Multi-directional forging principle of rock drill

During this drilling campaign, live data were synthesized with other datasets and used to formulate and execute a new drilling strategy which led to the success of this well. This ...

Abstract The complex grain fragmentation mechanisms of coarse grains in titanium alloys under multi-directional forging (MDF) directly influence the optimization and control of primary hot ...

Combined with the characteristic parts of the adapter and the principle of the existing multi-directional die forging equipment, it is clear that the forging process can be ...

The principle of working of Multi-axial forging/multi directional forging is exhibited in Fig. 1. In the Multi directional forging (MDF) process, the material must withstand very high ...

Multi-directional forging (MDF), as a severe plastic deformation (SPD) method, is considered as an effective technology for manufacturing ...

Summary The principal drilling methods used in mines today are mechanical ones in which a drill drives cutting tools into rock by means of static or dynamic force. Percussion rock drills are the ...

A review on effect of multi-directional forging/multi-axial forging on mechanical and microstructural properties of aluminum alloy May 2021 Materials Today Proceedings 47 (9)

Secondly, the forming principle is different. In this paper, the sheet component with ribs is formed by multi-directional rotary forging, in which the conical upper tool performs multi ...

The multi-directional forging hydraulic press is a kind of equipment used for metal forging, which has multiple hydraulic power systems and can apply pressure to the workpiece in multiple ...

On the effect of non-isothermal annealing and multi-directional forging on the microstructural evolutions and correlated mechanical and ...

In this chapter, the mechanical and microstructural characteristics of multi axial/multi directional forged materials are reviewed with highlighting ...

Multidirectional forging is a manufacturing process that uses multi-directional pressure to plastically deform metal. Its purpose is to improve the mechanical properties of the ...

Multi-directional forging principle of rock drill

Technological advancements have affected every industry, and the oil and gas sector is no exception. Directional drilling is a game-changer for the oil and gas industry. Drilling ...

When drilling laminated rock, e.g., layers of shale and sandstone, compared with a homogeneous limestone. When drilling formations that have certain dip angle and hardness characteristics. ...

The adequate process of obtain-ing fine equiaxed grains in aluminum alloys is Multi-axial forging (MAF) or Multi-directional forging (MDF).

Multi-directional forging is an effective plastic deformation method for polycrystalline grain refinement, and the degree of refinement is closely related to the number of forging ...

Geotechnical investigation methods, such as directional core drilling, help determine physical properties of sub-surface soil and rock, but ...

Abstract Rock drilling is widely used in various types of rock engineering. Rock boring is often used in tunneling, underground mining, and nuclear waste depository. This ...

1. Multiple wells from a single location: Directional drilling also allows multiple production and injection wells to be drilled from a single ...

Qing-feng ZHU et al (12) investigated the effect of forging passes on the refinement of high purity aluminum during multi-directional forging. They focused their studies on the structure ...

Directional drilling is defined as the practice of controlling the direction and deviation of a wellbore to a predetermined underground target or location. This section ...

Chapter 2 Principles of drilling 2.1 Introduction Drill-bit seismic started when geophysicists working with conventional seismics experi- mented with the idea of measuring ...

Evolution of directional drilling since 1900 Directional drilling is the science of controlling or correcting a wellbore, along a predetermined trajectory, to one or more underground targets or ...

Because of the problem that conventional directional drilling rigs are large in volume and small inclination angle of openings, which cannot meet the drilling requirements of narrow tunnels in ...

This type of directional drilling is meant to create holes that go vertically into the earth while being able to hit solid rock all along the way. This method involves ...

2.1 Multi directional forging Conventional forging operations include setting and pulling of the work-piece

material by the application of load.

The principle of the forging process was presented in Fig. 1. At first, the samples were multi- directional forged for one cycle at certain temperature. A pass ...

The invention relates to a multi-directional forging process for an oil drill rod joint. The multi-directional forging process comprises the following steps of (1) cutting barstock; (2) heating the ...

The hydraulic rock drill is an efficient rock-breaking tool widely used in mining, tunnel excavation, and construction engineering. Powered by a hydraulic system, it achieves rock fragmentation ...

The workpiece and flat dies were heated to 1000 °C and 900 °C, respectively, and soaked for 60 min in the resistance furnace before multi-directional forging. The water-cooled ...

Abstract This study systematically investigated the influence of multi-directional forging (MDF) on the microstructural evolution, hot deformation behavior, and tensile ...

A review on effect of multi-directional forging/multi-axial forging on mechanical and microstructural properties of aluminum alloy May 2021 ...

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