THE EFFECT OF PARTICLE SIZE ON THE CHARACTERISTICS OF PELLETS PRODUCED FROM CALCINED KOTON KARFE IRON ORE

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ABSTRACT
In this work the effect of particle size fractions on the physical properties of pellets produced using calcined Koton Karfe iron ore using lime as binder was investigated. The calcined iron ore was sieved into particle size fractions ranging from -45µm to +355µm and used to produce pellets. After production, the pellets were subjected to the following tests: drop number, drop resistance, micro-porosity, moisture content, and green, dry and indurating compressive strengths. The results obtained showed that as the particle size fractions decreases all the physical properties values of the pellets increased with the pellets produced at -45µm particle size fraction having the highest values of the physical properties. On the basis of the results obtained it can be inferred that particle size fractions do have effect on the physical properties of pellets.