

**INTERNATIONAL STUDIES
in SCIENCE and ENGINEERING**

Roman Weber

**LECTURE NOTES
IN HEAT TRANSFER**

Part II: Radiative Heat Transfer



TU Clausthal
Clausthal University of Technology

Bibliografische Information Der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.d-nb.de> abrufbar.

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INTERNATIONAL STUDIES in SCIENCE and ENGINEERING

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Weber, Roman:

Lecture Notes in Heat Transfer, Part II: Radiative Heat Transfer

First Edition 2012

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ISBN 978-3-86948-197-5

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To the Student

How to get the most from these lecture notes

These lecture notes in "*Radiative Heat Transfer*" have been prepared for graduate students attending a fifteen-week course (one semester) with 1.5 hour of lecture and 45 minutes of classes per week. This is a typical course at the Clausthal University of Technology. The first lecture "*Governing Laws of Thermal Radiation*" is identical to the lecture you heard already in your course on Basic Heat Transfer [1][2]. Beginning with this lecture, we embark on a fascinating journey of studying not so simple subject of thermal radiation. If you are like most students just opening this textbook, you are enrolled on one of the few courses in science and engineering at Clausthal that are delivered in English. Probably English is not your native language but do not worry. This textbook has been written with you in mind in very simple and plain English. Below I provide you with few suggestions how "*Radiative Heat Transfer*" can help you to succeed in this course.

Read before a lecture. You will get the most out of your radiation course if you read each lecture before hearing it. In this way, many of the topics will already be clear in your mind and you will understand the lecture better.

Study Examples and Problems. Each lecture contains several Examples. Study them carefully since they illustrate the subject of each particular lecture. In addition to Examples, Problems are formulated for each lecture and they can be found on the web site (see below). Some Problems will be discussed and solved in the classroom but the principal idea behind Problems is that they are your homework. I suggest you solve them, one by one, and in case of difficulties consult your class instructor.

Study together with your fellow students. Many students find it useful to form study groups. You can discuss the challenging topics with one another and have a good time while doing it. Make sure that you do Problems by yourself since during the exam you will have to prove your skills in problem solving.

Take advantage of the web site. In addition to these lecture notes we are providing online materials to assist you in this course. You can find it by browsing through the IEVB-Institute website of TU Clausthal: <http://www.ievb.tu-clausthal.de/>.

Acknowledgments

I would like to thank my colleagues who carefully scrutinized the manuscript making it a better textbook:

Dr.–Ing. Marco Mancini, Dipl.–Math. Marc Muster (all Clausthal University of Technology, Germany), Dr.–Ing. Gabriel Wecl (Silesian University of Technology, Poland). My special thanks go to Marc Muster who edited this textbook.

Although I have made a concerted effort to make this first edition error free, some mistakes may have crept in unbidden. I would appreciate hearing from anyone who finds an error or wishes to comment on the text. You may e-mail or write to me.

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Contents

1. Governing Laws for Thermal Radiation	1
1.1. Heat Transfer Mechanisms	1
1.2. Rate Equations	2
1.3. Relevance of Thermal Radiation	3
1.4. Electromagnetic Spectrum	4
1.5. Thermal Radiation	8
1.6. Geometrical Considerations	9
1.6.1. Normal to a Surface Element	9
1.6.2. Solid Angle	9
1.6.3. Area and Projected Area	13
1.6.4. Radiation Intensity and Irradiation	14
1.7. Governing Laws for Thermal Radiation	16
1.7.1. Blackbody Radiation	16
1.7.2. Planck's Radiation Law	18
1.7.3. Wien's Displacement Law	24
1.7.4. Stefan-Boltzmann Law	24
1.8. Blackbody Radiation in a Wavelength Interval	25
1.9. Historical Note—Origin of Quantum Mechanics	29
1.10. Blackbody Emission into a Medium Other than Vacuum	31
1.11. Summary	32
2. The Radiation Laws Revisited	35
2.1. Wien's Displacement Law	35
2.2. Planck's Radiation Law	36
2.3. Stefan-Boltzmann Law	39
2.4. Summary	40
3. Radiation Intensity, Emissive Power and Radiosity	41
3.1. Radiation Intensity, Irradiation and Emissive Power for Isotropic Radiation	41
3.2. Emissive Power through a Finite Solid Angle	42
3.3. Directional Black Body Emissive Power - Lambert's Cosine Law	43
3.4. Point Source of Radiation	46
3.5. Radiosity	47

3.6. Summary	48
4. Surface Radiation Characteristics	49
4.1. Introduction	49
4.2. Emissivity	50
4.3. Absorptivity	58
4.4. Kirchhoff's Law	59
4.5. Diffuse-Grey Surface	63
4.6. Reflectivity	64
4.7. Transmissivity	66
4.8. Relations among reflectivity, absorptivity transmissivity	67
4.9. Summary	68
5. Solar Radiation	71
5.1. Introduction	71
5.2. Solar Irradiation	72
5.3. Absorptivity of Surfaces Exposed to Solar Radiation	78
5.4. Summary	80
6. Radiation Exchange in Enclosures Containing a Radiatively Non-Participating Medium	83
6.1. Introduction	83
6.2. View Factors	84
6.2.1. Reciprocity relation for view factors	87
6.2.2. The summation rule	89
6.2.3. The additive rule	90
6.2.4. Overlapping areas	91
6.2.5. The cross-string method of Hottel	95
6.2.6. Mathematical techniques for evaluation of view factors	99
6.3. Radiation Exchange in Enclosures Consisting of Blackbody Surfaces	99
6.4. Radiation Exchange in Enclosures Consisting of Diffuse, Grey Surfaces	101
6.4.1. Net-radiation method (radiosity method)	101
6.4.2. The radiation network method	107
6.4.3. Enclosures consisting of two surfaces	109
6.4.4. Enclosures consisting of three surfaces	113
6.5. Methods Involving Integral Equations	115
6.6. Radiosity method and the integral equations	117
6.7. Radiation Shields	118
6.8. Summary	122
7. Radiation in Absorbing, Emitting and Scattering Media	125
7.1. Introduction	125

7.2.	Attenuation of Radiation Intensity by Absorption and Out-Scattering . . .	126
7.2.1.	Physical Meaning of the Extinction Coefficient	127
7.2.2.	Optical Thickness	130
7.2.3.	The Absorption Coefficient for Solids and Liquids	130
7.2.4.	The Absorption Coefficient for Gases	133
7.2.5.	The Scattering Coefficient	133
7.2.6.	Single-Scattering Albedo	136
7.2.7.	Mass Absorption, Scattering and Extinction Coefficients	136
7.3.	Increase of Intensity by Emission and In-Scattering	138
7.3.1.	Emission	138
7.3.2.	In-Scattering	138
7.4.	Radiative Transfer Equation (RTE) in an Absorbing and Emitting Medium	140
7.5.	Radiative Transfer Equation (RTE) in an Absorbing, Emitting and Scat- tering Medium	142
7.6.	Summary	143
8.	Absorption and Emission of Radiation by Gaseous Atoms and Mol- ecules	145
8.1.	Introduction	145
8.2.	Wavenumber and Planck's Radiation Law	146
8.3.	Spectra of Atoms and Molecules	150
8.3.1.	Electronic transitions	152
8.3.2.	Rotations	153
8.3.3.	Vibrations	157
8.3.4.	Rotations and vibrations occurring simultaneously	160
8.4.	Common Molecules	163
8.4.1.	Diatomic molecules	164
8.4.2.	Triatomic molecules	164
8.5.	Absorption or Emission of a Spectral Line	169
8.5.1.	Collision broadening	170
8.5.2.	Natural line broadening	181
8.5.3.	Doppler broadening	181
8.5.4.	Combined Doppler-Lorentz (Voight) lines	184
8.6.	Summary	185
9.	Models for Spectral Radiation of Gases	189
9.1.	Introduction	189
9.2.	Line-by-line models	190
9.2.1.	The shape of a Lorentz line as function of pressure (for constant temperature)	192
9.2.2.	The shape of a Lorentz line as function of temperature (for con- stant pressure)	196

9.2.3. Line overlap	201
9.2.4. Emissivity in a spectral region	206
9.3. Narrow band models	208
9.3.1. Elsasser narrow band model	209
9.3.2. Random band models	211
9.3.3. Selection of band models for specific molecules	212
9.4. Exponential wide band model	212
9.5. Calculation of total emissivity using line-by-line and band models . . .	214
9.6. Summary	215
10. Total Emissivity Correlations	217
10.1. Introduction	217
10.2. Standard and Total Emissivity of Gases	218
10.3. Hottel's emissivity charts for carbon dioxide and water vapour	219
10.4. Absorptivity of carbon dioxide and water vapour	222
10.5. Polynomial approximations	223
10.5.1. Leckner's polynomials	223
10.6. Weighted Sum of Grey Gas Models (WSGG)	226
10.6.1. Smith, Shen and Friedman model	227
10.7. Emissivity of soot	231
10.7.1. Yuen and Tien model	232
10.7.2. Felske and Charalampopoulos model	233
10.8. Emissivity and absorptivity of gas-soot mixtures	233
10.9. Mean Absorption Coefficient	235
10.10. Summary	235
11. Radiation Exchange in an Enclosure Containing Absorbing-Emitting Medium	237
11.1. Introduction	237
11.2. Emission and Absorption by a Volume of Isothermal Gas	240
11.2.1. Infinitesimally small volume of gas	240
11.2.2. Gas volume of finite size	242
11.2.3. Mean beam length	244
11.3. Enclosures filled up with an isothermal radiating/absorbing gas	251
11.3.1. Isothermal enclosure	251
11.3.2. Enclosure with a heat sink	252
11.3.3. Enclosure consisting of isothermal surfaces	260
11.3.4. Direct Exchange Areas	263
11.4. Hottel's zone method (grey enclosures)	270
11.4.1. Total exchange areas	280
11.4.2. Summation rules for total exchange areas	283
11.5. Summary	290

12. Furnace Models (Grey Radiation)	293
12.1. Hottel's zone method	293
12.1.1. Radiation exchange expressed using direct exchange areas	294
12.1.2. Radiation exchange expressed using total exchange areas	295
12.1.3. Overall energy balance	297
12.2. Solution procedure in the Hottel's zone method	299
12.3. Furnace models	299
12.3.1. Refractory-backed row of tubes	300
12.3.2. Speckled wall furnace	304
12.3.3. Well-stirred furnace model	309
12.3.4. Long-furnace models	319
12.3.5. CFD-based furnace models	324
12.4. Summary	325
12.5. Comprehensive example	327
A. Appendix: Gaussian Elimination Method for Solving a Set of Linear Equations	348
B. Appendix: Rotation, Vibration, Broadening	351
B.1. Correspondence between a translational motion of a particle (or a rigid body) along a fixed direction and a rotation of a particle (or a rigid body) about a fixed axis.	351
B.2. Vibration of a harmonic oscillator.	352
B.3. Properties of Lorentz Collision Broadened Function.	354
B.4. Properties of Doppler Broadened Function.	356
B.5. Loschmidt's number.	358
C. Appendix: View Factors for Selected Two- and Three-Dimensional Configurations	360
D. Appendix: Direct Exchange Areas	383
Bibliography	XI