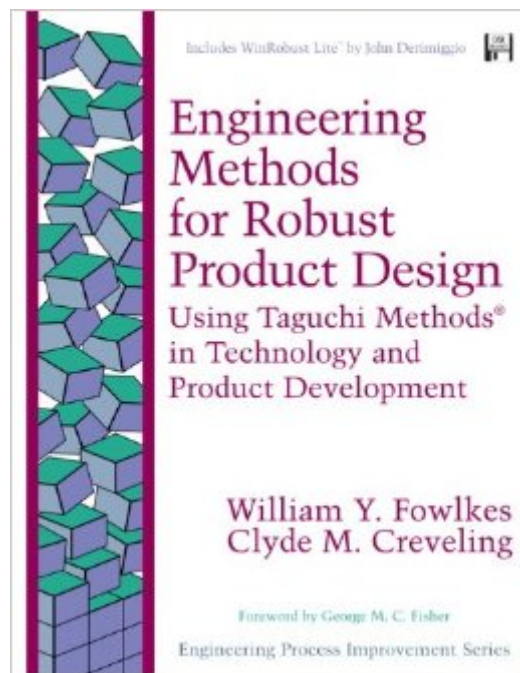# Engineering Methods For Robust Product Design: Using Taguchi Methods In Technology And Product Development

Synopsis

With practical techniques, real-life examples, and special software, this hands-on book/disk package teaches practicing engineers and students how to use Taguchi Methods and other robust design techniques that focus on engineering processes in optimizing technology and products for better performance under the imperfect conditions of the real world.The unique WinRobust Lite software included with the book, together with a number of practice problems, enables you to conduct and analyze Taguchi experiments by simplifying the tedious process of performing the many necessary computations.The book contains complete information on the process of engineering robust products that are insensitive to sources of variability in manufacturing and customer use. You will find detailed instructions for planning, designing, conducting, and analyzing the experiments that are used to optimize a product's performance under a variety of "stressed" conditions. An entire section focuses on designing products that achieve additivity, the property that reduces negative interactions. In addition, the book offers a systematic method for optimizing cost, quality, and cycle time. It even discusses the relationship of robust design to such other quality processes as Quality Function Deployment and Six Sigma.Numerous case studies, taken from the authors' extensive practical experience, illustrate how robust design theories and techniques actually work in the real world of product engineering. With the techniques described in this book as well as the WinRobust Lite software, you will be better able to design robust products that are high-quality, durable, and able to perform well in the marketplace.

Book Information

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Customer Reviews

I like this book because it gives a very good introduction into the concepts of noise- and control-factors. It treats the concept of "energy transformation" good, which is important to find the appropriate Ideal Function for your product.The examples are quite nice and most of them are illustrated by the p-diagram (parameter diagram). Unfortunately, examples are mainly form mechanical engineering. For me this is no drawback. Others may want to have a look on dedicated case studies from their field.To my taste the formulas presented appear a bit uglier than they really are.If you want to learn, how and why to use Taguchi's method, this book is an excellent tool for self-learning.

This book is quite readable, considering the topic, and does an excellent job of explaining the high level strategies of Dr. Taguchi's approach to optimization and experimentation. It also covers tactical issues like how to determine your ideal function and noise strategies.I've had several classes on this subject but found that the book helped clarify some of the finer aspects of the strategy and helped explain why the strategy should work. (e.g particularly the strategy for dealing with interactions).This book would not be sufficient to teach most people Robust Engineering, but it is a great reference.

The book is a good overview of Taguchi's methods with a few very good examples.

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