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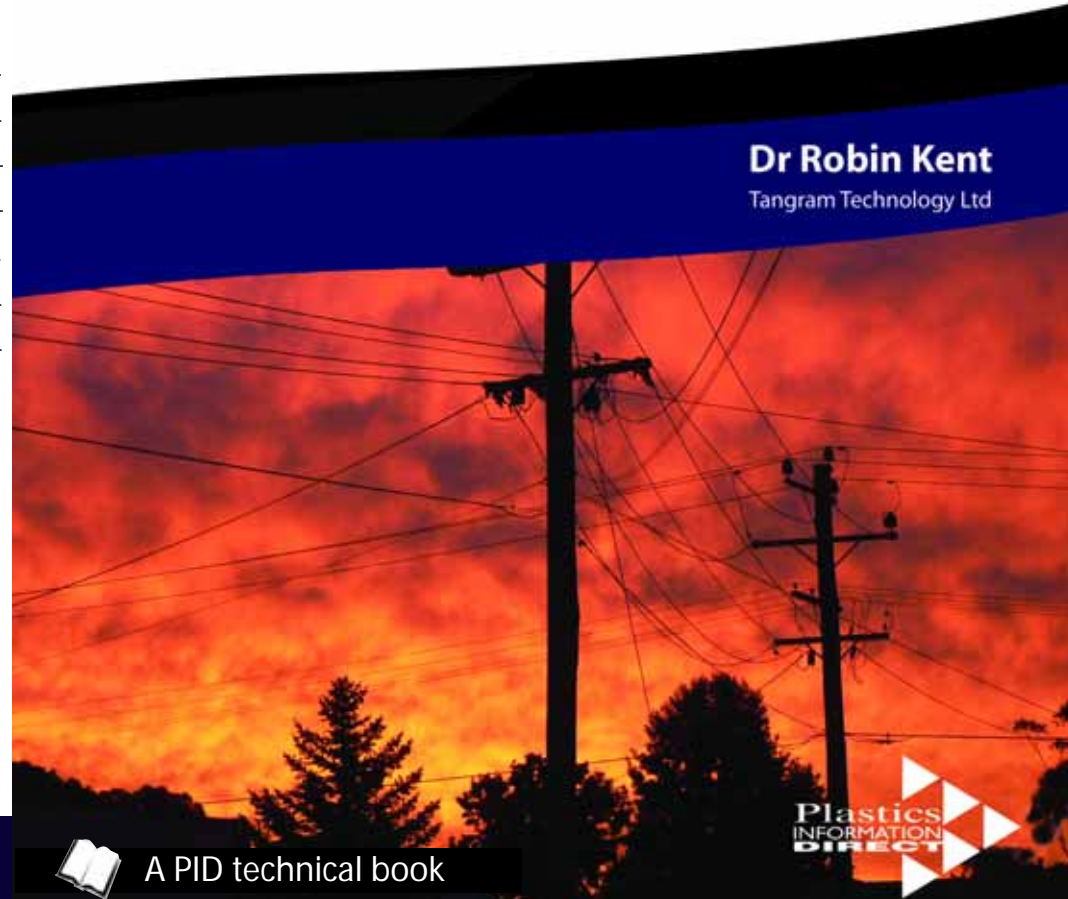
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# Energy Management in Plastics Processing

## Strategies, targets, techniques and tools

*Essential reading for everyone in the business of profitable plastics processing*

**Dr Robin Kent**  
Tangram Technology Ltd



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# ENERGY MANAGEMENT IN PLASTICS PROCESSING - STRATEGIES, TARGETS, TECHNIQUES AND TOOLS *By Robin Kent*

First edition, published 2008 by Plastics Information Direct.  
ISBN: **978-906479-03-9**, soft-backed, 271 pages, **\$160.00**

## WHO SHOULD READ THIS BOOK?

Everyone involved in the business of manufacturing plastics products, who needs to understand how energy usage affects their bottom line (as well as their planet), and wants to know how to reduce it. The practical advice contained in this book encompasses all the main plastics shaping processes, as well as ancillary services, buildings and offices, and the business and operational aspects of plastics processing.

## ABOUT THE BOOK

At a time when many plastics processors face global competition, the rising price of oil impacts both raw materials and energy costs. Current energy costs at manufacturing sites are generally around 4-8% of turnover, and for many plastics processors this will equal or even exceed their profit margin. Reading this book should change the way you look at every aspect of your business, not just your electricity bill.

It is important to understand where most energy is consumed. Switching off lights and turning down the heating can send out important messages to staff, but the savings will be small. Plastics processing machinery will probably account for two thirds of your consumption, so efficient motors and appropriate insulation can make a big difference. Established practices may be wasteful, and short-term investment decisions may have long-lasting consequences.

*There are two approaches to reducing energy bills: the 'cost/kWh' approach, and the 'cost/kg' approach. The first can provide immediate benefits through effective purchasing, but it is not a long-term solution. The second offers permanent savings based on engineering and technological change. This book concentrates mainly on the second approach.*

This is a workbook, designed to be used on a daily basis. Managers can evaluate their current strengths and weaknesses in energy management, and benchmark their consumption against real industry data, before implementing a strategy for improvement.

Guidance is provided on carrying out effective site surveys, and all areas of a typical processing operation are considered. Topics are broken down and presented in two-page sections, enabling managers to tackle and resolve each issue before moving onto the next. Tools are provided for monitoring progress, and key tips for energy-efficiency are offered throughout the book.

Following the advice provided in this book will enable managers of plastics processing operations to implement a structured energy management program. It describes simple practical changes which could permanently reduce energy consumption at a typical site by around 30%! Can you afford not to read it?

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- Introduction to energy management
- Energy benchmarking
- Targeting and controlling energy costs
- Services
- Processing
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- Buildings and offices
- Site surveys

## ABOUT THE AUTHOR

Robin Kent is well known in the plastics industry for his pragmatic approach to technology and change management. He has worked in extrusion and injection molding, as technical director of several large processors. He is now managing director of Tangram Technology, a consultancy providing specialist technical knowledge to the plastics processing and building products industries. Dr Kent lectures regularly on energy management, and he has carried out energy surveys and assessments in more than 200 companies around the world.

*There is no conflict of interest in being green. Energy efficiency can make the difference between profit and loss for a company.*

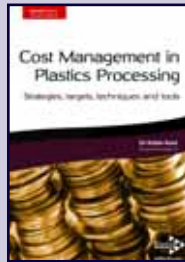
Some other titles available from Plastics Information Direct offering practical hands-on advice for processors:

## COST MANAGEMENT IN PLASTICS PROCESSING - STRATEGIES, TARGETS, TECHNIQUES AND TOOLS

A companion volume to Energy Management in Plastics Processing, this book was also written by Robin Kent for Plastics Information Direct, in the same readable style.

Already a best-seller, this book focuses on the visible and hidden costs of making plastics products and how to manage and reduce them. Challenging the old-fashioned principle of minimising labour costs, Dr Kent provides an alternative route map through all areas where costs can be reduced or eliminated. His advice covers all aspects of the product manufacturing process which influence cost, from initial design to dealing with waste.

Subjects scrutinized range from the principles of product costing to the hidden cost of inventory and overheads. A simple range of statistical tools are demonstrated, which will enable managers to implement the principles described. (Kent, 2007, 192pp, published by Plastics Information Direct)



\$140

## SPC - STATISTICAL PROCESS CONTROL IN INJECTION MOLDING AND EXTRUSION

According to the author of this new book, Chris Rauwendaal, "There is no question today that the use of SPC is an indispensable tool in world-class manufacturing operations". Based upon principles developed as long ago as the 1920s, SPC has been partially credited for the success of Japanese manufacturing in the 1970s and 1980s, and has enjoyed a widespread revival in other manufacturing economies as a consequence.

The basic idea which differentiates this book from many others is to teach SPC and its application to specific processes in an integrated fashion. Successful implementation of SPC requires an understanding of its principles and also practical process know-how, and the author is able to provide both. This book is an updated version of SPC in Extrusion, which was published more than a decade ago, expanded to cover injection molding as well. (Rauwendaal, 2008, 250pp, published by Hanser)



\$140

## THE MOULD DESIGN GUIDE

This new book provides design engineers, toolmakers, moulding technicians and production engineers with an in depth guide to the design and manufacture of mold tools that work successfully in production. The guide focuses on designs that will produce the required production rate and quality of moldings in a consistent and reliable fashion; the key components of a successful mold tool.

The introductory chapters outline the injection moulding process, basic moulding parameters and overall machine construction. Dedicated chapters give a full account of all the variables that should be taken into account. All the major types of mold tools are covered in the text including two plate, three plate, split, side core, stack and hot runner. Also, some less frequently used designs are discussed including multi plate and rotary side core molds. Additionally, there are chapters devoted to stress analysis and fatigue. (Jones, 2008, 556pp, published by Smithers Rapra)



\$250