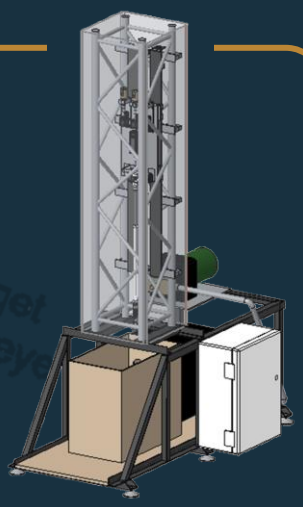
TODO

WORK PACKAGE

TITEL : Design and Manufacturing of BHA and Drill Pipe Stabilizers



WOPA.Nr: 0007 CONTEST YEAR: 2023/2024 ISSUED BY: C. SOILEMEZIDIS

University of Clausthal SPE Student Chapter

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Drillbotics® is a prestigious international university competition where teams from around the globe collaborate to design and develop an autonomous directional drilling rig. This challenge merges engineering expertise with innovation, aiming to revolutionize the drilling industry while promoting collaboration and hands-on experience.

OBJECTIVE

DEADLINE: 31st December 2023

To conceptualize, design, and oversee the manufacturing process of new BHA and drill pipe stabilizers.

OUTCOME

Upon completion, the rig will be fortified with newly designed and manufactured BHA and drill pipe stabilizers. The student will have developed expertise in material selection, CAD design using Creo, 3D printing applications, and oversight of the manufacturing process. Additionally, they will gain insight into the wear challenges associated with directional drilling.

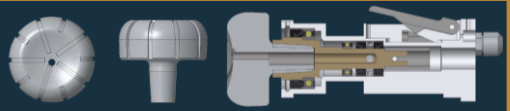
Student Work Packages

Students interested in hands-on experience and applying their academic knowledge are encouraged to take on these work packages. If you're keen to express interest, apply for a work package, or seek more details, please contact us. It's up to you to decide whether the task aligns with your skills and interests. If you lack experience in the highlighted fields (in BLUE), seize the opportunity to learn with us. Don't worry; the primary requirement is motivation. This journey is all about learning and growing.

DESCRIPTION

The task at hand revolves around the pivotal role of constructing new BHA and drill pipe stabilizers. The student's responsibilities kick off with selecting appropriate materials for the components. Utilizing Creo, the student will draft the design blueprints for the stabilizers. Once the design phase is concluded, the student will manage the manufacturing workflow. While the drill pipe stabilizers can benefit from 3D printing techniques, the BHA necessitates a metal-based material. A significant challenge to address during the project is the wear process the stabilizers undergo, especially in directional sections of the borehole.

CONTACT



drillbotics@tu-clausthal.de

Certificate of Completion for Work Packages

Upon successful and timely completion of the designated work package, and if the specified outcomes are met, a certificate will be issued to the individual responsible for the task. This certificate stands as an official recognition of the individual's diligence, skill, and commitment to the project.

Complexity grade

1.	20h	3.	60h	5.	100h
2.	40h	4.	80h	6.	>100h

Complexity grade

6
5
4
3
2
1

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