Stack Monitors - General

Model: 7022-STAKM-001

Application

Assess presence of tritium in the exhaust ducting or plant exhaust stack. May be used in nuclear power stations, laboratories, fusion facilities, research facilities. This product sheet is of a general nature since tritium stack monitoring takes many forms depending on a clients requirements. Where a tritium stack monitor is intended for compliance, two characteristics distinguish it from an area monitor. First the total flow must be known, even though the instrument may only measure tritium per unit area, and this means that the flow through the stack must be measured and equated to the tritium per unit area measurement; the second is that for compliance coverage, measurement must take place at all times so coverage must be provided even during instrument maintenance outages. If stack flow measurement is required, the stack must have been profiled according to its shape, distances from bends or valves etc., and assurance available that samples taken are representative of the full stack profile. If this is not already available it will have to be provided as part of a tritium stack monitoring system. A Client may wish to know not only how much tritium is exhausted from a facility but also what form it takes, ie whether elemental tritium or HTO, such an instrument will be termed a discriminating monitor. Other Clients may wish monitors to perform additional functions as well as tritium measurement such as the PIT which measures particulate and iodine as well as tritium. Other characteristics involve real time measurement for example and record peaks of tritium release, they can often be measured using ion chambers, whereas others may only require total tritium released over a wide period, and so bubblers and subsequent scintillation counting may be appropriate. Please contact us to discuss your needs.

Features

- Tritium stack monitors
- Tritium area monitors
- Duct measurement equipment
- Custom designed/built instruments to Client's requirements.
- Proven equipment to minimize uncertainty in new designs,
- Standard parts will minimize spare parts inventory
- Control system to integrate with Client's systems

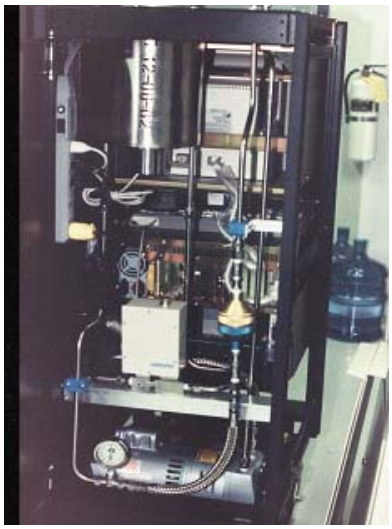
Description

Tyne has designed a new tritium controller unit which is operated through a touch sensitive screen. One of the advantages of this unit is that it includes a series of built in relays which can be used for valve and other equipment control which make the unit very flexible to use in a variety of stack and area monitor designs using the same unit but modifying the computer program by which it operates. Used together

www.tyne-engineering.com
Tel:(905)8250697 Fax:(905)8250716

with three ion chambers, a large wire cage three liter chamber, a smaller but well proven 1 liter solid chamber and a high level 10 cc wire cage chamber provides us with great flexibility in area monitor and stack monitor design. Some examples of stack monitors made by Tyne are shown below.

Computer-controlled stack monitors can be provided, with options of permanent computer read out, and monthly or continuous collection



Stack monitor internals

Tyne's flow measurements are controlled via sensitive mass flow controllers and meters; Tyne will provide calibration curves, operating and maintenance manuals, and other documentation required by the purchaser.

Temporary Mobile Stack monitor

Tyne will design and build to its ISO 9001-2000 program.

Stack analysis equipment