100 (per cent of E_{neg}) decreased with the increasing height. For this reason, the sudden downward pressure developed at landing might be so great that subjects could not jump in their maximal efforts.

It is suggested that elastic energy is stored effectively at the height of 0.20m.

B12 Research of Peripheral Vision by Driving Simulatar

Akihiro NISHIYAMA[1] and Kouichi NOSE[2]
1) *Depertment of Physiological Anthropology, kyushu University of Design Sciences*
2) *Shin Meiwa Kougyou, Ltd*

The purpose of this study is investigation how man have information correctly in autombile driving. Subjects were eleven male students and optically corrected (refracted). The experiment method was discrimination reaction using character indicated by dividing monitor of sumilator into twenty-one pieces (the vertical-three pieces × the horizonal-seven pieces). Four time experiments were practiced by variation of speed (80km/h and 120km/h) and doing discrimination reaction or not. Results showed that a no significant effect on the nunber and time of course out associated with variation of speed and doing discrdmdnation reaction or not, but a significant difference were observed for the number of oversight associated with difference of position indicated character and variation of speed. As degree from driver's eyes increase, the recognition decrease. And increase of speed contribute to narrow of vision. Current automobile fix right fender mirror and 16 degrees from the eyes. The future study will be important to think about effect of driving when driver's eyes separate from foward.

B14 On The Mechanism of Physiological Tremor in Fingers and Its Application to Evaluation of Finger's Function

Li ZHOU, Kazuyoshi SAKAMOTO, Naoaki ITAKURA, Satoshi HANABA
Department of Communications and Systems, The University of Electro-Communications

Physiological tremor, which is the invisible mechanical vibration of body parts like hands and fingers, was measured for the five fingers. In order to elucidate the mechaninm of tremore's generation, three experiments were performed: That is, (a) the physiological tremor by holding up the tip of finger, (b) physiological tremor by dipping the finger into water the finger is in a state of pseudo-non-gravity, and (c) physiological tremor by tapping were measured.

It was obtained that the power spectrum had two peaks around 10 and 25Hz on the average for each of the five fingers in the horizontal position of finger. The total power, which was the sum of power spectra ranging from 1.5 to 50Hz, was defined as an evaluation index, and it showed characteristic results for the five fingersz.

The holding up of finger in experiment (a) showed that the values of the power spectra at two peaks increased. The result shows the activation of two loops for the generation, where the two loops are the muscle-spine loop as short loop and the loop includng the central nervous system as long loop. The experiment (b) in pseudo-non-gravity showed that the power spectrum for higher frequencies decreased. The result denotes that the muscle-spine loop is deactivated due to decrease of gravity. It was found that the higher frequency band generated from muscle-spine loop, and the lower one corresponded to the loop including the central nervous system. The mechanism for the change of the power spectrum was well explained by the two-loop theory. The muscular load produced by tapping work was responsible mainly for the increase of total power.

B15 Functional Design of Rehabilitation Apparatus for Contracture of Articurations of Ankle

Kaname SHIBATO, Kazuaki KAWAKITA, Kazuki TAKENOUCHI
Functional Engineering, Kyushu Institute of Design