ijRASET

International Journal For Research in
Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

www.ijraset.com

Call: ◎08813907089 | E-mail ID: ijraset@gmail.com

Analysis of Fire Safety in Building

Punam Bhalekar[1], Himanshi Jamghare[2], Aishwarya Gholap[3]

[1, 2, 3]*Department of Civil Engineering , Dr. D. Y. Patil Institute Of Engineering ,Management & Research ,Pune, India*

Abstract: Many fire accidents have been increased due to inattentive building construction. So, at building have experienced much fire incidents. Due to inadequate equipment management and lack of public awareness are the main malefactors of this situation to create maximum miscellaneous. This study introduces the new techniques developed in IOT with respect to firefighting system. Demand for new and innovative fire protection system in comparison with conventional and traditional methods have been heightened by rapid development in technology. When it comes to existing buildings, such a need for new technologies is in particular of greater importance. Comparison of results shows advantages, limitations and drawbacks of systems.
Keywords: IOT, WMFS, NOZZLE, RFID, VFD

I. INTRODUCTION

Fire is most important factor must be consider in building planning. in some cases failure can occurs to curtail the fire hazards. It has been observed smoke management in building are failed by preventing measures. For example modern building such as TVCC, CAMBER WELL fire (UK) they are failed to avast the spreading of fire, As fire spread 44 floors in around 15min. so researches and studies are on fire-fighting system are becoming popular day by day. This paper introduce the importance of fire safety and new techniques used. In order to generate some meaningful results ,things are connected. In IOT these things are connected over a network for sharing data each of these things has independent identities. In IOT devices like Bluetooth connected headset, utility meters, temperature reader, thermostats, sensors etc. Which can sense some parameter.

II. LITERATURE REVIEW

A. Title

A Bbrief Review on design and Operation Principle for Nozzle Discharging Water Mist

1) Author: N. Zhu, WK Chow

2) Abstract: Water mist fire suppression system is one of the best suitable alternative methods for halogen-based total flooding system. Measuring the extinguisher time could also shows predominant parameter in this system under different conditions.

In this system design of water mist nozzle totally affect the system. Well design and installed nozzle could ensure that maintain the discharging distribution properly and enough water drops. There are main three types of nozzle that are impingement, pressure jet and twin fluid nozzle. In addition to above there are atomizing medium. The key component of this system is water mist nozzle for ensuring system well performance WMFSS researchers and designers should pay attention for design the nozzle. This method has many advantages depends on case and varying performance of this system under different conditions.

B. Title

"Research and application on the smart home based on component technologies and Internet of Things"

1) Author: Baoan Li[a], Jianjun Yu[b] ,a[*],(2011)

2) Abstract: The key technology of IOT including radio frequency identification (RFID) , Nano-technology, intelligence embed technology, sensor technology. The foundation and networking core of the construction of IOT is RFID. When concept of IOT is introduced to implementation of smart home, traditional home is out of fashion. IOT can change our life and job to a modern stage and more intelligence. Intelligence, residential, district, smart homes and more other applications will appear in future. Smart home means family medical treatment, family security, family data processing. Research and application on the smart home based on component technologies and Internet of Things

C. Title

Video Fire Detection-review

1) Author: Enis Cetin, Steven Verstock, Kosmos Dimitropoulos, benedict, Gouverneur Nikos Grammalidis, Osman Gunay, Y Hakan Habiboglu, B Ugur Toreyin,2013

2) Abstract: Video surveillance camera mostly used application of security. Many numbers of cameras are installed all over the world in recent years. But for surveillance operators this is practically impossible to keep a constant eye on every single camera. There is need to support the operators for unusual activity detection and undesired behavior before they occur.

Flames and smoke are moving objects, so moving objects detections is also widely used in VFD. They are not fully automated system, this known as invaluable security personal. Whenever VFD system produces and alarm operator can check there is a real fire or fire alarm. In this way we can handle millions of cameras at a time.

III. PROPOSED WORK

A. Advantages of Green Building

1) Reduce level of pollutant

2) Minimum utilization of water

3) Energy saving

B. Application

1) Smoke detecting

2) Track location

3) Fire incident monitoring

IV. CONCLUSION

In this paper we studied about fire safety in building using IOT this results compare with existing or traditional system used in previous researches. By analyzing we conclude that implementation of this system will increase awareness about the fire safety among the residence. Safety area is protected from fire effect.

REFERENCES

[1] A Bbrief Review on design and Operation Principle for Nozzle Discharging Water Mist, N. Zhu, WK Chow, Fire Sfety Science 6, 6c-1-1,2004

[2] Baoan Li, Jianjun Yu, "Research and application on the smart home based on component technologies and Internet of Things" [Procedia Engineering 15 (2011) 2087 – 2092 ocedia Engineering 00 (2011) 000–000]

[3] Video fire detection-review, Enis Cetin, Steven Verstock, Kosmos Dimitropoulos, benedict, Gouverneur Nikos Grammalidis, Osman Gunay, Y Hakan Habiboglu, B Ugur Toreyin, 2013)

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089   (24*7 Support on Whatsapp)