variables/V-color

Solutions | Magnetic Tool |Bin Picking of Brake Discs and Drums

Robot bin picking has is increasingly used in industrial environments. Those heavy work tasks, done by robot, guarantee continuous operation at the strategic beginning of an industrial manufacturing line. When the parts to pick are made of ferromagnetic material, magnet grippers are the key technology.

Electromagnetic solutions could offer high workloads. But those units are not designed to operate in a high duty cycle environment, when continuously activated and deactivated, the winding of the electromagnet starts to heat and deteriorate. This after several month operations resulted in higher current consumptions and burned cables.

Our pneumatically switchable magnets line offers the same power while mitigating maintenance problems due to electrical failures. It also guarantees safer operation and reduction of installation and operating costs (less maintenance, no air needed once actuated).

Key Features

- High power/contact ratio
- High duty cycle to support production flow needs
- Pneumatically actuated, no need for energy during the handling operation
- Custom poles shape (pole shoes) to better fit to the target

PES Support Outcomes

- Tool dimensioning and selection, EOAT improvements
- Engineering support during test, production validation and production follow-up phases
- Pole shoes (armor) design and integration follow-up and validation

Solutions | Magnetic Tool |Bin Picking of Brake Discs and Drums

Advantages

- Replacing costy and energy-consuming electrical installation
- Fail safe
- Handle multiple part models

Benefits

- Reduced maintenance
- Longer life time of tools with properly designed armor pole shoes
- Unique magnetic gripper reference reducing invetory management efforts

Facts & Figures

- Magnet field actuation time is measured in milliseconds
- Lifetime can reach **9 million of operation cycles** depending on gripping conditions on higher payload units
- **Customer plant example : ~15 cells equipped, thousands of compiled operation hours**