

## **Safety For Swimming Pool 'Life Is Precious' "Nothing Is More Valuable Than One's Life, Which They Have, Haven't Or Wish To Have."**

**Mabibhushan Kumar**

*Student (Civil Engineering, Metropolitan Institute Of Technology And Management, India)*

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**Abstract:** *Safety in swimming pool is more than a set of regulations or concern, it's a serious matter. Pool professionals (with new technics or advanced system) can help owners to prevent accidents.*

*As pool are a fantastic way to stay fit and spend time outdoors; and making pool safety as priority will let you enjoy your pool fully by giving you peace mind.*

*Pool operators are legally responsible for health and safety of pool users and employees. In order to manage and control risks, and comply with the law, you must carry out an assessment of risks to pool users and employees working at the pool, which must be written where there are 5 or more employees. You must take action to eliminate or control risks so far as is reasonably practicable.*

*A most important parts of the risk assessment are the identification of hazards and risks, and the elimination or control of risks. **The amount you need to control risks depends on the degree of risk, low or high.** Where the pool is hired out, say to a School or Club or Resort, they should give the relevant sections of the procedures. The emergency provisions should consider the type of first aid provision required, for instance to deal with resuscitation following water in halation.*

*These guidance's provide advice on how to manage swimming pools to avoid accidents. We can minimise or eliminate this type of accident by providing a "safety device" consists of laser which emits infra-red rays and light developing resistors with a microcontroller system assembling as a unit.*

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### **I. Introduction**

Some times what happen, ignoring Warning Signs (e.g. depth of water and others) and Prohibition Signs (e.g. no diving zone, no running etc.); someone get in trouble like sink down into the pool in depth area and also if that time no one present in that area to observe (or see) that one, after some time he/she will be no more. This is a very serious matter.

We can minimise or eliminate thistype of accident by providing a "safety device".

### **II. Safety Device**

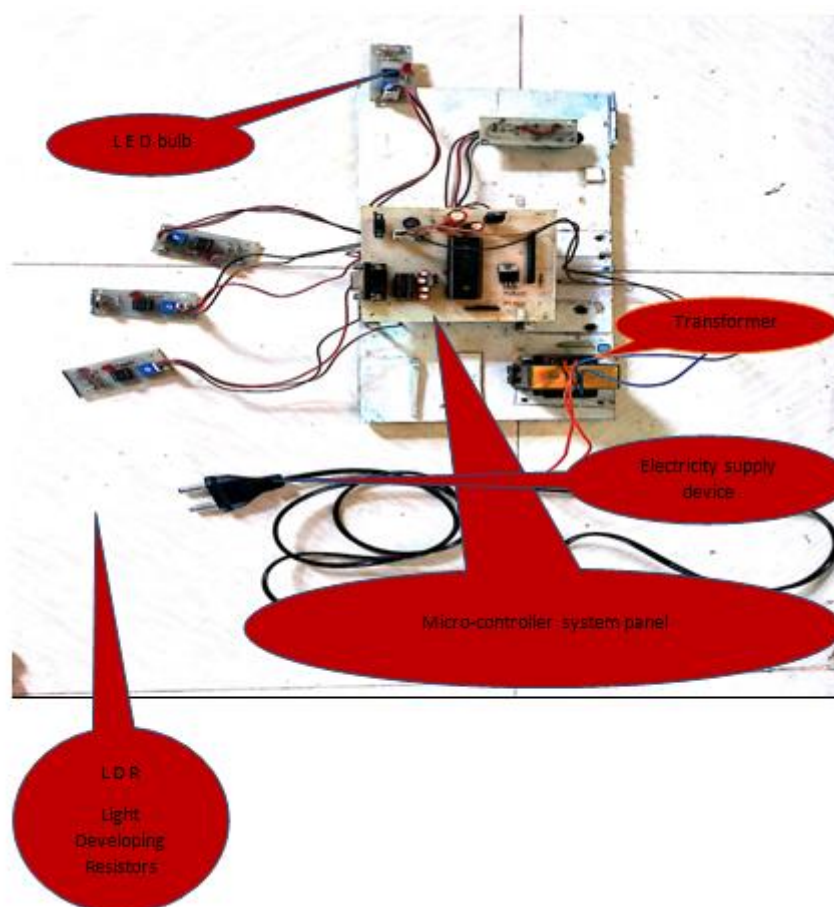
This is the high quality green laser pointer which generating amazing laser effects. This laser pointer can reach up to 1000 meters and high power visible in daylight also, absolutely amazing. This is one of the best green laser pointers out there. It's strong, sturdy, sleek and so powerful (but do not effect on our body parts, skin and others)! The beam is so strong; rescuers and search person could spot you from one mile away. These lasers are provided on the one side of the swimming pool face @ 450mm length wise at a distance of 10mm from the ground level of pool in dipper depth area.

### **III. Specifications**

- Laser colour - green
- Metal pen - sized barrel
- Range over 2 miles (or 12000 ft.)
- Wavelength of 532mm
- Metal housing g with rubberized handled for comfort
- Up to 50 times more powerful than most other laser pointers
- Material -Metal



**LDR** light developing resistors are used to catch the laser beams; it act as a receiver for the laser lights. These LDR are placed on the other side of the swimming pool normal to the position of laser pointer point; along with the LDR timer which is fixed on the back side of the LDR, the timer is fixed to the Led lights which helps, to indicate the fully functioning of alarm system. Next main parts comes to Micro controller system which helps to control the electricity throughout the circuit and the major part transformer which transforms the high voltage electricity into required voltage capacity.



#### **IV. Working:**

As the lasers starts, the LDR start receiving the laser beams; till LDR receiving the laser lights the LED light stars lighting this indicate the working of laser and when the obstruction/body lies between the laser and LDR for 10 seconds continuously, the alarm starts ringing and that is only applicable if the body/obstruction is lying between the laser and LDR, the span of obstruction of body between laser and LDR on actual site will be 90seconds; After receiving alarm signals the surrounding people or nearest people can help him/her and rescued. This indication can help one to save so many lives of human.

#### **V. Conclusion**

We have conclude that, "by installation of such device, through alerting the surroundings peoples or nearer peoples, we can minimise or eliminate such types of accident (death causes of sink down into the pool). Location and use of the emergency telephone/alarm and instructions to its use in emergency.

### **References**

- [1]. [www.swimmingpool.com](http://www.swimmingpool.com)
- [2]. <https://www.healthychildren.org>
- [3]. [www.redcross.org](http://www.redcross.org)

### **Special Thanks To**

- [1]. Mr Abhijit Patil sir ( H.O.D, Y B PATTIL POLYTECHNIC,1<sup>ST</sup> SHIFT,AKURDI,PUNE,MAHARASHTRA,INDIA)
- [2]. Mr Vikash N Tripathi (Accountant and Manager , QUIMZTECH SOLUTIONS, INDIA)
- [3]. Mr Niraj Rajesh Prasad( Civil Engineer, Pune, INDIA)
- [4]. Mr Amit Dhanawade (Electrical Engineer, Pune, INDIA)
- [5]. Mr Ronak B Patel (Civil Engineer , Daman, INDIA)