

Development of the banding type multilayer detector design applicable to high temperature conductive liquid

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The problem of existing two-wire leak detector is a slow sensing time and mal-function due to the damage of ceramic element. On the other hand, the problem of multi-layer leak detector is a difficulty in installing the device. This paper designed to solve the problem by bonding a metal or conductive fiber layer on top of high-temperature fiber insulator to form an integrated band type. This design is easy to install simply using the tape to attach to horizontal/vertical pipelines as well as valves, bending part, and various components. Furthermore, an extra terminal is added to improve the convenience at the opposite side of sensor terminal so that the daily check before/during/after the operation is possible. The second level detecting sensor is designed to be flat plate type rather than porous plate and as a result the structure acts as a disturbance to delay the liquid leak flow. After manufacturing the banding type multilayer detector, experiments comparing various leak detector will be conducted in near future.