

Pipeline Inspection Robot

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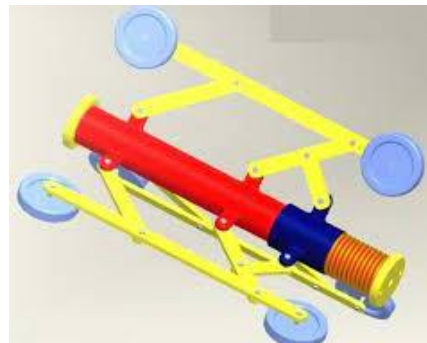
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Abstract: This paper presents the design and development of an in-pipe inspection robot (IPIR) version 2, which is composed of two driving leg systems, two supporting leg systems, and a connecting body. The novelty of version 2 is its stability and diameter adaptability, which are enhanced by adding two supporting leg systems in version 1 and optimizing its spring design. All major components of version 2 are designed safely, and the robot is suitable for offline visual checking of various pipe components like horizontal pipes, vertical pipes, and couplings in water pipelines, gas pipelines, and drain pipes

Keywords: in-pipe inspection robot

I. INTRODUCTION

This paper presents the design and development of an in-pipe inspection robot (IPIR) version 2, which is composed of two driving leg systems, two supporting leg systems, and a connecting body. The novelty of version 2 is its stability and diameter adaptability, which are enhanced by adding two supporting leg systems in version 1 and optimizing its spring design. All major components of version 2 are designed safely, and the robot is suitable for offline visual checking of various pipe components like horizontal pipes, vertical pipes, and couplings in water pipelines, gas pipelines, and drain pipes.



An Underwater Pipeline Inspection Robot Based on Raspberry Pi[2]

- Title: An Underwater Pipeline Inspection Robot Based on Raspberry Pi

- Authors: N/A

- Publication Date: 2022-07-18

- Abstract: This paper designs an underwater pipeline inspection robot to realize the autonomous inspection, cleaning, and maintenance of underwater pipelines. The robot is based on the Raspberry Pi platform and is equipped with sensors and cameras to capture images and data.

Development of a Pipeline Inspection Robot for the Standard Oil Pipeline of China National Petroleum Corporation[3]

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and excessive force exertion, which can lead to overheating and damage to the robot. The paper also discusses improvements in mechanical design, control system, inspection system, and field testing results.

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