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Analisis ergonomi desain sepeda motor bebek terhadap pengendara wanita dengan metode posture evalution index (PEI) dalam virtual environment = Analysis of motorcycle design toward female rider based on pPosture Evaluation Index (PEI) approached in virtual environment

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Abstrak

Penelitian ini mengkaji aspek ergonomi sepeda motor bebek dalam virtual environment. Analisis dalam penelitian ini dilakukan dengan menggunakan software Jack 6.1 dengan pendekatan Posture Evaluation Index (PEI) yang mengintegrasikan hasil analisis tiga buah metode, yaitu Lower Back Analysis (LBA), Ovako Working Analysis (OWAS), dan Rapid Upper Limb Assessment (RULA). Tujuan dari penelitian ini adalah mengevaluasi desain aktual sepeda motor dan mencari konfigurasi redesain paling ergonomis ditinjau dari tinggi stang dan jarak jok-stang. Hasil penelitian menunjukkan bahwa desain sepeda motor bebek yang paling ergonomis bagi pengendara wanita adalah desain yang memiliki tinggi stang 16cm dan jarak jok - stang sebesar 20cm yang memiliki nilai PEI terendah yaitu 1,45.

.....This research tried to study ergonomic aspect of motorcycle in virtual environment. This research were conducted by using Jack software 6.1 with Posture Evaluation Index (PEI) approach which can integrated the results of three methods: Lower Back Analysis (LBA), Ovako Working Analysis (OWAS) and Rapid Upper Limb Assessment (RULA). The objectives are evaluating existing motorcycle design and determining the most ergonomic redesign that concern at handlebar height and distance between motorcycle' seat and handlebar. The result showed that the most ergonomic design of motorcycle for female rider is motorcycle that has 16cm handlebar height and 20cm distance between motorcycle' seat and handlebar, which have 1,45 of PEI score.