

Preface

The environment is closely linked with human civilization. In order to ensure preservation of the human race, a healthy environment must be maintained on our planet. There was a time, when the mankind was at the mercy of the whims, fancies, and benevolence of nature, but slowly we started conquering nature, at least partially. Nowadays, we are no less dependent on technology than nature. Technology has made lifestyles more comfortable, but it is putting a heavy tax on the environment. It is being realized that if proper attention is not paid to the environment, we will have to face a lot of health and survival problems. Hence, increasing effort is being put for developing green or environmentally friendly technologies to reduce the negative impact of technology on the environment.

Environmentally friendly machining is a part of green manufacturing. Machining is one of the widely used manufacturing processes, and it is evident that it has to be made environmentally friendly. This book reviews the major efforts made by the researchers to develop environmentally friendly machining. We have deliberately discussed compressed air-cooled machining in somewhat greater detail, because compressed air-cooling can be very easily implemented on the shop floor. However, the other green technologies discussed in the book also have immense potential and they should be explored and used in practice. The last chapter of the SpringerBrief provides directions for future research and development.

This book can be used as a part of a course on machining at senior under graduate and post graduate level. It can also form a textbook for an elective course on environmentally friendly machining. Practicing machine shop engineers and managers will also find it useful.

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