

STROKE PARAMETERS ANALYSIS OF DIFFERENT LEVELS SWIMMERS

Ku-Chen Huang¹, Meng-Shiuan Pan²

Abstract

The aim of this paper is to present a comparison of the stroke parameters of different abilities swimmers by inertial sensory data. There are nine male college students to participate in the research, and according to the swimming performance divided into elite, well-trained and recreational. We fixed the inertial sensor on the hands and back of the participants to capture the sensory data in the swimmers. Results: A) There are no significant differences in the stroke frequency between different levels

of swimmers. B) Elite swimmers have a higher per stroke length than the other groups. C) Elite swimmers have higher average speed than other groups. D) Three groups of swimmers have significant differences in body rotation, pitch and yaw, recreational group have greater body rotation angle than elite group and well-trained group.

Key words: Stroke Parameters, Stroke Analysis, Sensor Technology.

(Received 26/9/2017, Reviewed 18/10/2017, Accepted 28/11/2017)

THE ANALYSIS OF PITCHING STRATEGY FOR THE JAPANESE TEAM PITCHER OTANISHOHEI VERSUS KOREAN TEAM DURING THE FIRST WBSC PREMIER 12 IN 2015

Jong Yeu Jeng¹

Abstract

The purpose of this study is to analyze the first WBSC Premier 12 in 2015 by using videotape system observation Japan team pitcher OtaniShohei finally on the South Korean baseball team with the pitching strategy analysis, to explore the Japanese team starting pitcher OtaniShohei pitching mode in the speed difference, the location of the ball road, different ball under the ball and with the pitching strategy ratio, for domestic baseball pitcher with the ball reference. The results of the analysis are as follows: (1) In terms of ball speed, the Japanese pitcher OtaniShohei has an average fast ball speed of 153 km / hr, an average slider ball speed of 145 km / hr, an average forkball of 143 km / hr, the maximum speed difference of 26 km /

hr, from the first to the seventh in the ball speed curve, showing the average speed of nine innings are close to 145 km / hr, no significant downward trend. (B) By the pitching position map found, OtaniShohei outside the ball straight as the main; followed by the outer Slider ball. (C) Analysis of the ball pattern found, OtaniShohei cross-ball mode accounted for 45%. (D) In different velocity under the pitcher with the pitching strategy found, OtaniShohei outer slider ball as the main ball, forkball is the winning ball.

Key words: Pitcher, Baseball, Pitching Strategy.

(Received 2/10/2017, Reviewed 24/10/2017, Accepted 28/11/2017)

1. Office of Physical Education, Tamkang University, New Taipei City, Taiwan

2. Department of Computer Science and Information Engineering, Tamkang University

3. National Chiayi University