

Drilling rig mast failure

What if a drill rig mast fails?

The collapsed drill rig mast (left) and the drill rig's failed pivot point (right) on the RHS tubing. Include, as part of the operator's pre-operational checks, a visual inspection of the mast pivot points, pivot shaft and supporting structure for any visual signs of cracking or component failure.

Why did a single pass over-burden drill rig collapse?

The operator was attempting to lower the mast on a single pass over-burden drill rig before tramping off the bench and up the access ramp. The operator had unlocked the mast locking pins and was lowering the mast when the lower pivot points on the mast failed, causing it to collapse.

Why did a blast hole drill rig collapse?

The mast on an open cut blast hole drill rig collapsed suddenly when the operator attempted to lower the mast before moving the drill rig off the drill bench. The operator was attempting to lower the mast on a single pass over-burden drill rig before tramping off the bench and up the access ramp.

What happened to a blast hole drill rig mast?

A blast hole drill rig mast was being lowered from the vertical to horizontal position. Its top end was about 1 metre from its horizontal resting position when a bearing block capping bolt failed. This caused more bolts to fail and the mast then fell close to its intended horizontal resting place, but causing considerable damage.

What happened when a drill lowered a mast?

The operator had unlocked the mast locking pins and was lowering the mast when the lower pivot points on the mast failed, causing it to collapse. The drill sustained substantial damage but there were no recorded injuries.

What happens when a hydraulic ram fails in a drill rig?

While raising the mast of a LM 1300 series exploration drill rig a catastrophic loss of oil pressure in the hydraulic ram occurred. The hydraulic ram is used to raise or lower the drill mast and this failure resulted in the rapid uncontrolled descent of the mast down into the support scaffolding frame of the drill rig.

A drilling rig that was used for exploration of gaseous fuels was inspected. During its operation the rig mast suddenly collapsed and the structure got twisted ...

Rotary drilling rigs are essential in construction projects, but like any heavy machinery, they can experience failures. Below are the five most common failures, along with ...

This standard operating procedure outlines the steps to safely lower the mast of a drilling rig. Key steps include: 1) Starting the hydraulic unit and testing controls. 2) Greasing the mast cylinders ...

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Alert 07 - 03 Mast Raising Line Failure Alert 07 - 03 Mast Raising Line Failure WHAT HAPPENED: During the rig move, the drilling rig mast was to be raised. It was initially ...

Piling rigs are designed and constructed so that they are sufficiently stable under the intended operating conditions, (e.g., tramming, parking, drilling, pile driving and extraction, slewing, and ...

The mast is a critical component of rotary drilling rigs, which has a cross-section consisting of a rectangular shape formed by two web plates and two flange plates. Structural ...

The rotary drilling rig is a large-scale engineering machine widely used in foundation construction for high-rise buildings, bridges, and ...

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The drilling rig is a critical machine in many industries. Discover the solution to increase the reliability and availability of the asset.

MAST RAISING LINE FAILURE During the rig move, the drilling rig mast was to be raised. It was initially lifted 30 cm (12 inches) from its horizontal position on the high derrick stand and ...

In some embodiments, the system, apparatus, and methods are configured to reduce such strain and wear and tear on the raising equipment and on prevent collapse of or damage to the ...

"Drilling Rigs" by the U.S. Bureau of Safety and Environmental Enforcement (BSEE): This webpage provides detailed information on drilling rigs and equipment, including different types ...

Fig. 1 Drilling rig mast structure during (a) in-service condition and Fig. 2 The middle portion of the mast structure is the region with (b) after collapse maximum damage

Abstract A drilling rig that was used for exploration of gaseous fuels was inspected. During its operation the rig mast suddenly collapsed and the structure got twisted from the middle. The ...

Case study on the failure of a drilling rig mast structure. Includes failure analysis, material characterization,

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Rig Mast broken or Crown pulled down is a rig accident while raising mast happened in china which result in disaster of mast collapse. Drilling rig derrick disaster was most probably due to ...

Pad Eye Failure - Free download as PDF File (.pdf), Text File (.txt) or read online for free. Three of the four lifting lug pad eyes failed at the welds located on the top of the mud tank. The skid ...

Able to handle the harsh challenges of high-volume horizontal drilling and move quickly, the Maverick fast-moving rig has a proven track record of enhancing ...

Accident Reconstruction visualization of drilling rig mast failure. Created at System Engineering And Laboratories, Tyler, Texas.

The rotary drilling rig is a large-scale engineering machine widely used in foundation construction for high-rise buildings, bridges, and infrastructure pile foundations. As a critical ...

After a short rig move, the mast of Rig was to be raised. After lifting 30 cm from its horizontal position (system under tension), the operations were stopped for 15 mins to fit the BOP beams ...

In order to express the inherent complex dynamic characteristics of mast mechanism of rotary drilling rig synthetically and improve the smooth-going property of key ...

Drilling rig mast maintenance can make or break your operation's safety record and bottom line. A single mast failure costs companies hundreds of thousands of dollars and ...

Abstract and Figures The pulley frame of a rotary drilling rig is located at the top of the mast and plays the role of changing the direction of wire rope movement.

Study of onshore oil and gas rig structure design, including derrick and mast structures, engineering calculations, and FEA. Covers design challenges and ...

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Drilling Equipment and Activity Related Safety Alerts Stop Plate fall from Wireline Mast Column Mud Hose Lifting Collar Insert Upper Wireline Sheave Fall to Rig Floor

The stability of a well service rig is impacted by multiple factors, which are interrelated. All of these factors must be addressed to maintain the hoisting capacity of the rig and its designed ...



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