



Three applications of robotics on a drilling rig

The oil and gas industry is undergoing a significant transformation with the advent of digitalization and automation technologies. This chapter explores the impact of digitalization ...

Robotic systems handle functions such as pipe handling, tripping, and rig floor operations with high precision and consistency. These systems ...

Abstract: This paper reviews the application of dual-arm collaborative robots in the assembly and disassembly of derricks (drilling derricks). First, the basic concepts and technical background ...

Applications of robotics in mining are broad and include robotic dozing, excavation, and haulage, robotic mapping and surveying, as well as robotic drilling and explosives ...

The application of artificial intelligence (AI) has become inevitable in the petroleum industry. In drilling and completion engineering, AI is regarded as a transformative technology ...

Exploration drilling technology is therefore considered ripe for innovation, with numerous companies - from start-ups to stalwarts - vying to bring increased automation to the ...

Advanced robotic systems, including remotely operated vehicles (ROVs), autonomous underwater vehicles (AUVs), and robotic drilling platforms, are now essential for conducting operations in ...

On site, there are usually two to three people operating a drilling rig. One or two of them are there to keep the machine supplied with pipe and ...

An example is the robot vacuum, which no longer resembles the dominant design of traditional vacuum cleaners. As automation process ...

First offshore drilling is tracked back to as early as 1869 to the first patent for offshore drilling rig design of T.F. Rowland but first commercially developed field started in ...

Robots continue to play a central role in mining, offering several benefits over traditional labor-focused operations. This article will briefly explore the use of robots and ...

Fully-automated handling robots for oil and gas drilling rigs Drilling for oil and gas is still one of the most adventurous businesses of our times. But it is a risky business not only in financial terms, ...



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Drilling Automation and Innovation-2025 Everywhere you look these days, there is talk of how advances in big data, artificial intelligence, and machine learning will revolutionize ...

The operator realized significant gains in drilling productivity and flat time efficiencies when comparing the H2 2020 performance of the two non ...

These rigs are equipped with sophisticated software, sensors, and mechanical components that enable precise control and execution of drilling operations. Robotic drilling ...

With robotics handling activities like tripping pipe in and out of the hole, rigs equipped with modular systems operate with greater consistency ...

Drilling rigs are essential machines used in various industries to create holes in the earth's surface. From oil and gas exploration to water well drilling and ...

In a nutshell, robots inspect pipelines, monitor offshore structures, detect gas leaks, and even help with drilling and maintenance. They make operations safer, cheaper, and more ...

The mining industry continues to be a hotbed of patent innovation. Activity is driven by the need for safety, productivity, and sustainability, which are all supported by ...

In a previous blog we have described the significant potential efficiency gain that lies in a fully automated drilling process, by use of ...

Robot revolution: five robotics developments in offshore oil and gas Oil and gas companies have invested heavily in robot developments. Umar Ali explores five applications of ...

Drilling robots are changing how industries handle projects for the better, with far more precision and speed. Learn about these bots here.

The rig configuration included Nabors's smart suite of automated drilling software and robotics from Canrig Robotic Technologies. The fully automated rig can ...

The present article analyzes the technological advancement and innovations related to drilling operations. It covers the review of currently proven and emerging ...

This paper aims to identify the capability of a highly flexible industrial robot modified with a high-speed machine spindle for drilling of aluminum 6061-T6. With a focus on ...

Ever wondered how are robotics used in the oil and gas industry? In a nutshell, robots inspect pipelines,



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monitor offshore structures, detect gas leaks, and even help with ...

These technologies are revolutionizing drilling operations, enhancing precision, and significantly improving safety in challenging ...

Successful implementation of robotics, in space and manufacturing industry, is an critical example of how robotic assistance and automation is the only option for safe and cost ...

Drilling robots are improving productivity in the automotive, aerospace, and many more industries. Discover their characteristics and how ...

For instance, the combined application of cloud computing systems and data analysis software is improving how drilling data is collected ...

NOV's ATOM RTX (pictured on H& P Rig 618) is the centerpiece of a pair of industrial robotics packages either currently operating or set to deploy on land rigs in North ...

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