

# Preface

Phosphorus, sulphur, zinc dialkyldithiophosphates (ZDDP) are examples of some of the widely used additives in lubricants. However, the concern for zinc and phosphorus as environmental contaminants as well as their poor biodegradability has resulted in efforts to find more environmentally benign replacements for industrial applications. Vegetable oils are viable and good alternative resources because of their environmental friendly, non-toxic and readily biodegradable nature. With the increasing cost associated with the procurement and disposal of traditional cutting fluids, and the threats on environmental and operator's health, alternative cutting fluids and lubrication methods are needed. The effectiveness of various types of vegetable oils as lubricants and additives in reducing wear and friction is discussed in this book. The book also provides information on the utilisation of environmental friendly gaseous and vapour, refrigerated compressed gas, chilled air, solid lubricant, mist lubrication and minimum quantity lubrication (MQL) in machining. Engineers and scientists working in the fields of lubrication and machining will find this book useful.

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