IOT BASED PIPE INSPECTION ROBOT

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Keywords:
Inspection, Time Saving, Reliability and Adaptability

Objectives:

- To fabricate a pipe inspection system which can be used for inspection of internal surfaces.
- To Develop a camera-based system which can be used to visualize the Defects inside the pipe.
- To make the system wireless so that it can be controlled efficiently without any hurdles of wires.

Methodology

The system works on the IOT protocols to handle the control of the pipe inspection robot. The following procedure is implemented for the operation for the Robot.

- Start the Robotic Vehicle
- Open the Browser and Connect to the Web Server
- If the system is live the control panel opens in the web server
- The Web server has button to control the robot, which can be used send the commands to control the pipe inspection robot
- The onboard camera will automatically capture the live video feed and send it to the robotic vehicle.

Outcomes:

- The proposed project deals with the development of pipe inspection robot with live video feed. this not only helps to wirelessly monitor and detect the quality and defects of the pipe but also provides with an efficient solution for pipe inspection compared to traditional ones.

- However, this project has wide scope for future modification. This project can be made autonomous using LIDAR in computer vision. Further deep learning can also be implemented in project to detect type of defects as well.

Project uniqueness:

The uniqueness of IOT Based Pipe Inspection lies in its ability to detect the defects of the inner surface of the pipe and to improve the efficiency of the defect detection.