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MATERIALS AND STRUCTURES SYMPOSIUM (C2)
Interactive Presentations (IP)

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DESIGN METHOD FOR DRILLING AND SAMPLING DEVICE WITH AXIAL HAMMERING PATTERN

Abstract

The dissertation focuses on the drilling and sampling process of superior plants and proposes a design scheme of axial hammering drilling and sampling device which is expected to achieve low power and high reliability. This device effectively combines force amplifying mechanism and ratchet wheel and ratchet bar mechanism, realizes the control of speed and force in drilling and sampling by real-time monitoring drag and amplifies force and reduces power dissipation by imparting output torque to drill pipe through force amplifying mechanism. The feasibility of the device has been verified through sample test. This scheme has a reference significance for the design of sampling device used in superior plants.