

Abstract

Title of the thesis: Current concepts of double poling by classic technique in cross-country skiing

Object of the thesis: The spatial-temporal analysis of node points and kinetic phases of the kick double poling and double poling of selected competitors at the FIS Nordic World Ski Championships in Liberec 2009.

Method: A case study in which we used the kinematographic method for the analysis of the kick double poling and double poling of selected competitors. We analyzed the video of the 15-km classic in the FIS Nordic World Ski Championships in Liberec 2009. For the analysis we used the software APAS.

Results: We performed spatial-temporal description of node points and kinetic phases of the kick double poling and double poling of selected competitors. We characterized current concepts of kick double poling technique, because selected competitors were relatively homogeneous set. By double poling we found out flexion-extension pattern in elbow, hip joints of slipping lower limb and partly in knee and ankle joints of slipping lower limb which results in generation of great propulsive force. Double poling becomes more significant driving element than push-off.

Keywords: cross-country skiing, kick double poling, double poling, kinematic analysis, top competitors