

Investigation of Aesthetic tension in automotive side-view curves based on

薛博仁、楊旻洲

E-mail: 9806812@mail.dyu.edu.tw

ABSTRACT

Car exterior form is composed by various kinds of curves and surfaces. Consequently, various images can be produced. Among many adjectives for describing images, “ tension ” has been long used by designers for special attribute of automotive forms. This research aims to investigate geometric properties of curves with tension in automotive side-view. The research consists of subjects ' evaluation and curvature analysis of tension curves. Side profile of hood, upper contour of door frame, lower-front contour of front door, and lower-rear contour of rear door of eighteen passenger cars were highlighted and shown to subjects for evaluating the strength of curves ' tension. Curvatures of curves were analyzed using Rhinoceros. By comparing curvatures of curves with higher tension and lower tension it shows that curvature may provide as a good geometric indicator for understanding tension curves.

Keywords : Car, Tension, Curve, Curvature

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