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(57) Abstract :

A system for containing leakage of liquefied petroleum gas (LPG) comprises of a thermally-insulated cuboidal enclosure 101 configured to house an LPG cylinder mounted on wheels 102, a thermal regulation module to monitor temperature fluctuations in the enclosure 101, an interactive display panel 103 shows current gas levels, system status, and safety conditions, an artificial intelligence (AI) based thermal imaging module 105 for detecting fire and heat signatures of animals and humans, an AI-powered voice assistant 106 for capturing voice commands for interpreting user commands and queries, an automated fire suppression module 107 for suppressing unique infrared signature of flames, a multi-zone gas mapping module for generating a 3D map of gas concentration in vicinity of the enclosure 101, a robotic valve to turn off the valve of the cylinder during detection of gas leaks, a covering module 109 to cover the enclosure 101.

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