

Book Review: Solving Problems with TRIZ (An exercise Handbook)
by Dr. Vladis Kosse, Second edition, revised and expanded
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It is difficult to give a simple “buy” or “pass” evaluation of this book as it is somewhat tied to a particular TRIZ software product, the Innovation Workbench™. The material is presented at an advanced level in the sense that detailed familiarity with all TRIZ tools is assumed. In part, the usefulness of this book will depend upon a reader’s experience with certain TRIZ tools and the reader’s familiarity with a particular TRIZ software product. It is definitely not a “first read” or introductory text.

Dr. Vladis Kosse has been involved with TRIZ since the mid-1970s and has introduced it to students at Monash University in Melbourne and Queensland University of Technology in Brisbane, Australia. *Solving Problems with TRIZ: An Exercise Handbook* was written to provide class exercises for TRIZ students. These many examples are welcome as it is frequently very difficult for TRIZ instructors to find non-confidential materials to share with others who may be interested in exploring the TRIZ methodology.

Readers of the first edition may be interested in knowing about the changes:

1. An increase in the number of problems from 170 to 188.
2. An increase in the number of solved problems from 48 to 73%.

Some positives about the book:

1. A broad range of examples from many different technical fields
2. Use and illustration of all the tools (including Smart Little People Modeling) in the TRIZ tool kit. Very few other publications have done this.
3. It has sophisticated examples for experienced engineers that go beyond simple examples seen in many introductory texts, giving significant material for practice and thought.
4. It shows parallel TRIZ approaches to solving many problems, a real significant plus from a training standpoint.
5. Some of the engineering and many of the general examples are interesting and understandable at an anecdotal level. Note the Russian experience included publications tailored to children. TRIZ, like other topics, can be approached at a variety of levels and sophistications.

Having said this, there are a number of negatives that limit the usefulness of the book, especially to early stage TRIZ users.

1. Its examples typically require detailed knowledge of the particular engineering field being discussed. The jargon and terminology in a particular area will be totally foreign to someone not already knowledgeable in that particular field. The use of abbreviations, many of which may not be familiar to the reader, doesn't help.
2. There is reference to and use of many tools with no explanation. Obviously, if this book is directed at a TRIZ Master or a very experienced practitioner, that's not a problem. However, solving a problem with SMLP (smart little people modeling), with no explanation of the tool is very confusing.
3. Kosse uses many references, explains many tools, and discussed problem-solving paths related specifically to the Innovation Workbench™ software produced by Ideation International, which will be useless to those using no software or using competitive software from Invention Machine or Creax. Since this is an Ideation International publication, this is somewhat understandable, but it does limit the understanding and use of some of the example solutions. In this area, the term AFD is used without explanation. The use of IPSP ("Ideation Problem Solving Process") as something different from TRIZ is also confusing. A few readers will know that AFD means "Anticipatory Failure Determination™", an Ideation International way of applying TRIZ in reverse, but most will not. The use of ARIZ in solution examples will not necessarily be clear to readers of the text and there is little use of ARIZ in its traditional form within the Ideation software.
4. There are many answers provided to the book's problems, but not all. Since the book was presented as a learning tool, not a quiz, we would have preferred to have all of the problems answered.
5. The linkage with the Ideation software is made even more confusing because Kosse uses conventional Su-Field modeling in many of the example solutions (again, without explanation or introductory education). The Ideation software does not use Su-Field modeling in the normal way. So, the reader might infer that the two are linked, when in practice they are not.

There would be many ways of improving this book and make it much more useful to the average TRIZ practitioner:

1. Given the broadening of use outside the traditional technical area, perhaps a wider audience should be considered. Examples that would stimulate interest in other fields such as accounting, marketing, and management could be used.
2. Perhaps more information as to why this edition is worth the publication vis a vis the first edition might be appropriate, or notes on changes for users of the first edition.
3. Present a basic explanation of the various tools and several simple examples of each to at least give a framework for the reader to work with.
4. Some simple examples of linking TRIZ problem solving to other tools such as QFD and Six Sigma would also be beneficial.
5. Use more pictures and other graphics to illustrate the problem. This book assumes a great deal of knowledge about the technical systems being discussed, and illustrations would help immensely.

6. A simple algorithm or flow chart, showing the author's mental process for how to choose which tool in the TRIZ tool kit (without reference to a particular piece of software) would be a real positive addition.
7. An index provided linking specific TRIZ tools to particular examples to assist readers who may be looking for examples for a particular tool.
8. The addition of a CD or web site with reference links and pictures, diagrams, etc. could add value.

These improvements, added to *Solving Problems with TRIZ: An Exercise Handbook* would increase the size of the publication significantly. It would make it an excellent introductory and advanced text, replacing several other texts used to get this additional knowledge.