



# Intelligent Control Engineering Drilling Rig

This paper solves the technical problems of electric drive, heavy load and intelligent control, and a set of full-electric intelligent drilling system was designed based on the technologies. The ...

Optimization control of the rate of penetration (ROP) is crucial due to its vital role in maximizing the drilling efficiency. In this article, a dynamic optimization-based intelligent ...

It achieves this by coupling the models with smart directional drilling tools and the rig automation control system. This project demonstrated ...

Oil drilling and extraction platforms are currently being used in many offshore areas around the world. Whilst those operating in shallow seas are secured to the seabed, for ...

This paper will focus on the progress of key drilling and completion technologies for ultra-deep oil and gas exploitation, including drilling technology research and breakthrough, automatic ...

Halliburton and Sekal have announced the deployment of what they claim to be the world's first automated on-bottom drilling system for ...

Leading the industry in rig automation, our control systems seamlessly integrate drilling equipment, improve performance, and boost drilling efficiency.

In drilling, more often than not, automation and optimization are independently addressed. Artificial intelligence can be the bridge between the ...

TAYMACHINERY's Intelligent Drilling Rigs are cutting-edge, AI-powered drilling solutions designed to enhance accuracy, efficiency, and safety in complex drilling environments. These ...

An intelligent drilling optimization application performs as an adaptive autodriller. In the Marcellus Shale, ROP improved 61% and 39% and ...

In order to build a complete intelligent construction system and realize the efficient drilling of the rotary drilling rig, it is necessary to predict the ...

Halliburton has introduced its LOGIX automation and remote operations platform, designed to refine drilling performance. LOGIX assists with autonomous drilling, streamlines ...



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The LGM312N intelligent integrated arch anchor trolley adopts an engineering chassis and is equipped with a dual anchor system. The machine ...

Foreign hydraulically driven reverse well drilling rig, power head drive using electrohydraulic proportional PID control technology, control unit using PLC or engineering controller [6 - 9], ...

Once prepared, the plan would be exported to the rig as a machine-interpretable digital drilling plan that the DAS could digest. With the validation of rig personnel, the DAS ...

HOUSTON, August 17, 2021-- Schlumberger announced today the introduction of Autonomous Directional Drilling, which includes solutions to steer autonomously through any section of the ...

It achieves this by coupling the models with smart directional drilling tools and the rig automation control system. "This project demonstrated autonomous on ...

Intelligent drilling and completion implies using big data, AI, information engineering, control theory, and other advanced transformative technologies in the drilling and completion ...

Aiming at the problem of insufficient rock breaking capacity and complex and changeable drilling process, a small intelligent drilling rig control system is designed.

In this paper, we introduced in detail the development status of key engineering technologies in intelligent drilling, including the intelligent optimization of borehole trajectory and drilling speed, ...

Accurately predicting the drilling efficiency of rotary drilling is the key to achieving intelligent construction. The current types of principle analysis (based on traditional interactive ...

Real-Time Well Monitoring and Engineering Analysis of Drilling Activities: Intelligent Rig State Detection and Prediction With Uncertainty

R& D Technical Section Q& A: Drilling Automation--People, Process, and the Rise of Smart Rigs This article is the fourth in a Q& A series from the SPE Research and Development ...

Our comprehensive drilling automation portfolio consists of intelligent control systems, material handling technologies, and remote visualization solutions. These industry-leading products ...

This work shows results of the research carried out on the topic of drilling automation. Its objectives are to design and test proof of concept technologies conducted on a laboratory ...

The key factors restricting the research and development (R & D) and application of intelligent drilling



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technology and equipment are comprehensively analyzed: low level of drilling rig ...

Accurately predicting the drilling efficiency of rotary drilling is the key to achieving intelligent construction. The current types of principle analysis ...

The integration of downhole data with rig control systems is designed to optimize drilling efficiency and ROP, while automation reduces non-productive time and ...

Intelligent control of the drilling: Computer vision and Deep Neural Networks for image classification are used to control the drilling rig and ...

The exploration and development of resources and energy are fundamental to human survival and development, and geological drilling is a ...

This rig, equipped with the intelligent Rig Control System (RCS), is capable of performing drilling operations without operator intervention, ...

2024 Drilling Rigs & Automation Innovating While Drilling; November/December Engineering, simulator testing help to integrate ...

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