Analisis ergonomi desain sepeda motor tipe CUB terhadap pengendara pria dengan metode posture evaluation index (PEI) dalam virtual environment = Ergonomic analysis of cub motorcycle toward male riderwith posture evaluation index within virtual environment

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Abstrak

Penelitian ini mengkaji aspek ergonomis sepeda motor tipe cub dalam lingkungan virtual. Pengambilan data gerakan dilakukan dengan Vicon System dan dianalisis menggunakan software Jack 6.2.1. Pendekatan yang digunakan adalah Posture Evaluation Index (PEI) yang mengintegrasikan analisis dari tiga metode: Low Back Analysis, Ovako Working Posture Analysis, dan Rapid Upper Limb Assessment. Tujuannya adalah mengevaluasi desain aktual sepeda motor dan menentukan konfigurasi paling ergonomis ditinjau dari posisi duduk dan footstep. Dihasilkan 9 buah konfigurasi yang akan dianalisis. Hasil penelitian menyarankan rancangan konfigurasi dengan perubahan posisi footstep lebih maju 13 cm dan posisi duduk lebih mundur 15 cm dari desain aktual karena memiliki nilai PEI terendah.

.....This research study the ergonomic aspect from cub motorcycle in virtual environment. Vicon System was used to capture motion and Jack 6.2.1 was used to analyzed it. Posture Evaluation Index was an approach that integrated the results of these tree methods: Low Back Analysis, Ovako Working Analysis System, and Rapud Upper Limb Analysis. The objective is to evaluate existing motorcycle design and determine the most ergonomic configurations that concern at seating and footstep position. There are 9 configurations that will be analyzed. The results suggest that the most ergonomic design is with change the footstep position 13 cm onward and seating position 15 cm backward from its actual design because of the lowest PEI score was gained.