

Module 6: Liquid Crystal Thermography Liquid Crystal Thermography

References

The Lecture Contains:

■ References

◀  Previous  Next ▶

Module 6: Liquid Crystal Thermography**References****REFERENCES**

- Ireland, P.T. and Jones, T.V., (2000), Liquid Crystal Measurements of Heat Transfer and Surface Shear Stress, *Meas. Sci. Technol.*, Vol. 11, pp 969-986.
- Zhong, S. Kittichaikan, Hodsan, H.P. and Ireland, P.T., (2000), Visualization of Turbulent Spots Under the Influence of Adverse Pressure Gradients, *Experiments in Fluids*, Vol. 28, pp. 385-393.
- Jeschke, P., Bierlumpfel, R. and Beer, H., (2000), Liquid Crystal Thermography for Heat-transfer Measurements in the Presence of Longitudinal Vortices in a Natural Convection Flow, *Meas. Sci. Technol.*, Vol. 11, pp. 447-453.
- Ireland, P.T. and Jones, T.V., (1987), Response Time of a Surface Thermometer Employing Encapsulated Thermochromic Liquid Crystals, *Journal of Physics E*, Vol. 20, pp. 1195-1199.
- Moffat, R.J., (1990), Some Experimental Methods for Heat Transfer Studies, *Experimental Thermal and Fluid Science*, Vol. 3, pp. 14-32.
- Kobayashi, T. Saga, T. and Doeg-Hee, D., (1998), Time Response Characteristics of Microencapsulated Liquid-crystal Particles, *Heat Transfer-- Japanese Research*, Vol. 27, pp. 390-398.
- Camci, C., Kim, K. and Hippenssteele, S.A., (1992), A new Hue Capturing Technique for the Quantitative Interpretation of Liquid Crystal Images used in Convective Heat Transfer Studies, *ASME J Turbomachinery*, Vol. 114, pp. 765-775.
- Smith, C.R., Sabatino, D.R. and Praisner, T.J., (2001), Temperature Sensing with Thermochromic Liquid Crystals, *Experiments in Fluids*, Vol. 30, pp. 190-201.
- Wang, Z., Ireland, P.T. and Jones, T.V., (1996), A Color Image Processing System for Transient Liquid Crystal Heat Transfer Experiments, *ASME J Turbomachinery*, Vol. 118, pp. 421-427.
- Ekkad, S.V. and Han, J.C., (2000), A Transient Liquid Crystal Thermography Technique for Gas Turbine Heat Transfer Measurements, *Measurement Science Technology*, Vol. 11, pp. 957-968.

Module 6: Liquid Crystal Thermography**References**

- Sabatino, D.R., Praisner, T.J. and Smith, C.R., (2000), A High-accuracy Calibration Technique for Thermochromic Liquid Crystal Temperature Measurement, *Experiments in Fluids*, Vol. 28, pp. 497-505.
- Camci, C., Kim, K., Hippensteele, S.A. and Poinsatte, P.E., (1993), Evaluation of a Hue Capturing Based Transient Liquid Crystal Method for High-Resolution Mapping of Convective Heat Transfer on Curved Surfaces, *ASME J of Heat Transfer*, Vol. 115, pp. 311-318.
- Valencia, A., Fiebig, M. and Mitra, N.K., (1995), Influence of Heat Conduction on Determination of Heat Transfer Coefficient by Liquid Crystal Thermography, *Experimental Heat Transfer*, Vol. 8, pp. 271-279.
- Baughn, J.W., (1995), Liquid Crystal Methods for Studying Turbulent Heat Transfer, *International J Heat Fluid Flow*, Vol. 16, pp. 365-375.
- Ireland, P.T., Neely, A.J., Gillespie, D.R.H. and Robertson, A.J., (1999), Turbulent Heat Transfer Measurements Using Liquid Crystals, *International J Heat Fluid Flow*, Vol. 20, pp. 355-367.
- Vogel, G, Graf, A. and Weigand, B., (2002), Film Cooling: A Comparative Study of Different Heater Foil Configurations for Liquid Crystal Experiments, *ASME paper*, 2002-GT-30552.
- Baughn, J.W., Mayhew, J.E., Anderson, M.R. and Butler, R.J., (1998), A Periodic Transient Method Using Liquid Crystals for Measurements of Local Heat Transfer Coefficients, *ASME J Heat Transfer*, Vol. 120, pp. 772-777.
- Wang, Z., Ireland, P.T. and Jones, T.V., (1995), Detailed Heat Transfer Measurements and Thermal Analysis at Engine Conditions of a Pedestal with Fillet Radii, *ASME J of Turbomachinery*, Vol. 117, pp. 290-297.
- Baughn, J.W., Anderson, M.R., Mayhew, J.E. and Wolf, J.D., (1999), Hysteresis of Thermochromic Liquid Crystal Temperature Measurement Based on Hue, *ASME J Heat Transfer*, Vol. 121, pp. 1067-1072.
- Chyu, M.K., Ding, H., Downs, J.P. and Soecting, F.O., (1998), Determination of Local Heat Transfer Coefficient Based on Bulk Mean Temperature Using a Transient Liquid Crystals Technique, *Experimental Thermal and Fluid Science*, Vol. 18, pp. 142-149.
- Metzger, D.E., Bunker, R.S., and Boch, G., (1991), Transient Liquid Crystal Measurement of Local Heat Transfer on a Rotating Disk With Jet Impingement, *ASME J of Turbomachinery*, Vol. 113, pp. 52-59.
- Metzger, D.E. and Larson, E.E., (1986), Use of Melting Point Surface Coating for Local Convective Heat Transfer Measurements in Rectangular Channel Flows with 90-Deg. Turns, *ASME J of Heat Transfer*, Vol. 108, pp. 48-54.