TRIBOLOGICAL BEHAVIOUR OF COCRMO SAMPLES ADDITIVELY MANUFACTURED WITH ELECTRON BEAM MELTING PROCESS

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Abstract- Friction and wear are vital in determining the performance of implanted biomaterials, such as CoCrMo. This study investigated the tribological behaviour of CoCrMo samples additively manufactured using an electron beam melting process. The tribological behaviour of the CoCrMo samples was evaluated with a ball-on-disc microtribometer with an alumina counterball. The coefficients of friction of the samples were measured during tribological testing. The wear rates of the worn samples were determined through measuring the widths and depths of the wear tracks using laser surface profilometry.

Keywords- CoCrMo; Electron beam melting; Additive manufacturing; Friction; Wear