



学校における品質工学の集中講義と その成績評価 (1)

— SN比の教授方法 —

*Short Course Lecture in Quality Engineering at University
and Assessment of Student Academic Grades (1)
— Teaching Method for S/N Ratio —*

上原 一剛*¹
Kazutake Uehara

小幡 文雄*²
Fumio Obata

矢野 宏*³
Hiroshi Yano

Promoting the education of quality engineering at the university, the teaching method for the S/N ratio using a familiar material easy to understand for students has been proposed. The material is a card made of several sheets of paper with different surface condition and appearance, and is scoring depending on the smoothness of the surface with the fingertips. A lecture of quality engineering using the proposed material for the students of the faculty of engineering was conducted, and its effect was examined qualitatively. In order to give the students to understand how to express the S/N ratio by measuring the variation, we made the students to be compared with the S/N ratio of other students. As the results of the experiments using the materials proposed, it was cleared that S/N ratio calculated in these experiments was included not only the variation of the senses but also variations of the method for quantifying the sense. Increasing the level of work proficiency by repeating the scoring tasks, the variation of the S/N ratio was reduced. In addition, the effect of education using this materials was examined qualitatively from the results of the questionnaire conducted after the lecture. As a result, many students made remarks that they were able to understand the importance of quality engineering. Experiments by scoring the smoothness of the paper led to the improvement of the motivation for the study of quality engineering.

Key words : S/N ratio, teaching method, university, lecture, sense of touch, surface roughness, dispersion, scoring

1. 緒 言

現在、品質工学は研究開発や製造現場で広く活用され、効率的な研究開発の実現やロバストネスの高

*¹ 島根大学, 正会員

*² 鳥取大学名誉教授, 正会員

*³ 応用計測研究所(株), 正会員