

The Gas Act 1986 provides for all consumers the right to have the accuracy of their gas meters independently verified by a competent and impartial Gas Meter Examiner appointed by NMO under Section 17 of the Act. The procedure formally adopted by SGS for testing disputed gas meters is as follows-

Prior to its receipt and inputting of relevant information into the system, the meter is subjected to a visual examination so as to inspect certain features, such as the presence and condition of the appropriate seals and any evidence of tampering, interference or external damage that might affect the test results. Should any relating defects be found then a dispute certificate is issued stating the nature of the fault.

The end caps are removed and the meter is placed in the laboratory for a minimum period of four hours for thermal equilibrium to be established, where a constant temperature of $20^{\circ}\text{C} \pm 1^{\circ}\text{C}$ is to be maintained. The registration tests are only performed on meters that satisfactorily pass the initial inspections. The meter is installed in the test rig and various tests are performed. The system is tested for leaks and testing only commences once the system is confirmed leak tight. If it is confirmed that the meter itself is leaking then the tests are terminated and the result is recorded on the test certificate.

The index reading is recorded and the meter is tested by passing standard volumes of air through it at the designated flow rates. The quantity registered by the meter is then compared with the known volume and the percentage error of the meter is calculated. Diaphragm meters are tested at two flow rates- i) one fifth of the maximum design flow rate (e.g. 1200 litres per hour for a U6 meter) and ii) maximum design flow rate (e.g. 6000 litres per hour for a U6 meter).

Meters registering within the maximum permissible error limits are certified as accurate. Otherwise, meters registering outside those limits are certified as inaccurate and the certificate will state the amount by which the meter has registered erroneously. The meter is then checked to ensure it is working reliably. Thereafter, another physical and visual examination is undertaken, which consists of the removal of the official seal and, if necessary, the mechanical index from the meter.

The components of the index are also examined for faults, such as any signs of tampering, damage and other defects. On completion of the tests, the index (if applicable) is re-fitted and the meter (minus the official seal) is made ready for collection by the submitter. There is no cost incurred for the dispute test.