Improvement of Passive Safety of Two-Wheels Commuting Vehicles - Based on Industrial Design Solutions

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ABSTRACT
This research aims to find an improvement of passive safety for scooter drivers in Taiwan. The number of motorcycles is growing fast over here, and so does the numbers of safety problems. It is worthy to look for a possible solution on this field, especially focusing on Ordinary Heavy-Duty Motorcyclists. This thesis indicates active safety and passive safety. In the moment, 'active safety' applied on vehicles is difficult to match market requests, because it will rise the costs for motorcycling essentially. So we concentrated on passive safety for both, vehicles and also driver's gear. This research uses questionnaires to analyze the acceptance of a big number of Taiwan motorcycle users, there it shows that users have low acceptance for existing protective products, especially for changes on the vehicles, because of high costs and inconvenience in usage. So for us it turned out more meaningful to focus our design improvements on the driver's body. During the design improvement part, the author chose professional specialists from Taiwan's motorcycle market as interviewees. We used an in-depth interview method and compared existing products with prepared ideas for improvement, collecting opinions and suggestions. Finally, the professionals came to a positive conclusion on the offered design work. According to their general impression, the design improvement shows possibilities for a safety enhancement.

Keywords: passive safety, traffic accident, Ordinary Heavy-Duty Motorcycle, design improvement

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