URN etd-0407109-183716-1288
Author Chan-Wei Chang
Author's Email Address No Public.
Statistics This thesis had been viewed 58 times. Download 0 times.
Department
Year 2007
Semester 1
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title A Study on Feasible Strategies for Energy Recycling Burn-In Test
Date of Defense 0000-00-00
Page Count 0
Keyword
Energy Recycling
Converter
Inverter
High Frequency Isolating

Abstract
This thesis proposed some feasible strategies for energy recycling burn-in test applications. The proposed structures include the two single-phase PFC units type, the three legs full-bridge type and the high frequency isolating type. All of these types are able to recycling the test power and reduces the production cost.
Except for the high frequency isolating type, the proposed architecture for the three phase energy recycling unit consists of two power stages, including the AC/DC converter stage and the DC/AC inverter stage. The AC/DC converter is inserted between the test unit and inverter stage. It is used to regulate the dc bus voltage and the input side power factor. The inverter stage is used to simulate and recycling the test power. In addition, a low frequency based transformer needs to isolate the tested equipment and the proposed energy recycling unit.The difference between the high frequency isolating type with the others is used to replace the low frequency transformer by high frequency based dc/dc converter.
To implement the proposed idea, a simple control algorithm and system design is presented in this dissertation. Case study for an AC motor driver is demonstrated by means of prototype experiment to prove its performance and effectivenes.
Advisory Committee Tsai,Ming-Tsung - advisor

Files No Any Full Text File.
Date of Submission 2008-08-01