

## **Evaluation of Easiness to Hold a Strap in an Instant**

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The purpose of this study is to obtain the knowledge about the easiness to hold a strap in an instant depending on the strap parameters (height, shape and direction). We conducted the experiment on easiness of holding a strap to 99 subjects by using a train simulator. The content of the experiment is such that the subject holds a strap as soon as the subject hears the beep sound. The height parameters are 1500mm, 1600mm, 1700mm and 1800mm above the floor; the shape parameters, circle and triangle; and the direction parameters, facing front and facing sideways. The facing front means that the subject can see the hole of the ring strap when he stands in front of the strap. As a result, it has been found out that the “circle shape” has a better performance than the “triangle shape”, and the “facing front direction” has a better performance than the “facing sideways direction”. It has been also found out that it is not easy to hold the strap of the “1800mm height” in an instant for any shape and direction, that it takes a longer time to hold the strap of the “1800mm height” than that of any other height (1500mm, 1600mm, 1700mm), and that it is easy to hold the “circle-facing front” strap of the height other than the “1800mm height”.