

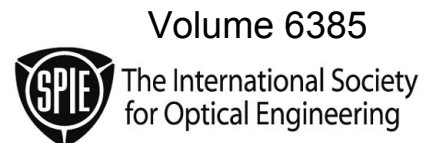
PROCEEDINGS OF SPIE

Environmentally Conscious Manufacturing VI

Surendra M. Gupta
Chair/Editor

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Introduction

Environmentally Conscious Manufacturing (ECM) is concerned with developing methods for manufacturing new products from conceptual design to final delivery and ultimately to product recovery, and—only as a last resort—end-of-life disposal, such that all the environmental standards and requirements are satisfied.

Industrialized countries all over the world are facing a serious aftermath from the rapid development that has taken place in the last few decades. In recent years new environmental awareness and recycling regulations have been putting pressure on many manufacturers and consumers, forcing them to produce and dispose of products in an environmentally responsible manner. Government regulations are becoming more pervasive and thus many manufacturers feel pressured to use recycled materials whenever possible. Occasionally they are even required to take care of their products at the end of their useful lives. This has created a need to design products that are friendly toward the environment and easy to disassemble and recycle. To that end there is a need to develop algorithms, models, heuristics and software for addressing recycling and other end-of-life issues (such as the economic viability and logistic aspects of disassembly, recycling, and remanufacturing) for ever-increasing numbers of discarded products.

The sixth international conference on ECM that took place in Boston, Massachusetts, USA from October 1-3, 2006 addressed the above-mentioned needs. Academicians and the industrial community in both the United States and abroad participated in this timely conference. The conference provided a forum for the latest developments in the field of ECM.

This volume is a compilation of the papers selected for the conference. They represent the wide variety of research fronts in ECM. Based on the quality and variety of papers included in this volume it is clear that the conference was a success. It is my hope that this volume will continue to inspire further research in ECM and motivate new research interest in this all too important field of study.

The conference and this volume would not have been possible without the devotion and commitment of the authors. They have been very patient in preparing their manuscripts. I would also like to express my appreciation for having been given the opportunity to organize and chair this conference. I specially want to thank the SPIE staff for providing seamless support in unraveling all of the obstacles that arose in putting the conference and this volume together.

Surendra M. Gupta

