

## **Specification for Water/ Liquid Leak Detection system in Plant Rooms & Areas with solid floors**

### **LEAK DETECTION SYSTEM**

#### **1. General requirement**

To provide a liquid leak detection and locating system to give the earliest warning of a leak

- *from all pipework, Storage Tanks, Pumps and other items of Plant as detailed in the schedule and drawings.*

The system shall

- *Provide an alarm giving an accurate location of a leak at a specific point or zone.*

OR

*Provide a general alarm indicating a leak has occurred somewhere/ anywhere within the detection network area*

The system shall comprise a network of sensing devices connected to either a *locally OR remotely located* control panel as indicated in the schedule and drawings. The sensing devices should be *water sensing probe/point devices and any other type of liquid sensing device such as sensing pads, pipe-in-pipe probes, tundish/overflow type sensors* as may be deemed appropriate to fully comply with the requirements of the project. Whichever type of sensor is used It is recognised that liquid must touch a sensing device for an alarm to be activated.

The leak detection system will continuously monitor the network of sensing devices and give an alarm in the event of detecting a leak or system/sensing device malfunction, damage or disconnection.

A control panel will be capable of monitoring up to *500 no* point/ probe sensors or a combination thereof.

The number of sensing devices and their installation disposition shall be

- *as detailed in the schedule and drawings*
- *as recommended by the specialist sub-contractor or supplier in accordance with the general requirement set down in the schedule and drawings*

The system shall be capable of

- *reporting the location of a leak to a sufficiently accurate position to enable the operator to locate and identify the activated individual (or group of) probe device(s) quickly and accurately. \**
- *reporting the presence of leak in within a general area. \**

A control panel shall be capable of providing the level of accuracy of leak detection required. This may be achieved by applying a contiguous number of separately reporting zones of appropriate length or by a system which will report the position of a leak as a measurement of metres along the defined route of a sensor. Wherever possible the allocation and installation of sensor lengths or zones shall be arranged to coincide with defined areas or "land-marks", individual rooms, partition walls or other easily identifiable features. This is to facilitate speedy and positive leak location.

## **2. Leak Location**

The water detection system will be applied and mapped in such a way as to make the part of the sensor network detecting the leak easy to identify and physically locate. This may be achieved by sub-dividing the sensor network into a series of separately reporting zones or by a system which, uses a sensor cable which will report the location of a leak via a distance measurement displayed on the control. In any event the information the distance measurement or zone displayed by the control panel shall be cross-referenced to a map, chart or diagram which shall clearly show the routing of the sensor network, its relationship to the building layout and any fixed zone positions or cumulative distance marks.

## **3. Point Sensors and other devices**

The system will be capable of using other types of water/liquid sensing devices (in addition to, and/or instead of, detection cable on the same control system) as required and where detection cable is unsuitable.

These may include:

- Point Sensors (plus any protective Guard Plates and mounting devices)
- Pad Sensors
- Oil Sensors
- Pipe-in Pipe (Double containment) Sensors.
- Tundish / Overflow type sensors

Unless specifically instructed in the schedule the specialist contractor may put forward an alternative proposal using these or any other type of specific sensing device which they consider to be appropriate given the requirements of the project.

This must be in addition to a proposal adhering to the original requirements of the schedule and must clearly identify any specific cost, efficacy, functioning or operational advantages .

## **4. Leader Cables**



## Andel Floodline Leak Detection Specification

It is a statutory obligation that the system must conform to relevant EU regulations particularly the EMC and Low Voltage Directives and be “CE” marked accordingly.

### 6. Manufacturer

The water leak detection system shall be as manufactured by:



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