

HIGH TORQUE MOTOR FOR OIL PALM ELECTRICAL CUTTER APPLICATION

TECHNOLOGY DESCRIPTION

This technology is a new electrical motor with high torque density for electrical cutter application. It has specially designed structure based on parallel magnetic circuit topology with good ratio of torque to volume compared to conventional permanent magnet motor.

TECHNOLOGY FEATURES

This technology consists of two parts which are the stator and the rotor. The stator is composed of coil and stator yoke for stator winding availability. The rotor structure is formed by permanent magnet, rotor core and a shaft, making it suitable to be used as cutter, crusher, driller, dryer & fan and as a pump & compressor. The permanent magnet structure produces high torque as compares to brushless DC permanent magnet motor in the market.

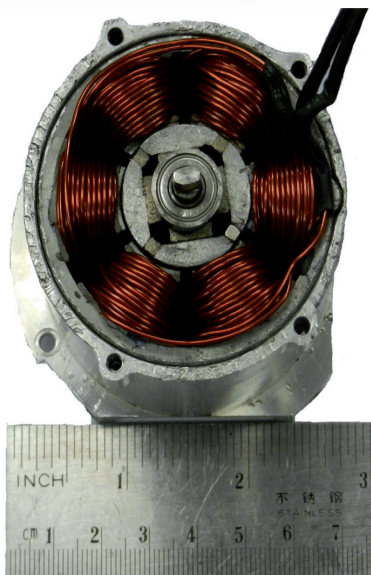
ADVANTAGES

- High efficiency as electrical cutter
- Compact size and easy fabrication
- High torque density

INDUSTRY OVERVIEW

Prospects: MPOB, FELDA

As of 2012, the total planted area of palm oil in Malaysia was 5.1 million hectares and the plantations make up 77% of agricultural land. As the largest producer of palm oil, Felda manages more than 450,000 hectares of plantation estates in Malaysia as well as in Indonesia. In Malaysia, two-thirds of the plantation areas are located in Pahang, Peninsular Malaysia and Sabah. In the private sector, however, there are presently 41 plantation companies listed in Bursa Malaysia and Sime Darby is currently the world's largest listed plantation player by planted area. While the palm oil industry is still very much dependent on manual labor to carry out most of the operations, particularly in harvesting, the industry is constantly searching for new machines to increase outputs and to cut production costs. On a macro perspective, global agricultural machinery market is expected to grow at a CAGR of 7.97% over the period 2013-2018. It is expected that demand for agricultural machinery is driven by farm income and crop production projections for the next season and can vary highly year to year.



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