

17 Collection of all references from chapters 1 till 16

Abhari R.S., Epstein A.H., 1992, '*An experimental study of film cooling in a rotating transonic turbine*', ASME 92-GT-201, Cologne, Germany

Abhari R.S., Guenette G.R., Epstein A.H., Giles M.B., 1992, 'Comparison of Time-Resolved Turbine Rotor Blade Heat Transfer Measurements and Numerical Calculations', ASME J. of Turbomachinery, vol. 114, pp 818-827

Ainsworth R.W., Allen J.L., Davies M.R.D., Doorly J.E., Forth C.J.P., Hilditch M.A., Oldfield M.L.G., Sheard A.G., 1989, '*Developments in Instrumentation and Processing for Transient Heat Transfer Measurement in a full-Stage Model Turbine*', J. of Turbomachinery, vol. 111, pp 20-27

Allan W., Ainsworth R., Thorpe S., 2004, '*Unsteady heat transfer measurements from transonic turbine blades at engine representative conditions in a transient facility*', ASME GT2004-53835, Vienna, Austria

Ameri A.A., 2004, '*Numerical simulation of flow and heat transfer in the tip region of turbine blades*', Turbine blade tip design and tip clearance treatment, VKI LS 2004-02

Anderson J.D., 1990, '*Modern compressible flow with historical perspective*', McGraw-Hill series in aeronautical and aerospace engineering, McGraw-Hill, Inc, ISBN 0-07-001673-9, United States of America

Anthony R.J., Jones T.V., LaGraff J.E., 2004, '*High frequency surface heat flux imaging of bypass transition*', ASME GT2004-54162, Vienna, Austria

Arnone A., Liou, M-S, Povinelli, L.A., 1992, '*Navier-Stokes Solution of Transonic Cascade Flow Using Non-Periodic C-type Grids*' J. of Propulsion and Power, vol. 8(2), pp 410-417

Arnone A., Swanson R.C., 1993, '*A Navier-Stokes Solver for Turbomachinery Applications*', J. of Turbomachinery, vol. 115(2), pp 305-313

Arts T., 1994, '*Measurement chain: definitions, error and uncertainty*', Measurement Techniques in Fluid Dynamics, VKI LS 1994-01, ISBN D/1994/0238/417

Arts T., Charbonnier J-M., 1994, '*Temperature measurements*', Measurement Techniques in Fluid Dynamics, VKI LS 1994-01, ISBN D/1994/0238/417

Arts T., Denos R., Brouckaert J.F., Popp O., 1996, '*The dual hot wire aspirating probe*', 13th Symp. Measuring Techniques for Transonic and Supersonic Flow in Cascades and Turbomachines, Zurich, Switzerland

Arts T., Ginibre P., Oksuz O., Iliopoulou V., Key N., 2005, '*Comparison of turbine tip leakage aero thermal flows for flat tip and squealer*', Proc. 6th European Conference on Turbomachinery Fluid Dynamics and Thermodynamics, Lille, France

Arts T., Lambert de Rouvroit M., Rutherford A.W., 1990, '*Aero-thermal investigation of a highly loaded transonic linear turbine guide vane cascade - A test case for inviscid and viscous flow computations*', VKI TN 174

Baldwin B.S., Lomax H., 1978, '*Thin Layer Approximation and Algebraic Model for Separated Turbulent Flows*', AIAA 16th Aerospace Sciences Meeting, paper 78-257

Bejan A., Kraus A.D., 2003, '*Heat transfer handbook*', Thermal Radiation, John Wiley & Sons, inc., Hoboken, New Jersey, pp 573-633

Billiard N., Iliopoulou V., Ferrara F., Denos R., 2002, '*Data reduction and thermal product determination for single and multi-layered substrates thin-film gauges*' Proceeding of the 16th Symposium on Measuring Techniques for Transonic and Supersonic Flows in Cascades and Turbomachines, Cambridge, Great Britain

Booth T.C., 1985, '*Importance of tip clearance flows in turbine design*', Tip Clearance effects in Axial Turbomachines, VKI LS 1985-05

Boyle R.J., Haas J.E., Katsanis T., 1984, '*Comparison between measured turbine stage performance and the predicted performance using quasi-3D flow and boundary layer analysis*', NASA TM-83640

Brooks A.J., Colbourne D.E., Wedlake E.T., Jones T.V., Oldfield M.L.G., Schultz D.L., Loftus P.J., 1985, '*The isentropic light piston annular cascade facility at RAE Pyestock*', Heat transfer and cooling in gas turbines, AGARD-CP-390, pp 31.1-31.23

Buchlin J.M., 2004, '*Infrared Thermography*', Advanced measurement techniques for aero engines and stationary gas turbines, VKI LS 2004-04

Buttsworth D.R. & Jones T.V. (1998a): '*A fast response total temperature probe for unsteady compressible flows*'. ASME, J. of Engr. for Gas Turbines and Power, vol. 120, pp 694-702

Buttsworth D.R., Jones T.V., 1998b, '*A fast response high spatial resolution total temperature probe using a pulse heating technique*', ASME, J. of Turbomachinery, vol. 120, pp 601-607

Buttsworth D.R., 1997, '*A finite difference routine for the solution of transient one dimensional heat conduction problems with curvature and thermal-dependent thermal properties*', University of Oxford, OUEL Report number 2130/97

Buttsworth D.R., Jones T.V., 1997, '*Radial conduction effects in transient heat transfer experiments*', The Aeronautical Journal, Vol. May, p.p. 209-212

Buttsworth D.R., Jones T.V., 1998a, '*A fast response total temperature probe for unsteady compressible flows*', ASME, J. of Engr. for Gas Turbines and Power, vol. 120, pp 694-702

Buttsworth D.R., Jones T.V., Chana K.S., 1996, '*Fast-response total temperature probe experiments in a turbine facility*', 13th Symposium Measuring Techniques for Transonic and Supersonic Flow in Cascades and Turbomachines, Zurich, Switzerland

Buttsworth D.R., Jones T.V., Chana K.S., 1998, '*Unsteady total temperature measurements downstream of a high pressure turbine*', ASME, J. of Turbomachinery, vol. 120, pp 760-767

Cakan M., Arts T., 1997, '*Effect of rib height on heat transfer enhancement in a cooling channel*', Proc. Eurotherm Seminar 55, Heat transfer in single phase flows 5, Santorini, Greece

Camci C., Arts T., 1990, '*An experimental convective heat transfer investigation around a film-cooled gas turbine blade*', J. of Turbomachinery, vol. 112, pp 497-503

Carscallen W.E., Currie T.C., Hogg S.I., Gostelow J.P., 1999, '*Measurement and computation of energy separation in the vortical wake flow of a turbine nozzle cascade*', ASME, J. of Turbomachinery, vol. 121, pp 703-708

Casarsa L., Cakan M., Arts T., 2002, '*Characterization of the velocity and heat transfer fields in an internal cooling channel with high blockage ratio*', ASME GT-2002-30207, Amsterdam, The Netherlands

Chana K.S., 2004, '*Requirements for instrumentation technology for gas turbine propulsion systems – Gas total surface temperature measurements for harsh environments*', Advanced Measurement Techniques for Aeroengines and Stationary Gas Turbines, VKI LS 2004-04

Chana K.S., Povey T., Jones T.V., 2003, '*Heat transfer and aerodynamics of an intermediate pressure nozzle guide vane with and without inlet temperature non-uniformity*' ASME GT2003-38466, Atlanta, Georgia, USA

Chana K.S., Singh U.S., 2005, '*A program to investigate the effects of film cooling in a high-pressure aeroengine turbine stage*', Proc. 6th conf. on Turbomachinery, Fluid Dynamics and Thermodynamics, Lille, France

Consigny H., Chan C.K., Richards B.E., 1979, '*The effect of pressure gradient and external turbulence on heat transfer to a cold flat plate*', VKI TN 128

Denos R., 1996, '*Aerothermal investigation of the unsteady flow in the rotor of a transonic turbine stage*', Ph.D. thesis, University of Poitiers, France

Denos R., Arts T., Paniagua G., Michelassi V., Martelli F., 2001, '*Investigation of the unsteady unsteady rotor aerodynamics in a transonic turbine stage*', ASME 2000-GT-0435, J. of Turbomachinery, vol. 123(1), pp 81-89

Denos, R., 1996, '*Aerothermal investigation of the unsteady flow in the rotor of a transonic turbine stage*', Ph.D. thesis, University of Poitiers, France

Didier F., Denos R., Arts T., 2002, '*Unsteady rotor heat transfer in a transonic Turbine Stage*', ASME 2002, Amsterdam, GT-2002-30195, J. of Turbomachinery, vol. 124(4), pp614-622

Diller T.E., 1993, '*Advances in heat flux measurements*', Academic Press, Inc, ISBN 0-12-020023-6, Advances in heat transfer, vol. 23, pp 279-368

Doorly J.E., 1988, '*Procedures for determining surface heat flux using thin film gages on a coated metal model in a transient test facility*', J. of Turbomachinery, vol. 110, pp 242-250

Doorly J.E., Oldfield M.L.G., 1986, '*New heat transfer gages for use on multilayered substrates*', J. of Turbomachinery, vol. 108, pp 153-160

Doorly J.E., Oldfield M.L.G., 1987, '*The theory of advanced multi-layer thin film heat transfer gauges*', J. of Heat Mass Transfer, vol. 30 (6), pp 1159-1168

Ekkad S.V., Han J.C., 2000, '*A transient liquid crystal thermography technique for gas turbine heat transfer measurements*', J. of Meas. Sci. Technol., vol. 11, pp 957-968

Epstein A.H., Guenette G.R., Norton R.J.G., Yuzhang C., 1986, '*High-frequency response heat-flux gauge*', Review of Scientific Instruments, vol. 57 (4), pp 639-649

Ferrara F., 2002, '*Assessment of a heat flux source for the determination of thin film gauge substrate thermal product*', VKI SR 2002-15

Gadea J., Denos R., Paniagua G., Billiard N., Sieverding C.H., 2004, '*Effect of clocking on the second stator pressure field of a one and a half stage transonic turbine*', ASME GT2004-53463, Vienna, Austria

Galvan I., 2001, '*Assessment on the use of a LASER to determine the thermal product of thin-film gauge substrates*', VKI PR 2001-11

Glezer B., 2004, '*Thermal-mechanical design factors affecting turbine blade tip clearance*', Turbine blade tip design and tip clearance treatment, VKI LS 2004-02

Guo S.M., Jones T.V., Lock G.D., 1997, '*Gas turbine heat transfer measurements with engine simulated film cooling*', 2nd European Conference on Turbomachinery – Fluid Dynamics and Thermodynamics, Antwerp, Belgium

Guo S.M., Lai C.C., Jones T.V., Oldfield M.L.G., Lock G.D., Rawlinson A.J., 2000, '*Influence of surface roughness on heat transfer and effectiveness for a fully film cooled nozzle guide vane measures by wide band liquid crystals and direct heat flux gauges*' J. of Turbomachinery, vol. 122, pp 709-716

Guo S.M., Lai C.C., Jones T.V., Oldfield M.L.G., Lock G.D., Rawlinson A.J., 1998, '*The application of thin-film technology to measure turbine-vane heat transfer and effectiveness in a film-cooled, engine-simulated environment*', Int. J. of Heat and Fluid Flow, vol. 19, pp 594-600

Guo S.M., Spencer M.C., Lock G. D., Jones T.V., Harvey N. W., 1995, '*The applications of thin film gauges on Flexible Plastic Substrates to the gas Turbine Situation*', ASME paper 95-GT-357, Houston, Texas, USA

Hilditch M.A., Ainsworth R.W., 1990, '*Unsteady heat transfer measurements on a rotating gas turbine blade*', ASME 90-GT-175, Brussels, Belgium

Holmberg D.G., Mukkamala Y.S., Diller T.E., 1994, '*Shock tunnel evaluation of heat flux sensors*', AIAA-94-0730, Reno, NV, USA

Iliopoulou V., 2000, '*Optimization of double-layer thin film gauges for heat transfer measurements*', VKI PR 2000-27

Iliopoulou V., Arts T., 2002, '*Applications of the heat flux thin film sensor in short duration flows*', Proceedings of ESDA 2002, Istanbul, Turkey

Iliopoulou V., Arts T., 2005, '*The dual thin-film probe for high frequency flow temperature measurements*', Proc. 6th conf. on Turbomachinery, Fluid Dynamics and Thermodynamics, Lille, France – to be published in Proc. of the Institution of Mech. Eng. Part A 'J. of Power and Energy'

Iliopoulou V., Denos R., Billiard N., Arts T., 2004, '*Time averaged and time-resolved heat flux measurements on a turbine stator blade using two-layered thin-film gauges*', ASME 2004-GT-53437, Vienna, Austria – J. of Turbomachinery, vol. 126, pp 570-577

Ireland P.T., Jones T.V., 2000, '*Liquid crystal measurements of heat transfer and surface shear stress*', J. of Meas. Sci. Technol., vol. 11, pp 969-986

Jones T.V., Oldfield M.L.G., Ainsworth R.W., Arts T., 1993, '*Transient cascade testing*', Advanced methods for cascade testing, AGARD-CP-328, pp 103-152

Jones T.V., Schultz D.L., Hendley A.D., 1973, '*On the flow in an isentropic light piston tunnel*', Reports and Memoranda no 3731, Dept. Engineering and Science, University of Oxford, Great Britain

Kays W.M., Crawford M.E., 1980, '*Convective heat and mass transfer*', McGraw-Hill, Inc, ISBN 0-07-033457-9, United States of America

Kestin J., Wood R., 1971, '*The influence of turbulence on mass transfer from cylinders*', J. of Heat Transfer, vol. 93C, pp 321-327

Key N.L., Arts T., 2004, '*Comparison of turbine tip leakage flow for flat tip and squealer tip geometries at high-speed conditions*', ASME GT2004-53979, Vienna, Austria

Liepmann H.W., Roshko A., 1957, '*Elements of gasdynamics*', Galcit aeronautical series, John Wiley & Sons, Inc., ISBN 0471534609, Library of Congress Catalog Card Number: 56-9823 United States of America

Ligrani P.M., Camci C., Grady M.S., 1982, '*Thin film heat transfer gage construction and measurement details*', VKI TM 33

Lowery G. W. and Vachon R.I., 1975, '*The effect of turbulence on heat transfer from heated cylinders*', Int. J. of Heat and Mass Transfer, vol. 18, pp 1229-1242

Lyons P.R.A., Gai S.L., 1988, '*A method for the accurate determination of the thermal product $(pck)^{1/2}$ for thin film heat transfer or surface thermocouple gauges*', J. of Phys. E: Sci. Instrum., vol. 21, pp 445-448

Maulard J., 1969, '*Etude du fluxmètre à température superficielle pour mesures dans les tubes à choc*', ONERA NT 139, 1969

Meyers R.F., 1960, '*A heat-flux-meter for use with thin film surface thermometers*', Aeronautical Report LR-279, National Research Council of Canada, Ottawa

Miller C.G., 1981, '*Comparison of thin-film resistance heat transfer gauges with thin-skin transient calorimeter gages in conventional hypersonic wind tunnels*', NASA Technical Memorandum 83197

Miller R.J., Moss R.W., Ainsworth R.W., Harvey N.W., 2003, '*Wake, shock, and potential interactions in a 1.5 stage turbine – Part I: Vane-rotor and rotor-vane interaction*', J. of Turbomachinery, Vol. 125, pp33-39

Oksuz O., 2004, '*Aerothermal investigation of turbine tip gap flows*', VKI PR 2004-13

Oldfield M.L.G., Burd H.J., Doe N.G., 1982, '*Design of wide-bandwidth analogue circuits of heat transfer instrumentation in transient tunnels*', 16th Symposium of the International Center of Heat and Mass Transfer, Dubrovnik, Croatia

Olivary D., Carbonaro M., 1994, '*Hot wire measurements*', Measurement techniques in fluid dynamics, VKI LS 1994-01, pp 193-228

Paniagua G., Billiard, N., Denos R., Sieverding C.H., 2003, '*Interference and clocking effects in a one and a half stage turbine: Time-Averaged Endwall Pressure Measurements*', Technical Report No B4/VKI/2/1

Paniagua G., Denos R., Arts T., 2001, '*Steady-unsteady measurements of the flow field downstream of a transonic high-pressure turbine stage*', Proc. of the Inst. of Mech Engrs, vol. 215 (A) pp 663-673

Paniagua G., Denos R., Oropesa M., 2002, '*Thermocouple probes for accurate temperature measurements in short duration facilities*', Proceedings of ASME TURBO EXPO 2002, Amsterdam, The Netherlands

Papa M., Goldstein R.J., Gori F., 2003, '*Effects of tip geometry and tip clearance on the mass/heat transfer from a large-scale gas turbine blade*', J. of Turbomachinery, vol. 125, pp 90-96

Pelle O., Arts T., 1997, '*Development of a double-layer thin film gauge for surface heat transfer measurements*', Proc. of Eurotherm Seminar 55, Heat transfer in single phase flows 5, Santorini, Greece

Piccini E., Guo S.M., Jones T.V., 2000, '*The development of a new direct-heat-flux gauge for heat-transfer facilities*', J. of Measurement Science and Technology, vol. 11, pp 342-349

Pope A., Goin K.L., 1965, '*High-speed wind tunnel testing*', John Wiley & Sons, Inc., Library of Congress Catalog Card Number: 65-21435, United States of America

Porreca L., Denos R., 2002, '*Turbine stage mass flow evaluation in a compression tube facility*', Proc., 16th Symposium on Measuring Techniques, Cambridge, Great Britain

Rhee D.H., Choi J.H., Cho H.H., 2001, '*Effect of blade tip clearance on turbine shroud heat/mass transfer*', ASME 2001-GT-0158, New Orleans, Louisiana

Rolls-Royce, 1986, '*The jet engine*', The technical publications department of Rolls-Royce plc, ISBN 0902121235, Derby, England

Schultz D.L., Jones T.V., 1973, '*Heat transfer measurements in short duration hypersonic facilities*', AGARDograph Report 165

Sieverding C.H., Arts T., Denos R., Brouckaert J.F., 2000, '*Measurement techniques for unsteady flows in turbomachines*', J. of Experiments in Fluids, vol. 28, pp 285-321

Sieverding C.H., Cicatelli G., Desse J.M., Meinke M., Zunino P., 1999, '*Experimental and numerical investigation of time varying wakes behind turbine blades*', Notes on numerical fluid mechanics vol 67, Results of the Industrial and material technology aeronautics research project AER2-CT92-0048 (1992-1996), ISSN 0179-9614, ISBN 3-528-06967-8, Germany

Sieverding, C. H., 1984, '*Transonic flows in last stages of big steam turbines*', course note 120, von Karman Institute, Belgium

Sieverding, C. H., Arts, T., 1992, '*The VKI compression tube Annular Cascade Facility CT3*', ASME paper 92-GT-336, Koln, Germany

Simeonides G., 1992, '*Hypersonic shock wave boundary layer interactions over compression corners*', Ph.D. thesis, University of Bristol, April 1992, United Kingdom

Smith M. and Kuethe A., 1966, '*Effects of turbulence on laminar skin friction and heat transfer*', Physics of fluids, vol. 9, pp 2337-2344

Thorpe S.J., Yoshino S., Ainsworth R.W., 2000, '*Fabrication and calibration techniques for turbine rotor tip heat transfer gauges*', Proceedings of the XV Symposium on Measuring Techniques for Transonic and Supersonic Flows in Cascades and Turbomachines, Florence, Italy

Timnat Y.M., 1989, '*Diagnostic techniques for propulsion systems*', Prog. Aerospace Sci., vol. 26, pp 153-168

Wonnacott R.J., Wonnacott T.H., 1985, '*Introductory statistics*', John Wiley & Sons, Inc, Fourth edition, ISBN 0-471-86899-X