Literature Survey

Industry-specific intelligent fire management system

By

AVINASH VULIYA SARAVANAN, GIRIDHAR P V, HARIHARAN B, SANTHOSH S

Suwarjono, S. Wayangkau, I.H. Istanto, T. Rachmat, R. Marsujitullah, M. Hariyanto, H. Caesarendra, W. Legutko, S. Glowacz, A. “Design of a Home Fire Detection System Using Arduino and SMS Gateway”. Knowledge 2021, 1, 61-74. The main of their project was to help house owners and firefighters to quickly detect the fire and the leakage of gas using gas sensor and temperature sensor

M. Trinath Basu, Ragipati Karthik , J. Mahitha , V. Lokesh Reddy “IoT based forest fire detection system” International Journal of Engineering & Technology 7 (2.7) 2018. With the help of an RF module the data can be sent to the IoT cloud which is received from the gas sensors and temperature sensor. Using the readings if the values exceed a certain threshold the buzzer will start to ring

Hamood Alqourabah , Amgad Muneer , Suliman Mohamed Fati “A smart fire detection system using IoT technology with automatic water sprinkler” International Journal of Electrical and Computer Engineering (IJECE) Vol. 11, No. 4, August 2021. In this project the gas concentration level is constantly being measured by the gas sensor and uploaded to the cloud, if the flame sensor detects the presence of fire, then the water sprinkler is automatically activated and puts out the fire

Nyyssoenen, T, Rajakko, J, and Keski-Rahkonen, O. “On the reliability of fire detection and alarm systems”. Exploration and analysis of data from nuclear and non-nuclear installations. Finland: N. p., 2005. They made a literature review on

the reliability of fire detection data and which was resulting in rough estimation of some failure frequencies.

Ponnusamy V, Palanisamy S, Paulraj P, and Kanchana S. “Fire Safety in the Textile Industry”. DOI: 10.35530 / IT.070.06.1615 In their review they discussed the various causes of fire in the textile industry, using the thermometer and hygrometer they can keep the temperature below 308 K and humidity below 70 %

Matthew P Thompson, Donald G MacGregor, Christopher J Dunn, David E Calkin, John Phipps “Rethinking the wildland fire management system” Journal of Forestry, Volume 116, Issue 4, July 2018. Their primary focus was how to catalyze changes in the fire manager behavior. Using the forest service of the US Department of Agriculture as a test case, they deduced the fundamental changes to the community’s way of thinking and plans towards the wildfire

Laura Bravo Diaz, Xuanze He, Zhenwen Hu, Francesco Restuccia, Monica Marinescu, Jorge Varela Barreras, Yatish Patel, Gregory Offer and Guillermo Rein “Review of Fire Safety of Lithium-Ion Batteries: Industry Challenges and Research Contributions” Journal of the Electrochemical Society, Volume 167, Number 9. They discussed the safety challenges faced by the industry, and the ignition and propagation challenges. It is mentioned that gas sensors are essential for the detection of the initial thermal runaway along with heat and smoke sensors to support.

Ross D.Collins, Richard de Neufvillea, João Claro, Tiago Oliveira, Abílio P.Pacheco “ Forest fire management to avoid unintended consequences”Journal of Environmental Management, Volume 130, 2013. They explored how the physical

and political dynamics affect suppression, they have used system dynamics to model the forest fire.