

Design of a Mobile Snack Bar on Light Commercial Vehicle



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Abstract:

The fast food sector or snacks sector is growing rapidly because of changing life style of urban people. More and more business opportunities took place because of globalization. People are engaged in career life, this scenario helps the food industry to grow. All consumers prefer hygienic and clean food at affordable price. The rentals and other overhead costs will be high and consequently the price of snacks and food items will increase. The concept of mobile snack bar on wheels is derived from self service restaurants and snack bar requirements.

This project explains about designing of mobile snack bar on a light commercial vehicle, considering functionality, ease handling, good ergonomics and aesthetics. Research methods involved literature survey and market study, through questionnaire, images and video observations. Ethnography studies were carried out to understand various issues. The design started with the analysis of data collected, Quality Functional Deployment and Product Design Specification were developed. Based on the QFD and PDS three concepts were generated.

Among these three concepts, one was selected as the feasible solution to the identified problem through weighted ranking method. In the final concept sliding kind of door design used to consume less space, pump is provided for water, detachable basin provided for customers and it connected to the drain tank. Racks other equipment are anchored by metallic strips to prevent the falling when vehicle is moving. Further digital modeling of the design was developed using software like Pro Engineer and Alias. A 1:10 mock up model of the final concept was prepared to validate the design. Design validation was carried out with user group and feedback obtained was positive and satisfactory.



Concepts-1

Concepts-2

Concepts-3

Mock up Model

Various concepts of mobile snack bar