Kinematical Analysis of Starting Phase in 500m Short Track Speed Skating

Sung-Hyu, Shin(SungKyunKwan Univ.)
Jin-Ho, Back(SungKyunKwan Univ.)

The purpose of this study is to explain the kinematical characteristics of starting techniques in 500m short track speed skating. 3Dimensional video techniques were used to capture the movement of starting phase of 4 female short track speed skater who place in the world class. Based on the result of this study, the following conclusion were drawn.

1. The better the record of starting phase is the faster take off time of first foot.
2. The better the record of starting phase is the shorter average of contact time on ice surface
3. For 0.4 second after starting, the horizontal displacement of C.O.G. has increased rapidly.
4. The better the record of starting phase is the lower ready position.
5. The velocity of skate blade accelerates in the propulsive motion, decelerates in the recovery motion and finally shows the lowest velocity during contact of ice surface.
6. The better the record of starting, phase is the higher step rate.

**Key words**: short track speed skating, kinematic analysis starting phase, ready position, propulsive motion