

PREFACE

The problem of the destructive effects of High-Altitude Electromagnetic Pulse (HEMP or EMP) on electronic and electrical equipment has been well known for more than 70 years and more than 50 years ago, this topic was declassified and began to be very actively discussed in the media.

All military equipment and critical equipment of special governmental services are reliably protected from such influences. There are many companies on the market that manufactures numerous EMP protection means that meet the requirements of military standards. It would seem that in such a situation, critical civilian infrastructure facilities (electrical power systems, water supply systems, communications, large medical centers, banks, etc.) should also be protected against EMP. But it turns out that this is not the case! Nowhere in the world are critical civilian infrastructure still protected from such impacts! Why?

The main reason is an attempt to use well-known military strategies, methods and protection means for protecting civilian infrastructure. Addition reason including expensive fakes, bureaucratic tricks, and simply misconceptions in the field of protecting critical civilian infrastructure from nuclear high- altitude EMP.

This book analyses the reasons why critical civilian infrastructure has been unprotected for more than 50 years, proposes new protection strategies and methods, as well as new protections means designed by author especially for the civilian sector.

The first part of the book is a lightweight version (without scientific and technical details) that summarizes the reasons for the lack of progress for 50 years in the EMP protection of civilian critical infrastructure and proposes a new strategy that will solve the problem

The second part of the book provides the scientific and technical information necessary to prove the validity of the author's conclusions and the new strategy he proposes. Descriptions of new technical means of EMP protection developed by the author on the basis of his strategy are also given.

These two parts are needed because decisions to protect critical civilian infrastructure are made by politicians and managers, and those decisions are executed by engineers. While the former need a common understanding of the problem and ways to solve it, the latter need technical details and scientific evidence. For the success of the business, the participation of both managers and engineers is necessary, so the author has taken care of both these categories of readers.

Until now, books on the EMP problems available on the book market have been in two separate categories: those written in popular form and those written as scientific monographs. The author decided to remedy this situation and publish a book intended for a very wide category of readers with very different scientific and technical levels.

This book can be an important tool to take a fresh look at the unsolved fifty-years-old problem and successfully solve it.

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