

# gas2energy.net

english edition

<b>Title:</b>	gas2energy.net System Planning Fundamentals of the Gas Supply
<b>Editors:</b>	Prof. Dr.rer.nat. Hans- Georg Fasold, Prof. Dr.-Ing. habil. Jürgen Heymer, Prof. Dr.-Ing. Prof.h.c. Jens Mischner
<b>Edition:</b>	1 <sup>st</sup> edition 2015
<b>Book format:</b>	165 x 230 mm, sewn binding, hardcover
<b>Scope:</b>	approx. 700 pages, four-colour throughout
<b>Price:</b>	130,- euros
<b>Print run:</b>	1.000 copies
<b>Publication date:</b>	November 2015
<b>Advertising deadline:</b>	30 <sup>th</sup> September 2015
<b>ISBN:</b>	978-3-8356-7274-1 (book+eBook)

MEDIA FILES – ADVERTISING OPPORTUNITIES

## Content

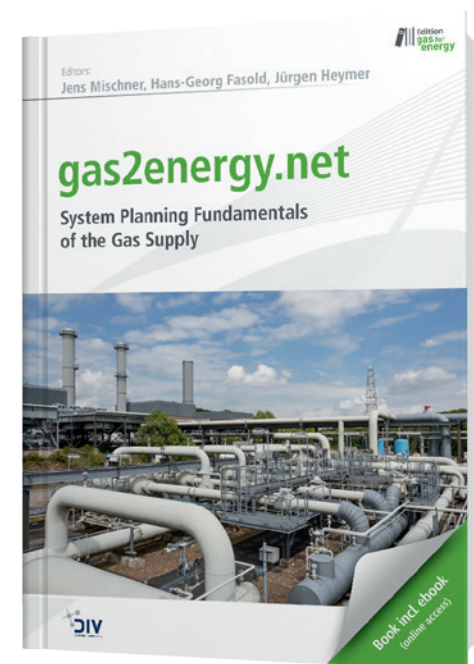
This unique reference book is intended for professionals, students, university professors, employees of public agencies, and career changers, in the field of energy- in particular those who are interested in the gas supply (gas transport, gas distribution, and plant construction) and are involved in the design, planning, and operation of gas pipelines/gas grids.

This book is intentionally not designed like a “classical” textbook. Instead it is problem-based, comprising of self-contained main topics, which are relevant for the design of gas supply and transport systems. All approaches and computation methods presented in this book are proven in both academics as well as in business practices. This book contains diverse, well-researched information that is currently not present in German literature, or can only be obtained from international literature with difficulty.

By observing the general physical and thermodynamic principles as well as the fundamentals of fluid mechanics, the characteristics of the gas supply are described. Such elements include: pipelines, separators, compressors, pressure regulating and metering stations, as well as gas storages. In regards to the planning, calculation, and design of systems, system components, and equip-

ment, the application of accurate, realistic, and practically compliant methods is emphasized. Thus, it is mandatory to account for the real gas behavior of the considered natural gases. In accordance with good engineering practices, the calculation of all the relevant material data is discussed in detail in connection with the calculation and design of pipelines, compressors, expansion systems, control systems, and storages. In addition to the physical and technical aspects of the plant and system planning, economic considerations are also made: thus, optimal designs of equipment and systems can only be found with respect to economic constraints- in the sense of searching for and finding a cost minimum for the total cost of annuity as well as the specific and fixed costs. The book content is rounded out with aspects of the energy industry.

All significant correlations are systematically derived; here in the printed text, the most quintessential information is always stated with further details provided in the digital version. This ensures good readability of the text, without compromising the depth of the engineering academics. This book explicitly encourages the reader to conduct their own analysis in order to develop creative solutions that go beyond the standard routines, without simultaneously omitting them.



**The eBook**  
(accessible online in the Media Center)  
is fully searchable and provides  
additional content.

## Table of Contents

### Part I

1. Introduction
2. Gas Industry Specific Literature
3. Fundamentals of Thermodynamics
4. Fundamentals of the Energy Industry
5. Load Curves
6. Economic Evaluations  
Literature – Part I

### Part II

7. Interconnected Natural Gas Grid in Germany and Europe
8. Material Data
9. Planning with Real Gas Behavior
10. BWR Equation of State  
Literature – Part II

### Part III

11. Construction and Function of Gas Storage
12. Preliminary Design Methodology  
Literature – Part III

### Part IV

13. Flow Characteristics
14. Design of Gas Preheating Systems
15. Joule-Thomson Coefficients
16. Calculation of Preheating Capacity
17. Costs for Gas Pressure Regulator Stations
18. Optimization of Gas Preheating
19. Design and Sizing of Gas Preheating Systems
20. Pressure Reduction with Expansion Machines
21. Evaluation of Power Production in Gas Expansion Plants
22. Evaluation of Pressure Reduction Processes
23. Gas Preheating with a Gas Expansion/Air Compression Expansion System  
Literature- Part IV

### Part V

24. Determining the Pipe Friction Coefficient
25. Calculation of the Pressure Gradient in Gas Pipelines  
Appendix
26. Fluid Transport in Pipelines I

27. Fluid Transport in Pipelines II
28. Temperature Gradient  
Appendix
29. Transport Capacity of Gas Pipelines
30. Transport Capacity of Systems
31. Factors Influencing Capacity Determination
32. Influence of Roughness on Capacity/Costs
33. Model Offshore Pipelines
34. Pipeline Looping
35. Pipeline Storage
36. Calculation of Meshed Grids  
Literature – Part V

### Part VI

37. Model of a Turbo Compressor  
Appendix
38. Design of an Uncooled Turbo Compressor
39. Power Demand for a Compressor Station
40. Power Demand for a System
41. Optimal Outlet Pressure  
Appendix
42. Long-term Gas Procurement  
Literature – Part VI

## Advertising, bound-in inserts, bookmarks

All prices stated net in €. VAT must be added.

Ad formats in type area (bled formats on request)	Width x Height in mm in type area	Width x Height in mm in bled (+ 3mm trim allowance)	b/w	2c	3c	4c
Inside front cover, inside back cover	–	165 x 230	1,830.-	2,170.-	2,520.-	2,850.-
Back cover	–	161 x 235	1,910.-	2,250.-	2,590.-	2,930.-
Page opposite half title	135 x 204	165 x 230	1,750.-	2,090.-	2,430.-	2,770.-
Page opposite fly title	135 x 204	165 x 230	1,750.-	2,090.-	2,430.-	2,770.-
Page opposite foreword	135 x 204	165 x 230	1,750.-	2,090.-	2,430.-	2,770.-
Page opposite introductory greeting	135 x 204	165 x 230	1,750.-	2,090.-	2,430.-	2,770.-
Page opposite index of authors	135 x 204	165 x 230	1,750.-	2,090.-	2,430.-	2,770.-
Page opposite Table of Contents	135 x 204	165 x 230	1,750.-	2,090.-	2,430.-	2,770.-
Page opposite Imprint	135 x 204	165 x 230	1,750.-	2,090.-	2,430.-	2,770.-
1/1 page in contents, index of authors or text	135 x 204	165 x 230	1,550.-	1,890.-	2,230.-	2,570.-
1/2 page, portrait	62 x 204	77 x 230	930.-	1,270.-	1,610.-	1,950.-
1/2 page, landscape	135 x 97	165 x 110	930.-	1,270.-	1,610.-	1,950.-

Colour surcharges each Euroscale colour € 340.-  
each special colour € 450.-

Bound-in inserts each sheet € 1,800.-  
Trim allowance 3 mm per trimmed edge

Bookmarks € 3,500.-  
(format on request, production costs on request)

We are always pleased to help you!

**MEDIA CONSULTANT:**



**Wilhelm Sicking**  
Sicking Industrial Marketing  
Emmastr. 44  
45130 Essen  
Phone: +49 201 779861  
Fax: +49 201 781741  
e-mail: sicking-media@email.de

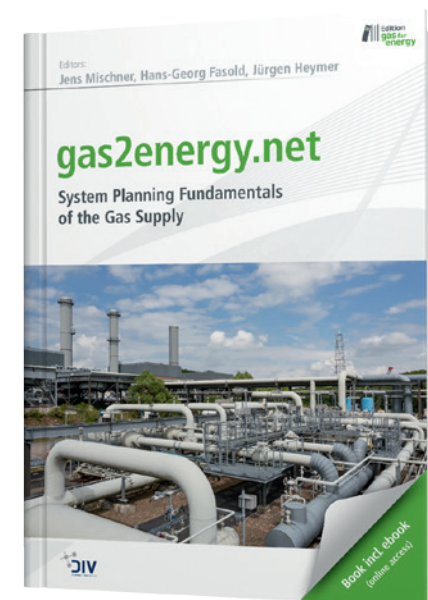


**Andreas Sicking**  
Sicking Industrial Marketing  
Kurt-Schumacher-Str. 16  
59872 Freienohl  
Phone: +49 2903 338570  
Fax: +49 2903 33850 82  
e-mail: sicking-media@email.de

**CUSTOMER SERVICE:**



**Eva Feil**  
DIV Deutscher Industrieverlag GmbH  
Arnulfstraße 124  
80636 Munich  
Phone: +49 89 203 53 66-11  
Fax: +49 89 203 53 66-99  
e-mail: feil@di-verlag.de

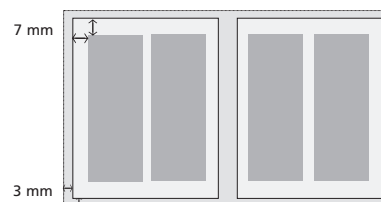


## Digital material for printing

- Data transmission:**
- Printable PDF/X-3
  - for bleed ads:  
3 mm trimming allowance on all pages
  - whitout crop marks
  - We recommend a distance of not less than 7 mm between the logo/text and the outer edge, in order to avoid bleeding into the type area.
  - The InDesign job options can be found on [www.di-verlag.de/services](http://www.di-verlag.de/services)

- Layout:**
- Submission of the following file formats may cause additional charges. In this case we will contact you.
- InDesign up to Version CS3
  - Photoshop up to Version CS3
  - Illustrator up to Version CS3
  - MS Word 2010

- Data transfer:** [anzeigen@di-verlag.de](mailto:anzeigen@di-verlag.de)  
or:  
<ftp://ftp.di-verlag.de>  
User: ftptransfer\_anzeigen  
Password: 1c6fU75G  
Please create a folder with the book title in the folder name.  
Name files as follows:  
Customername\_shortbooktitel\_Format.pdf  
e.g. customername\_g2e-EN\_148x210.pdf  
(Please state abbreviated short book title.  
Please use not more than 16 characters if possible)



**Important:**

We are unable to accept any guarantee or liability for accurate reproduction of colours unless you supply proofs (as per ISO 12647, Part 1 with Ugra/FOGRA media wedge). Please send proofs to:

**DIV Deutscher Industrieverlag GmbH**  
**Attn. Frau Eva Feil**  
**Arnulfstraße 124**  
**80636 Munich**  
**Germany**

**Bank account:** Deutsche Bank  
BIC: DEUTDEBBXXX  
IBAN: DE 14 1007 0000 0895 5262 00  
VAT ID No: DE 812 959 878

**Payment terms:** All invoices are payable net, in cash, without deduction within 15 days from date of invoice. A 3% discount is deductible in case of payment in advance. The invoice amount is started on the confirmation of order. Moratory interest will be charged on delay of payment. Direct debit facilities are available.

## Ads, bound-in inserts, bookmarks

Fax reply to +49 201 781741 or +49 2903 33850 82 or by e-mail to: [sicking-media@email.de](mailto:sicking-media@email.de)

Yes, we wish to book in the book gas2energy.net, English edition

an ad of the following format \_\_\_\_\_  
 portrait       landscape  
 b/w             2c             3c             4c

a bound-in insert  
Number of sheets \_\_\_\_\_

**Positioning:**       best possible       left-hand side       right-hand side

a bookmark

positioning in text (please state required chapter):  
\_\_\_\_\_

\_\_\_\_\_  
Name (company)

\_\_\_\_\_  
Address

\_\_\_\_\_  
e-mail

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Date and signature