Abstract

The aim of this project is to give an innovative concept to handle the bore well rescue operations. Nowadays child often falls down in the borehole which is left uncovered and get trapped. It is difficult and also risky to rescue the trapped children to aid in such rescue we proposed a system of designing robots to the rescue of a child in a borehole. The robot structure consists of power supply, switch pad, gear motors, Oxygen concentrator, camera and Microcontroller. The condition of trapped child is captured with CCTV camera and monitored on a TV. A safety balloon is introduced in order to provide extra safety. Once the lifting rod reaches a safe position under the child, an air compressor is operated to pump air to the bladder attached to the end of the lifting rod through an air tube that runs downwards inside the lifting rod. The bladder provides a safe seating to the child. When the child is secure, the lifting rod is contracted to its maximum position. The motor is then reversely operated so as to unclamp the system. Simultaneously, it is lifted out of the well using a chain or rope. The programming language is Embedded C which is executed by MP lab Integrated Development Environment. This robot type machine can rescue trapped body from the bore well in a minimum amount of time and safety.
References

- Alan Mutka and Zdenko Kovacic "A Leg-wheel robot based approach to the solution of flipper-track robot kinematics"; IEEE International Conference on Control Applications, 28-30 September, 2011, USA.
- Oxygen concentrator -Direct web search on google. com
- Safety balloon-Direct web search on google. com
- Camera - Direct web search on google. com

Index Terms

Computer Science
Information Sciences

Keywords

Digital camera  Oxygen Concentrator  PIC Microcontroller  Robot design  Safety balloon