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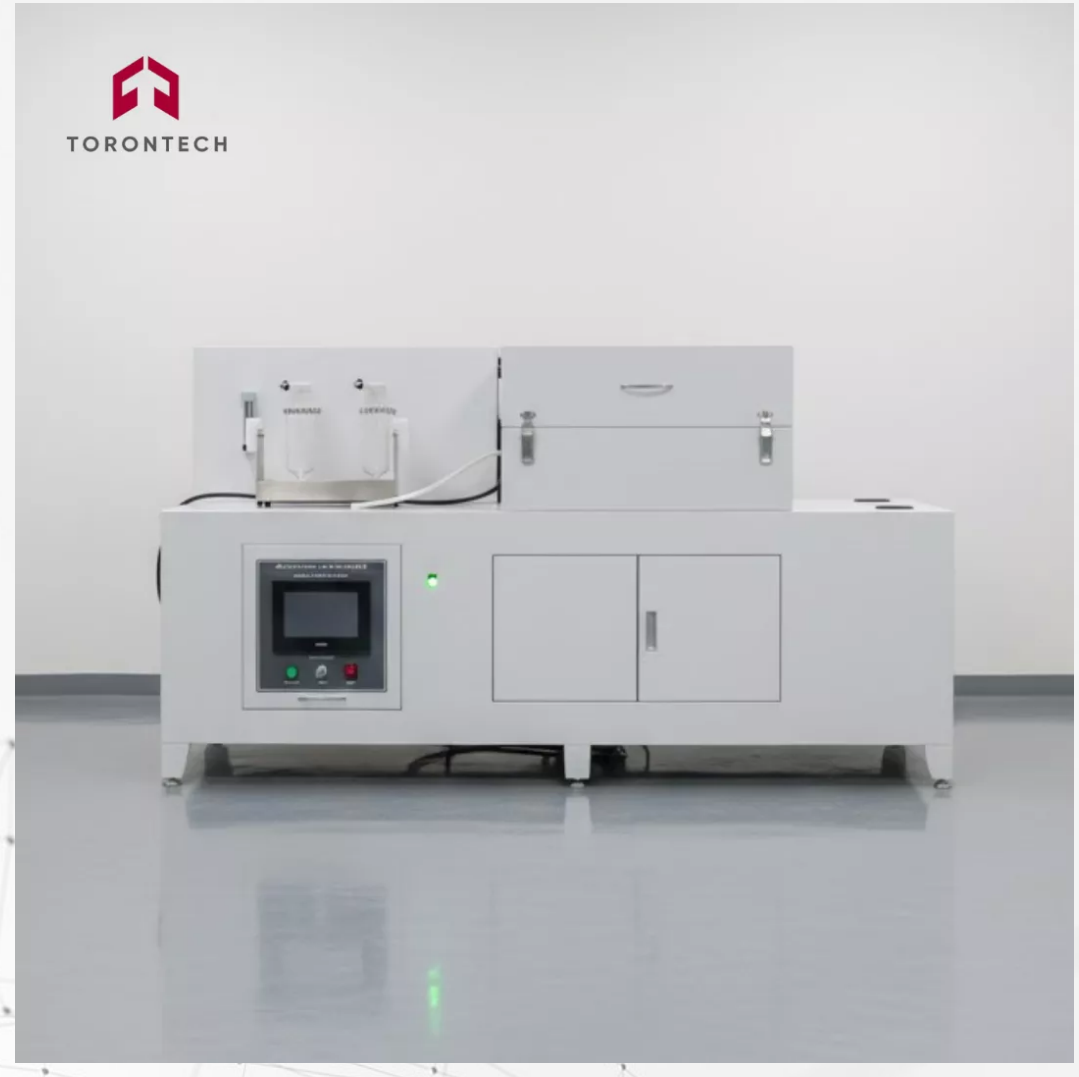

CORROSIVE GAS TESTER FOR OPTICAL FIBRE CABLES

IEC 60754-2

Corrosive Gas Tester for Optical Fibre Cables TTOFTAC-2000 is a precision instrument designed to test the corrosive gas emissions from optical cable materials.

APPLICATIONS

Standard

IEC 60754-2:2011 specifies the apparatus and procedure for the determination of the potential corrosivity of gases evolved during the combustion of materials taken from electric or optical fibre cable constructions by measuring the acidity (pH) and conductivity of an aqueous solution resulting from the gases evolved during the combustion. The general method specified in this standard is intended for the testing of individual components used in a cable construction. Formulae are given for the calculation of a weighted value for a combination of materials found in a specified cable. The use of this method will enable the verification of relevant requirements for either individual components or combined components of a cable construction stated in the appropriate cable specification. A simplified method is included for the testing of individual components where it is required only to demonstrate compliance with a stated performance requirement for quality control purposes. The significant technical changes with respect to the previous edition are as follows:

1. Improved definition of safety requirements relating to capture of gases;
2. Introduction of guidance on the preparation of test specimens for more even combustion;
3. Better expression of tolerances and precision;
4. Clarification of the conductivity and acidity functions;
5. Improved definition of the heating procedure;
6. Greater precision in the definition of the test temperature for the determination of pH value and conductivity;
7. Correction of the formulae for the calculation of the test results.

IEC 60754-2:2011 has the status of a group safety publication in accordance with IEC Guide 104.

Test Method Principle

The test material must be heated in a flow of dry air. The gases released should be captured by passing them through wash bottles containing distilled or demineralized water. The acidity of the resulting solution should be measured by checking its pH level, and its conductivity should also be tested.

Test apparatus

The test apparatus assembly must be fully sealed to prevent leaks. The connecting distances between the quartz glass tube and the first bottle, as well as between subsequent bottles, should be kept as short as possible. Use glass or silicone rubber tubing for these connections.

Determination of the pH value and conductivity

The pH value of the solution must be measured at (25 + 1) Â°C following the test procedures provided by the measuring instrument's supplier.

The test report shall include the following information:

a) A detailed description of the tested material and the cable it was sourced from, including the reference number of this standard. c) The average pH value and conductivity of the material, reported at 25Â°C. d) The method used for testing (general or simplified). e) The calculated weighted pH and conductivity values for the tested cable, if applicable.

TECHNICAL SPECIFICATIONS

Model	TTQFTAC-2000

Quartz glass tube	Ø42*600
Tube Furnace	Internal diameter Ø40
Combustion boats	100x25x10mm
Gas washing bottles	Two, with 1 magnetic stirrer
Air supply	20ml~200ml
Analytical Balance	Accuracy 0.1mg
Digital PH Meter	Accuracy 0.02PH
Conductivity Measuring Device	Measuring range (0~1 x 105) uS/cm

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