

Strain Distribution in Circular Disk of PMMA by Using Reflection Polariscope

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The experiment was conducted to study strain distribution in circular disk of PMMA by photoelasticity in reflection polariscope. The strain in circular disk was induced by two point load of hydraulic system 535.37-994.63 N with the step increase of 153.21 N. We added the Babinet compensater in basic reflection polariscope to observe the fractional isochromatic fringe order in the first quadrant of disk and we calculated strain by using stress-strain optic laws. The result showed the relation between absolute of different strain in first quadrant of circular disk and the relation of force with absolute of different strain. It was found that maximum different strain produced at contact area of disk decreased along horizontal and vertical direction. The relation of force with different strain was linear.

Primary author: Mr MANJIT, Yongyut (Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai, 50200, Thailand)

Co-authors: Mr LIMPICHAINAPIT, Apichart (Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai, 50200, Thailand); Mr NGAMJARUOJANA, Athipong (Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai, 50200, Thailand)

Presenter: Mr MANJIT, Yongyut (Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai, 50200, Thailand)

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