

RUSTING CHARACTERISTICS OF OILS



Rusting Characteristics of Oils TT-665

Rusting Characteristics of Oils TT-665 conforms to the ASTM D665 Standard Test Method for Rust-Preventing Characteristics of Inhibited Mineral Oil in the Presence of Water.

Rusting Characteristics of Oils TT-665 evaluates the ability of inhibited mineral oils, particularly steam-turbine oils, to help prevent the rusting of ferrous parts if water mixes with the oil. This test method is also used for testing other oils, such as hydraulic oils and circulating oils. The procedure includes provisions for testing fluids that are heavier than water.

APPLICATIONS

The primary application of the Rusting Characteristics of Oils TT-665 apparatus is to evaluate the **rust-preventing characteristics of inhibited mineral oils** when they are contaminated with water, in compliance with the **ASTM D665** standard. The test assesses a lubricant's ability to protect ferrous (iron and steel) components from rusting. It is a critical performance test for steam-turbine oils, as well as for other products like hydraulic oils and circulating oils.

Key Industries

- **Lubricant Manufacturing:** This is a fundamental quality control and product development test for lubricant blenders. They use it to verify the effectiveness of the rust-inhibitor additive packages in their formulations, ensuring their products meet performance specifications before sale.
- **Power Generation:** This is a crucial end-user industry. The test is used to qualify new shipments of steam-turbine oil and to monitor the condition of in-service oil. Preventing rust in multi-million dollar turbine systems is essential for reliability and preventing catastrophic failures.
- **Industrial Manufacturing:** A wide range of manufacturing sectors (e.g., steel mills, paper mills, automotive) rely heavily on hydraulic and circulating oils for their machinery. They use this test for quality assurance on incoming

lubricants and as part of predictive maintenance programs to ensure the continued protection of their vital equipment.

FEATURES

- The equipment features low-noise, high-torque electrical motors, ensuring thorough stirring and precise rotation speed.
- It can conduct four sets of experiments simultaneously, significantly enhancing testing efficiency and saving time.
- The device utilizes electrical motors to stir the constant-temperature bath, ensuring fast and uniform temperature control.
- Equipped with a digital display temperature controller, it is easy to operate with high precision temperature control.
- Heating output is achieved through solid-state relays, eliminating contact, sparks, and noise. This ensures a long lifespan and reliable safety.
- The heater is made of stainless steel, providing fast heating and a long lifespan.
- Designed with both functionality and aesthetics in mind, it ensures safe operation while maintaining an appealing appearance.

TECHNICAL SPECIFICATIONS

1. Rated voltage: AC220V $\pm$ 10%, 50Hz. (110V also available)
2. Heating power: 2100W.
3. Temperature control mode: LCD.
4. Temperature control point: 60°C $\pm$ 0.5°C.
5. Sensor: Pt100 RTD.
6. Bath holes: 4.

7. Sample agitation speed: $1000\text{RPM} \pm 50\text{RPM}$.
8. Bath stirring mechanism: electrical motor.
9. Ambient requirements: Temperature $10 \sim 40^{\circ}\text{C}$; Humidity $\leq 85\%$.



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