Title	Calibration and application of photoelastic coating method
Sub Title	
Author	小沢, 王春(Ozawa, Takaharu)
Publisher	慶応義塾大学藤原記念工学部
Publication year	1964
Jtitle	Proceedings of the Fujihara Memorial Faculty of Engineering Keio University (慶応義塾大学藤原記念工学部研究報告). Vol.17, No.66 (1964.) ,p.56(12)- 56(12)
JaLC DOI	
Abstract	
Notes	Summaries of Doctor and Master Theses Master of Engineering, 1964 Mechanical Engineering
Genre	Departmental Bulletin Paper
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=KO50001004-00170066-0012

Calibration and Application of Photoelastic Coating Method

Takaharu OZAWA*

Photoelastic coating technique provides measurement of distribution of stresses or strains over large fields at a time, without compensations regarding the effect of Poisson's ratio.

Relations between stress, color and fringe order or dispersion of strain sensitivity are tested, showing how to calibrate coating materials, especially epoxy rubber, with ease. Although low stresses in the elastic stage should be measured from white-light patterns, in usual charts have been given so far only common names of colors which include, precisely speaking, other ones, besides difference of the sense of sight is neglected, for example, difference of the principal strains; 500×10^{-6} at "Indigo," 720×10^{-6} at "Gray Blue."

Considering the above I tried to make a color scale with Munsell's color table.

Measured stresses in a side frame of a railway carridge model are examined, and compared with the results of calculation obtained from assuming the frame as a statically indeterminate Rahmen.

*小 沢 王 春