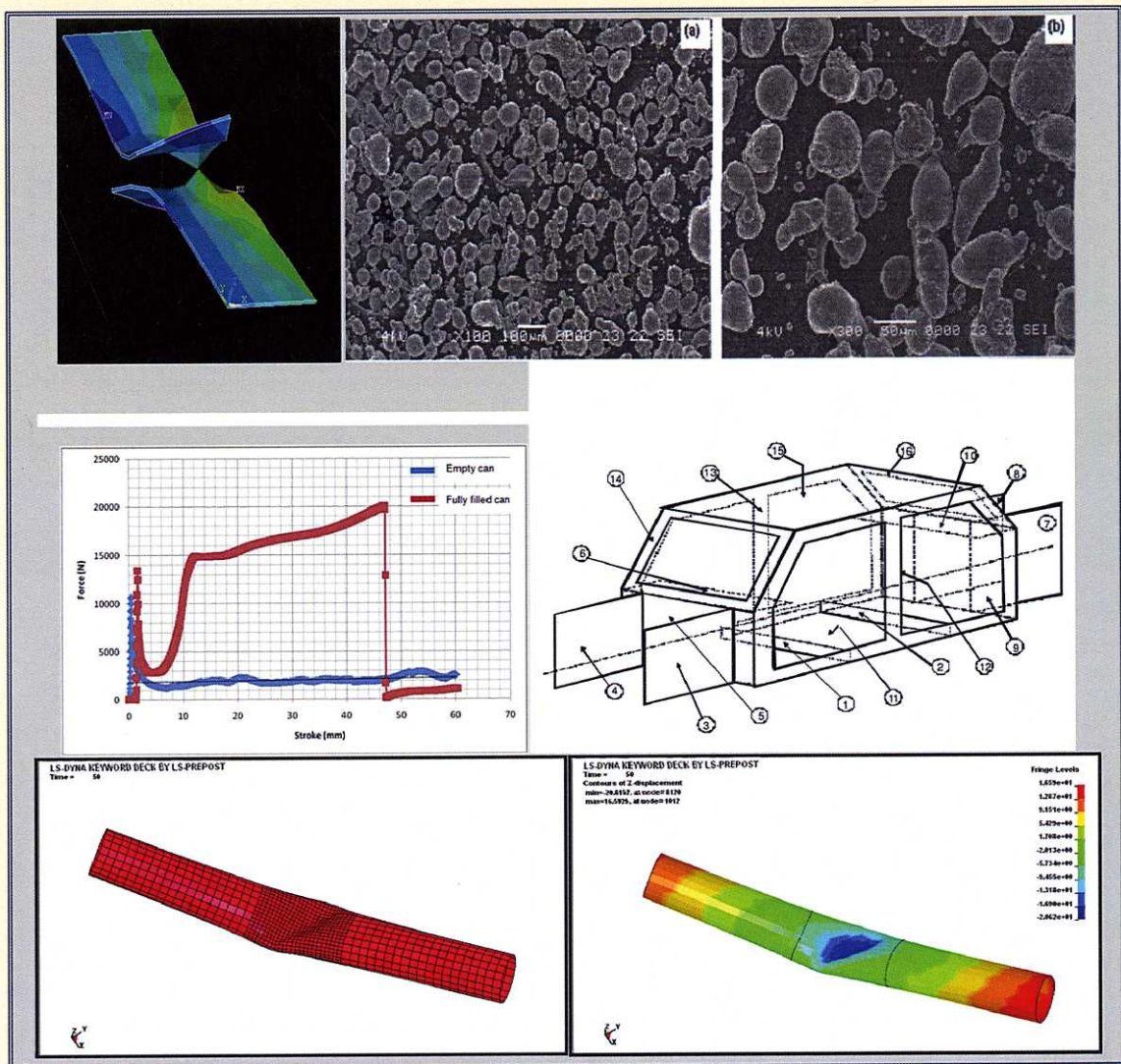


ADVANCED TOPICS IN MECHANICAL BEHAVIOR OF MATERIALS



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Meftah Hrairi



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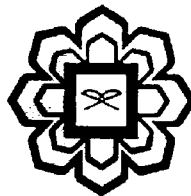
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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DESIGN AND DEVELOPMENT OF DRIVING SYSTEM FOR DISABLED DRIVER

Kassim A. Abdullah, J. S. Mohamed Ali, Mohd Azlan bin Habeeb Rahmathullah, Ruzael Amir Afendi b.

Kaharuddin

1. INTRODUCTION

Having a specialized car for the disabled is a relatively new concept in Malaysia. Previously, disabled people in Malaysia had to import the system to be installed in their cars, where the cost of importing and installation is a big issue. Moreover, most control device used by physically handicapped drivers, especially people without lower limbs, are difficult to install and must be carefully adjusted to provide satisfactory performance.

The main objective of the present study is to develop a new system in a way to modify the existing conventional car so that a disabled person without lower limbs can drive safely and properly. However, realizing that there exist a few alternatives for the disabled people in the present day, this project aims:

- 1) To design hand operated brake and throttle systems with a proper feel mechanisms
- 2) To modify the steering system adaptable for disabled driver.
- 3) To build a model of the system to demonstrate the feasibility of the idea.

2. METHOD

Modifications were done on the steering geometry in order to allow the disabled driver to operate the steering wheel, brake and accelerator by using hands. Based on that, the design of the steering system came up with attachment of a grip handle on the steering in the form of a knob. By this way, the driver can use one hand to operate the steering wheel. This will ensure comfortable driving and better grip.