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Patent Search

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| Invention Title | PNEUMATIC SYSTEM FOR CRUSHING ONE OR MORE CANS AUTOMATICALLY |
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Abstract:

Embodiments herein provide apneumatic system (100) for crushing one or more cans automatically, that includes a hopper (101) for receiving and storing the one or more cans crushing bed (102) for crushing the one or more cans, and a control unit (103). The control unit (103) is configured to (i) automatically generatea first signal using a sensing unit (202) when the crushing bed (102) receives the one or more cans, (ii) activatethe solenoid valve (203) usingarelay (403) when the sensing unit (202)generates the first signal, (iii) automatically actuate a single-acting cylinder (204) to crush the one or more cans when the solenoid valve (203) is energized and (iv) collect one or more crushed cans using a collector tray (404). FIG. 1

Complete Specification

Description:BACKGROUND

Technical Field

[0001] Embodiments of this disclosure generally relate to crushing of cans, and more particularly, to a pneumatic system for crushing one or more cans automaticallywith less manual efforts and processing time.

Description of the Related Art

[0002] Metal cans are mostly used to store beverages, food items and other chemical products and sell in the market since metal cans are most suited for the purpose. Also, the consumption of these kinds of beverages, food items, and other chemical products in metal cans especially aluminum cans are more.

[0003] The present usage of aluminum cans is about 180 billion every year. The energy consumption for producing aluminum cans is more. About 2 % of the total world's energy use is spent on producing aluminum. Hence it is mandated to recyle the aluminum cans and take part in reducing energy consumption and dumping it on land as waste. The recycling of aluminum process helps in protecting the environment. The used cans are to be collected and transported to the recycling plants for recycling processes. Transporting the cans with same dimensions and size may increase the space, and also the cans are empty. Crushing the cans before transportation will drastically reducethe transportation costs. Crushing is a process of pressing the cans with a required amount of torque or pressure to reduce their shape. In earlier days, the crushing has been done manually which takes more time, non-uniform and incomplete crushing.

[0004] Nowadays, there are lot of machineries and devices that crushes the cans. But, most of the existing crushing equipments use a greater number of components and lacks in coordination among the components, which requires more manual interventions and provide lesser productivity. Another existing crushing device includes a

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