ABSTRACT

FILTER WITH MEMORY, COMMUNICATION AND CONCENTRATION SENSOR

The present invention describes a system and method for accurately measuring the concentration of a substance within a filter housing. A concentration sensor and a communications device are coupled so as to be able to measure and transmit the concentration of a particular substance within the filter housing while in use. This system can comprise a single component, integrating both the communication device and the concentration sensor. Alternatively, the system can comprise separate sensor and transmitter components, in communication with one another. In yet another embodiment, a storage element can be added to the system, thereby allowing the device to store a set of concentration values. The use of this device is beneficial to many applications. For example, the ability to read concentration values in situ allows integrity tests to be performed without additional equipment.

Figure 1