

# Pipeline Inspection and Cleaning Robot with Live Streaming for Chemical Industries

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**Abstract:** This project involves the development of a pipeline inspection and cleaning robot equipped with live streaming capabilities. The robot is designed to traverse through pipelines, inspecting and cleaning as it moves, while also providing a real-time video stream of its progress. This can be achieved by designing an IOT based inspection and cleaning robot. The system consists of 4W chassis design and camera for pipeline inspection. The hardware part consists of chassis, Node MCU board, Camera, DC geared motors and motor driver, cleaning tools, LED's etc. The live stream allows for remote monitoring and control of the robot, enabling operators to make necessary adjustments in real-time. This project is intended to improve the efficiency and safety of pipeline inspection and cleaning processes, reducing the need for manual labor and minimizing the risk of human error.

**Keywords:** Pipeline inspection, live streaming, chassis, camera, real-time, Node MCU, motor-driver, risk, safety

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