Design Theory for Screw Geometry in a Briquette Press

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This paper focuses on the structural design of screw tools in briquetting presses used for the production of solid, high quality, bio fuels. The primary objective is to analyse the screw tool geometry and determine a procedure for its design, specifically the theory involved with the pressing tool and force relations which are necessary for the verification of the proposed tool geometry and its strength analysis. In designing the main drive of the press, procedures for determining frictional performance of the screw press are used. Familiarity with the above mentioned procedures forms the basis for research into new tools in screw briquetting presses that will improve the service life and competitiveness of the technology.

Keywords: biomass, briquetting, tool, screw, screw profile

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