

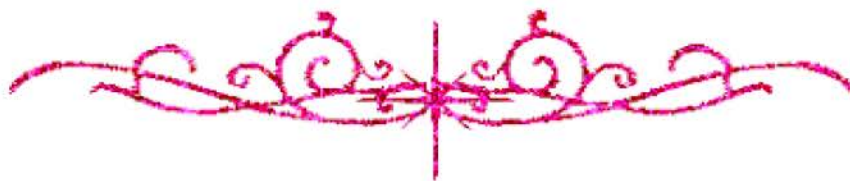
بسم الله الرحمن الرحيم





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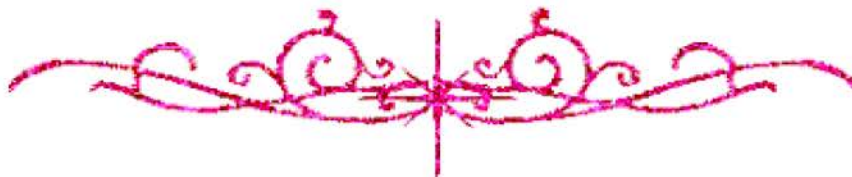
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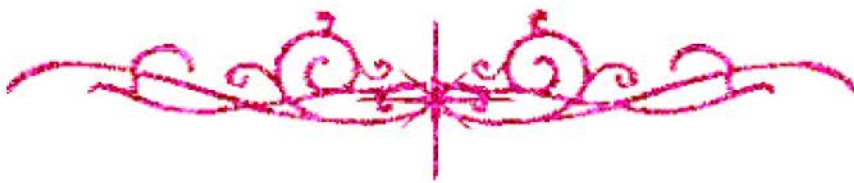
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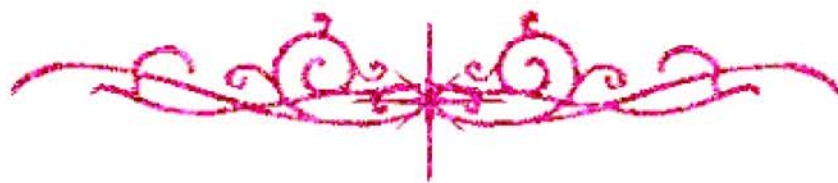


بعض الوثائق الأصلية تالفة





بالرسالة صفحات
لم ترد بالأصل





Cairo University

PERFORMANCE ANALYSIS OF EDDY CURRENT SHOCK ABSORBERS

By

Ahmed Ali Ahmed Abdallah

A Thesis Submitted to the
Faculty of Engineering at Cairo University
In Partial Fulfillment of the
Requirement of the Degree of
MASTER OF SCIENCE

in

ELECTRICAL POWER AND MACHINES ENGINEERING

Faculty of Engineering, Cairo University
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Title of Thesis: “Performance Analysis of Eddy Current Shock Absorbers”

Keywords: shock absorber - eddy current- electromagnetic damping.

Summary:

The main target of this thesis is to reach the optimum design of the proposed damper which results in the best damping effect after adding to the traditional suspension system. To achieve this target, the model was solved many times at different design cases. First the Effects of adding an aluminum sleeve to the actuator is studied in chapter four. The relation between the sleeve thickness and the damping force is examined. Second the damper was studied from another point of view in chapter five, by changing its configuration. Removing the aluminum sleeve, lower number of magnets and two opposite magnets groups are the studied design cases. The steady state performance of the damper at each design case was discussed. It was found that there is an optimum design case at which the best damping performance is obtained.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

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Date: 10/7/2019

Signature:

Acknowledgments

At first, I would like to thank Allah the entirely gracious, the Especially Merciful, who gave me the ability and subjected all the reasons for me to finish this work.

I would like to present my deep gratitude for my supervisor **Prof. Dr. Amr Amin Adly**. His continuous support and encouragement motivated me all the time. Thanks to his guidance I have passed many challenges in this research. I do not consider him my supervisor only but he is my role model.

I would like to express my sincere thanks and deep gratitude to my supervisor **Dr. Tamer Mamdouh Abdo** for his help and support during all the stages of this work, his assistance and encouragement push me forward all the time. I would like also to thank **Dr. Ahmed Aly Huzayyin** for his faithful supervision. His constructive comments and great opinions added a lot for the thesis.

Last but not least, I would like to express all of my sincere thanks to my parents for helping me a lot during this work. They have been encouraging all of my decisions. I couldn't reach all of this without their love and guidance.

Finally I would like to deploy my heartiest gratitude and sincere thanks to my beloved wife. I really appreciate all her big sacrifices and her sincere support over the past three years. Her encouragement and belief in me push me forward all the time.

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