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NOVEL TECHNIQUES TO ANALYSE THE COMFORT OF CAR SEAT

The comfort performance of car seat is important factor while producing car seats, each layer of the car seat is tested separately on classical testing machines, which lacks the real car seat performance when all layers are sandwiched. The complication of car seat design and the testing method bring a great demand of portable device which can measure the comfort performance of the real car seat. In this research a novel portable device is designed which work with special heat flux sensor and the device is connected to computer by USB port and values of heat flux temperature of the water and temperature of the surface is provided by the software. Heat flux sensors measure the heat transfer through a surface, and are expressed in kw/m2. The software controls the heating plate adjustment using PID controller. The device is tested with real car seat and shows repeatable and reproducible results.

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