation tests. Our technology is simple, clean, and efficient.

Features

- Front-loading, easily accessible pressure chamber.
- Small, bench-top footprint. No laptop or PC required.
- Non-liquid 'Dry-Cylinder' sample heating — eliminates hot, hazardous, liquid bath mess and odor.
- Automated fill and purge control.
- Integrated controls and data acquisition with touchscreen interface.
- Onboard test data storage.
- Integrated Water Calibration.
- Live graph of test data.
- LED lighting scheme based on operating condition.
- Closed loop motor speed control (no calibration required).
- Lower power usage (20 - 30%).
- Lower heat loss, improving external instrument temperature.
- USB ports to transfer records to flash drive or PC.
- Automated test report submission over Ethernet (full or restricted network).

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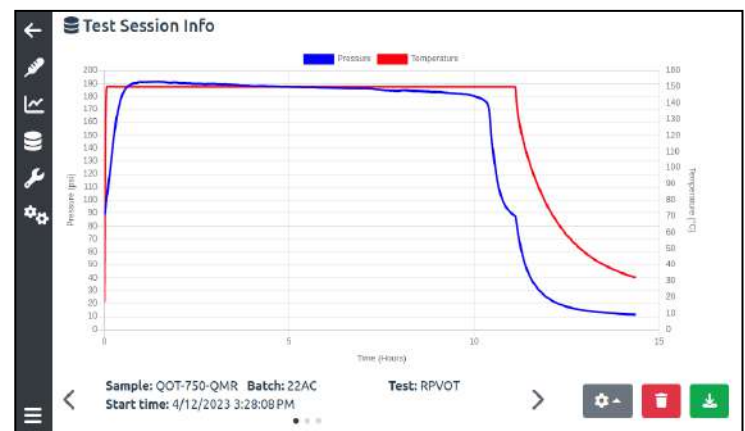
RPVOT: Rotating Pressure Vessel Oxidation Test

ASTM D4742, D7098

TFOUT: Thin Film Oxygen Uptake Test

Common Applications

- Steam Turbine Oils
- New & In-Service Oils
- Insulating Oils
- Gasoline Engine Oils



Instrument & Parts

ASTM D2272 & D2112 (RPVOT):

200853: RPVOT Sample Beaker
 200651: Copper Catalyst Coils
 200910: Magnetic Sample Cup w/ Spring Clip
 200480: Magnetic Sample Cup Tester
 200035: Sample Extraction Device Assembly
 040028: QMR Reference Oil (D2272 only)
 040027: QHR Reference Oil (D2272 only)

ASTM D4742 & D7098 (TFOUT):

200104: TFOUT Conversion Package
 200106: TFOUT Segmented Glass Dish
 010047: TFOUT Catalyst A Package
 010049: TFOUT Catalyst B Package

All Applications:

200916: Oxygen Regulator
 200914: Certified Reference Oxygen Gauge
 040045: VarClean Cleaner

Instrument Specifications

Dimensions	23(w) x 50(d) x 41(h) cm (9 x 19.65 x 16 in)
Weight	~ 15.9 kg (35 lbs.)
Voltage	100-240 VAC
Frequency	50/60 Hz.
Heating Medium	Dry Cylinder' heating system - no hot oil bath
Testing Capacity	Single position stainless steel pressure vessel Designed for multi-unit alignment, each independent
Test Parameter Capabilities	Temperature: 160° ± 0.1°C recommended max. Oxygen Charge: 100 ± 0.1 psi recommended max. Vessel Rotation: Variable speed control
Output	Continuous temperature & oxygen pressure readout
Safety	Auto-Shutoff at end of test Current limiting fuses Over-pressure sensor & relief Over-temperature cutoff fuse CRN Approved & CE Marked Manual fill and purge control
Shipping Weight & Dimensions	~26 kg (58 lbs.) approx. ~53 x 46 x 58 cm (21 x 18 x 23 inches) approx.

Additional TANNAS CO. Precision Laboratory Instruments



Tannas Foam Air Bath (TFAB)

- ASTM D892, D6082, D1881, D7840, IP146
- Non-liquid bath
- 24°C to 150°C range



TBS 3000 HTHS Viscometer

- ASTM D4683, D6616, CEC L-36, IP370
- High-Temperature, High-Shear (HTHS)
- 80°C, 100°C, 150°C testing



Noack S2® Volatility Test

- ASTM D5800, Procedure D, CEC L-40
- Phosphorus Volatility
- Non-Wood's metal heating system



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