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Fire-fighting system simulation and control using Arduino connected with Labview

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ABSTRACT

Fire-fighting is extremely important, common usage in all industrial institutions and most buildings. Fire-fighting system is overviewed. Fire definition, types and their reasons were discussed. Using Arduino Mega2560 due to its simplicity and cheapness comparing to the big fire-fighting control systems is the main reason for this paper. Sensing, detecting acting against gas, heat and fire all are simulated and controlled using Arduino board with connected to Labview program. Labview was existed for monitoring the system and hardware components which installed on Arduino Mega2560 board. Three types of sensors were used for each room to detect gas, heat and fame. Connection between Arduino board and Labview program need sub-programs to perform. All sensors responded correctly and react well whereas on Arduino or Labview.

Keywords: FF Fire-fighting system, Labview Laboratory Virtual Instrument Engineering Workbench, IC Integrated Circuit.