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Physics of the artisanal mining of sandstones in a rural community

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Abstract content (Max 300 words) http://events.saip.org.za/getFile.py/?target=_blank Formatting & Special chars

Sandstone, a sedimentary rock containing either siliceous grains, or calcareous grains or ferruginous grains, is artisanal mined on the Drakensberg chain of mountains in the South African Free State province. Chisel and hammer are the main tools for the rock extraction while wheelbarrow is the usual transport means for the mined products. At a time, gravity is used to move bigger lumps from the up mountain to the bottom for an easier cutting before piece cutting or size reduction with a metallic circular steel saw run with the electricity from the grid at a static workshop. The position of the tip of the chisel, the impact force generating the required momentum of the chisel, and the grain size and mineralogical composition are elements used in this paper as it elaborates on the resulting often horizontal sliding or displacement of the aggregated bulk rock piece. This paper is a contribution to physics education as applied to earth materials.

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No

Level for award (Hons, MSc, PhD, N/A)?

N/A

Main supervisor (name and email) and his / her institution

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