

My Papers

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Journal Papers

1. M.A.Antar, M. N.Saeed, M. M. Osman, M. K. Ibrahim and A. I. Abdelfattah, "Experimental investigations on the performance and nitrogen oxides emissions of an idled and part load SI engine" *Alexandria Engineering Journal*, Vol. 29, No. 1, pp. A19-A39, 1990 .
2. M. A. I. El-Shaarawi, A. A. Al-Farayedhi, and M. A. Antar, "Boundary layer flow around and inside a liquid sphere", **ASME** *Journal of Fluids Engineering*, Vol. 119, pp. 42-49, Dec. 1997.
3. E. M. Mokheimer, M. A. Antar, J. Farooqi and S. M. Zubair, "Analytical and numerical modeling along with PC spreadsheet modeling for a composite fin", *Heat and Mass Transfer, Warme und Stoffubertragung Journal*, Vol. 32, pp. 229-238, 1997.
4. L. C. Thomas and M. A. Antar, "Heat Transfer in Composite walls: A Practical Two Dimensional Thermal Circuit Method", **ASHRAE Transactions**, Vol. 104 Part 2, pp. 198-209, 1998.
5. M. A. Antar, "A Simplified Solution Technique for Some Fluid Flow and Heat Transfer Problems" *International Journal of Energy Research*, Vol. 22, pp. 1291-1298, 1998.
6. M. A. Antar "A simplified numerical solution of unsteady heat conduction problems with an application to a short cylinder" *IJMEE*, Vol. 28, No. 3, pp. 201-212, July, 2000.
7. E. M. Mokheimer and M. A. Antar "On the use of Spreadsheets for Solving Heat Conduction Problems" *IJMEE*, Vol. 28, No. 2, pp. 113-139, April, 2000.
8. A. A. Al-Farayedhi, M. A. Antar and A. Khan, "Effect of Equivalence Ratio on the concentration of CH₄/NO₂/O₂ Combustion Products", *I. J. Energy Research*, Vol. 23, No. 13, pp.1165-1175, 1999.
9. M. A. Antar, A. A. Al-Farayedhi and M. A. I. El-Shaarawi, "Steady and transient liquid sphere heating in a convective gas stream", *Heat and Mass Transfer Journal*, Vol. 36, No. 2, pp. 148-157, 2000.
10. M. A. Antar "Steady and Transient Analysis of the Performance of Annular Fins" *Int. J. Energy Research*, Vol. 25, pp. 1197-1206, 2001.

11. M. A. Antar and S. M. Zubair, "Thermoeconomic Considerations in the Optimum Allocation of Heat Exchanger Inventory for a Power Plant" *Energy Conversion and Management*, Vol. 42, pp. 1169-1179, 2001.
12. M. A. Antar and E. M. Mokheimer "Spreadsheet modeling of Transient Three Dimensional Heat Conduction with Various Standard Boundary Conditions" *IJMEE*, Vol. 30 No.1, pp. 17-34, 2002.
13. M. A. Antar and M. A. I. El-Shaarawi, "Mixed Convection Around a Liquid Sphere in an Air stream", *Heat and Mass Transfer Journal*, Vol. 38, No. 4-5, pp. 419-424, 2002.
14. E. M. A. Mokheimer, M. A. Antar, J. Farooqi and Syed M. Zubair "A Spreadsheet Solution of Transient Conduction in Composite Fins", *International Journal of Energy Research*, Vol. 26, pp. 383-397, 2002.
15. M. A. Antar and L. C. Thomas, "Heat Transfer Through a Composite Walls with Enclosed Convective and Radiative Spaces: A Practical Two Dimensional Analysis Approach", *ASHRAE Transactions*, Vol. 107, Part 2, pp. 318-324, 2001.
16. M. A. Antar and S. M. Zubair, " Thermoeconomic Considerations in the Optimum allocation of Heat Transfer Inventory for Refrigeration and Heat Pump Systems" *ASME Journal of Energy Resources Technology*, Vol. 124, pp. 28-33, March 2002.
17. P. Gandhidasan, A. A. AL-Farayedhi and M. A. Antar, " Investigation of heat and mass transfer in a gauze-type structured packing liquid desiccant dehumidifier" *Int. J. Energy Research*, Vol. 26, No. 12, pp. 1035-1044, 2002.
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20. M. A. Antar and M. A. I. El-Shaarawi, "Simultaneous Effect of Rotation and Natural Convection on the Flow About a Liquid Sphere" *Heat and Mass Transfer*, Vol. 40, pp. 393-399, 2004.
21. M. A. Habib, M. A. Antar and R. Ben-Mansour, "Influence of inclination angle and air to fuel ratio on the thermal characteristics of tangentially fired furnaces", **Fuel, In Press.**

22. .M. A. Habib, R. Ben-Mansour and M. A. Antar "Flow field and thermal characteristics in a model of a tangentially fired furnace under different conditions of burner tripping", Heat and Mass Transfer, Vol. 41, pp. 909-920, 2005.
23. A. A. Al-Farayedhi, P Gandhidasan, M. A. Antar and M. S. Abdel Gaffar, "Experimental study of an aqueous desiccant mixture system: air dehumidification and desiccant regeneration", Proc: IMechE Vol. 219 Part A: Power and Energy, pp. 669-680, 2005.
24. I. S. Hussaini. S. M. Zubair and M. A. Antar, "Area Allocation in Multi-zone Feedwater Heater" Enegy Conversion and Management, Energy conversion and Management, Vol. 47, pp. 568-575, 2007.
25. M. A. Antar, Maged A. El-Shaarawi, "Generation of Entropy due to Forced Convection Fluid Flow About a Solid Sphere", Int. J Exergy, In Press.
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Conference Papers

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3. M. A. Antar and A. A. Al-Farayedhi, "A Simplified Numerical Approach for Solving Multi-Dimensional Transient Heat Conduction Problems" Proceedings of the Fifth Saudi Engineering Conference, Umm Al-Qura University, No. 4, pp. 373-381, 1999.
4. A. A. Al-Farayedhi and M. A. Antar, "Burning Rates of Tent's Fabrics in a Convective Environment" Proceedings of the Fifth Saudi Engineering Conference, Umm Al-Qura University, No. 4, pp. 493-503, 1999.

5. M. A. Antar and L. C. Thomas, "Heat Transfer Through a Wall with an Enclosed Convective and Radiative Space" Workshop on Energy Conservation in Industrial Applications, KFUPM, Dhahran, Saudi Arabia, Feb. 12-14, 2000.
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7. I. Dincer and M. A. Antar, "A Generalized Approach for Heat Transfer Modeling for Regular Shaped Objects Subject to Cooling" Presented at the Twelfth International Symposium on Transport Phenomena, Istanbul, Turkey, July 16-20, 2000.
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9. A. Al-Farayedhi, P. Gandhidasan, M. A. Antar and M. S. Abdul Gaffar "Experimental study of hybrid liquid desiccant based vapor compression cooling system", Proceedings of the Sixth Saudi Engineering Conference, KFUPM, Dhahran, 14-17th December 2002, Vol. 5, pp. 503-515.
10. M. A. Antar and M. A. I. El-Shaarawi, "Unsteady Flow around a Liquid Sphere", accepted for presentation at the 14th International Symposium on Transport Phenomena, ISTP14, 6-10 July, 2003, Bali, Indonesia.
11. محمد عنتر "أهمية الهواء كمادة عزل حراري" ندوة العزل الحراري وأهمية تطبيقه في دول مجلس التعاون لدول الخليج العربية. الرياض. المملكة العربية السعودية 19-21 ابريل 2004.
12. M. A. Antar, M. I. El-Shaarawi and M. Gayazullah, "Entropy Generation Around a Solid Sphere in The Forced convection Regime" Proc., 4th International Conference on Computational Heat and Mass Transfer, Paris France, May 17-20, 2005.
13. M. A. Antar "Multi-Dimensional Effects in Estimating the Heat Loss Across Building Envelopes" Proceedings of the Second International

Conference on Thermal Engineering Theory and Applications, Al-Ain, UAE 3-6 Jan., 2006.

14. M .A. Antar, "Fluid flow and heat transfer over a micro-sphere", Proceedings of IPACK, 2007, ASME InterPACK '07, July 8-12, 2007, Vancouver, British Columbia, CANADA.
15. H. Baig and M. A.Antar, "Conduction /Natural convection analysis of heat transfer across multi-layer building blocks" Accepted for presentation at the EuroTherm 2008, Eindhoven, The Netherlands, May 18-22.

Technical Reports

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2. A. Al-Farayehdi, P. Gandhidasan, M. A. Antar, "Hybrid Liquid Desiccant Based Vapor Compression Cooling System", KACST Report, August 2002.
3. M. A. Antar, "Heat Transfer Virtual Lab Experiments", Report submitted to KFUPM Summer Session director upon completion of four Heat transfer experiments in JAVA, July 2002.
4. M. A. Antar, S. Zubair, A. Sahin, F. Ahmed, M. A. Samad and I. Hussaini, "On-Line Heat Transfer" Report on On line project funded by DAD-KFUPM, May 2004.
5. M. A. Habib, M. A. Antar and R. BenMansour "Flow, Temperature and Combustion Characteristics in a Model Furnace of a Tangentially Fired Boiler" May 2004.
6. M. A. Antar, S. M. Zubair and I Hussaiani, "The Effect of Superheating and Subcooling on the Total Heat Exchanger Area for a Feed Water Heater in a Power Plant", March 2006.
7. M. A. Antar and M. A. I. El-Shaarawi "Entropy generation around a solid/liquid sphere in a gas stream" DSR, KFUPM, Nov., 2006.