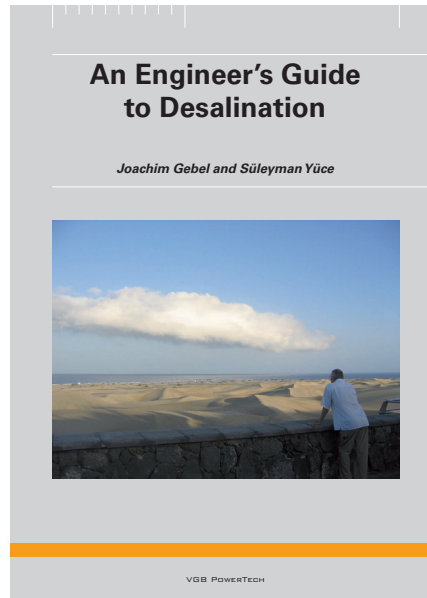


An Engineer's Guide to Desalination

Authors: *Joachim Gebel, PhD, and Süleyman Yüce, PhD*

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An Engineer's Guide to Desalination

Within the next years keywords such as water scarcity, water pollution and water aid projects will become more and more familiar to the broad public as well as put into focus. On the Global Environment Day in Beirut 2003, it was reported that the available water quantity per person in the MENA region (Middle East North Africa) in 1960 averaged out to 3,300 cubic metres. In 2003, this quantity had decreased to only 1,200 cubic metres. Water projects are discussed and realised all over the world. Already today water supply is closely connected to politics. In the future, the distribution of the limited water resources will depend worldwide on the sense of responsibility of international politics and the globalized society.

The author, Dr.-Ing. Joachim Gebel, has been involved in the field of seawater desalination and water treatment plant design for more than twenty years. Together with the co-author, Dr.-Ing. Süleyman Yüce, he founded the engineering company S.T.E.P. Consulting GmbH in 1996. During his job experience and as a result of the close co-operation with RWTH Aachen University and KRAFTWERKSSCHULE E.V. (POWERTECH TRAINING CENTER) he realised, that not only an appropriate technology to desalt seawater and a sufficient number of plants are essential for the water supply of a country suffering with water scarcity, but that the human factor, i.e. the personnel operating the facilities, is of crucial importance for a successful project. To fulfil this responsible and challenging task the skilled workers, technicians and engineers ought to be highly qualified.

With their book "An Engineer's Guide to Seawater Desalination" the authors present a comprehensive elaboration that reflects on all important subjects of seawater desalination technologies, from the thermo- and hydro-dynamical fundamentals to material problems as well as from the process design of MED, MSF and RO plants to the layout of the main components. A historical overview and a foresight complete the book. In total, the Guide contains more than 200 graphics and 60 data tables on nearly 600 pages.

Most parts of the book are field-tested and well proven in numerous training courses at KRAFTWERKSSCHULE E.V. where managing and operating personnel of seawater desalination plants have gone through training for several weeks. Many calculation examples and figures resulting from the fruitful discussions with the participants of these courses in conjunction with the great experience of the authors turn this book into a useful tool in order to assist all involved in the area of seawater desalination.

KRAFTWERKSSCHULE E.V. is pleased to offer to its students such a modern and detailed guide for further training programs in seawater desalination. Surely it will help skilled workers, technicians, engineers and managers to improve their understanding of the technology as well as do a better job.

Heinrich Nacke, General Manager, PowerTech Training Center, Essen, Germany

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