

NEWSLETTER

Tamson Instruments

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ASTM D2440: Oxidation stability of mineral insulating oil

Tamson is happy to announce its first oxidation stability bath. We have designed a six position apparatus for ASTM D2440, the oxidation stability of mineral insulating oil. The ASTM D2440 liquid bath is based on the Tamson TC16, which has proven to be one of the most robust baths on the market for petroleum tests.

The oxidation stability test of mineral transformer oils is a method for assessing the amount of sludge and acid formed in a transformer oil when the oil is tested under prescribed conditions. Good oxidation stability is necessary to improve the service life of the oil. Oils that meet the requirements tend to minimize electrical conduction, ensure acceptable heat transfer, and preserve system life.

For this test, a test specimen of mineral insulating oil is placed in an oil receptacle together with a copper catalyst coil to simulate the ageing of the sample. The sample is in the bath at 110°C for 72 or 164 hours. During this time, oxygen is constantly bubbled through the sample. After this procedure, the oil is evaluated by measuring the amount of sludge and acids formed.

Tamson ASTM D2440 Oxidation stability bath

The Tamson ASTM D2440 apparatus consists of one liquid bath equipped with six sets of calibrated flowmeters and six sets of glassware. The flowmeters have a fine adjustable needle valve, to ensure the correct amount of oxygen is supplied. A dryer tower is also supplied and can be mounted on the side of the bath. The liquid bath is well insulated and all wetted parts are made from stainless steel to withstand high working temperatures. The stainless steel parts can easily be cleaned. Grommets around the openings protect the glassware from scratches. The apparatus should be placed in a fume hood. In case this is not possible, six additional pieces of glassware can be used together with the standard



supplied side brackets to prevent smell spreading into the laboratory.

Primary benefits of Tamson D2440 apparatus

- Up to six positions
- Drain valve to safely empty bath oil
- Grommets to protect glassware
- Overflow outlet and float to ensure correct filling level
- Levelling platform to position glassware to required depth
- Separate opening in cover to add bath oil
- Robust and well insulated bath
- Bath is equipped with six calibrated flowmeters
- Dryer tower included, which is mounted on the bath
- Thermometer opening in cover
- Stainless steel bath and cover (easy to clean)
- Optional six additional pieces of glassware can be placed in the standard supplied brackets to reduce smell in case apparatus is not placed in fume hood
- Bath can also be used as circulator to pump bath fluid to an external application

Please see our website [Tamson ASTM D2440 apparatus](https://www.tamson.nl) for more information. If you have any questions or would like to receive a quotation, please contact your local Tamson distributor or contact us at sales@tamson.nl

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