

Title (en)

AUTOMATIC VELOCITY CONTROL RUNNING MACHINE USING PRESSURE SENSOR ARRAY AND FUZZY-LOGIC

Title (de)

LAUFBAND MIT AUTOMATISCHER GESCHWINDIGKEITSSTEUERUNG UNTER EINSATZ EINES DRUCKSENSOR-ARRAYS UND FUZZY LOGIC

Title (fr)

MACHINE DE COURSE À COMMANDE DE VITESSE AUTOMATIQUE UTILISANT UN RÉSEAU DE CAPTEURS DE PRESSION ET UNE LOGIQUE FLOUE

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Application

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Abstract (en)

[origin: WO2008007856A1] The present invention relates to an automatic speed-controlled treadmill using a pressure sensor array and a method of operating the same. The automatic speed-controlled treadmill includes a walking belt, a pressure sensor array including pressure sensors for detecting loads of the exerciser's feet and outputting the detected loads of the feet as load detection signals, a pace speed status storage unit for storing a pace speed and variation in pace speed of the exerciser, and a control unit provided with an algorithm for calculating a pace speed of the exerciser using the load detection signals, calculating a difference between a previous pace speed and a current pace speed as the variation in pace speed, calculating the exercise center of the exerciser, and proportionally accelerating/decelerating a driving speed of the walking belt in consideration of the variation in pace speed and the exercise center.

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