

ELECTROACTIVE POLYMER VIBRATION DAMPENER FOR DOWNHOLE DRILLING TOOLS

ABSTRACT

Systems and methods of the present disclosure relate to dampening downhole vibrations with an electroactive polymer (EAP). A downhole tool comprises a collar; an electronic control unit (ECU); a vibration sensor in communication with the ECU; a voltage source in communication with the ECU; and the EAP disposed along portions of the collar, the EAP in communication with the ECU, wherein the ECU is configured to apply voltage to the EAP based on signals received from the vibration sensor.

[Fig. 1]