Design of Miniature Filters and Iron Ore Packer Conveyor Using PLC

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ABSTRACT

Iron is an essential metal that provides many benefits for life. Many methods are used to acquire iron ore. Industrial development at this time was growing very fast. In terms of speed of production time was needed to produce a quality product with a large number.

For this reason the need for industrial automation. One of them is the automation of conveyors and packing iron ore separator. This tool serves as a separator and packing of iron ore in the production process in the form of a miniature. Parts of the tool consists of a conveyor which serves as a transfer box packing iron ore, which serves as a magnetic roller separator sand with iron ore, 12 Volt DC motor for driving the conveyor, infrared sensor that functions as a box packer detection of iron ore as well as limit switch which serves as a detector of heavy iron ore to be transported by the conveyor.

The average success rate separation of sand and iron ore is 70% other material that can be seen from the ferrous iron into the sand box.

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