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Life-cycle-Assessment of Cast Stone Manufacturing: A Case Study

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Abstract

This research paper aims to perform a “cradle-to-gate” carbon dioxide emissions Life Cycle Assessment (LCA) on cast stone products, i.e. to quantify their accumulated CO₂ emissions from the extraction of raw materials to a complete finished product. The collected data is mapped using Energy Value Stream Mapping (EVSM) and Sankey diagrams. Areas of carbon footprint reduction are identified and transportation, packaging and mould-making recommendations are made. The study was undertaken at a manufacturing facility located in the UK and based on three types of materials.

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