KINEMATICS ANALYSES OF SPORTS WALKING ON TREADMILL
AT DIFFERENT BELT INCLINATIONS

Abstract

Objective of this research represents detailed reveal of sports walking technique, demonstrated on treadmill at different angles of belt inclination, on the part of subject who overwhelmed the walking technique through the course on Faculty of sports and physical education in Niš and isn't actively involved in training process, as well as subject who overwhelmed the walking technique through the long standing training process, still is actively engaged in this athletic discipline and at this moment is a member of athletic team of Serbia. Problem of research represents possible impact of belt inclination, on values of analyzed kinematics variables (velocity and acceleration). Main aims of this research were to establish, if there exist statistically important differences in values of kinematics variables, upon occasion of different angles of belt inclination and to establish, if different angles of belt inclination have statistically important influence on values of analyzed kinematics variables. At this research, technique of competitive sports walking was recorded by using digital video camera „SAMSUNG VP-D371", and video was mistreated by using software "HUMAN", for kinematics 2D video analyses. Based on results of t test, the conclusion is that statistically important differences in values of kinematics variables, at subjects, upon occasion of different angles of belt inclination, don't exist, and that statistically important influence of belt inclination on values of analyzed kinematics variables doesn't exist. The importance of research lays in capability of clear and strict interpretation of derived data, which will point out on differences in levels of mastered technique, which is the base in achieving top results.

Key words: *sports walking, kinematics, inclination, differences, influence.*