CENTRO DE COMPETÊNCIA EM MANUFATURA

PETROBRAS

EXOBOT – Mobile Robotic Force Amplification System

Motivation

The manipulation of huge structures in offshore environment is a challenge for enterprises in oil and gas sector. This usage is characterized by the need for precision assembly and autonomous system for energy generation.

Objective

To implement a force amplification system and adapt this hardware to control an industrial robot fixed above a mobile platform to handle large pipes.

Approach

This system were implemented and it was developed a supervisory system controlled by a human operator. The hardware responsible by the force amplification system will control an industrial robot KUKA KR 480 and will be integrated to a Bobcat®, allowing the system to be guided to several locations. It was also developed an end-effector capable of handling large pipes.

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