

Preface

Applied mechanics is a branch of the physical sciences and the practical application of mechanics. Applied mechanics examines the response of bodies (solids and fluids) or systems of bodies to external forces. Some examples of mechanical systems include the flow of a liquid under pressure, the fracture of a solid from an applied force, or the vibration of an ear in response to sound. A practitioner of the discipline is known as a mechanic. Applied mechanics, as its name suggests, bridges the gap between physical theory and its application to technology. As such, applied mechanics is used in many fields of engineering, especially mechanical engineering. In this context, it is commonly referred to as engineering mechanics.

Material is anything made of matter, constituted of one or more substances. Wood, cement, hydrogen, air and water are all examples of materials. Sometimes the term "material" is used more narrowly to refer to substances or components with certain physical properties that are used as inputs to production or manufacturing. In this sense, materials are the parts required to make something else, from buildings and art to stars and computers.

Manufacturing is the production of goods for use or sale using labor and machines, tools, chemical and biological processing, or formulation. The term may refer to a range of human activity, from handicraft to high tech, but is most commonly applied to industrial production, in which raw materials are transformed into finished goods on a large scale. Such finished goods may be used for manufacturing other, more complex products, such as aircraft, household appliances or automobiles, or sold to wholesalers, who in turn sell them to retailers, who then sell them to end users – the "consumers". Manufacturing takes turns under all types of economic systems.

2013 International Conference on Applied Mechanics, Materials, and Manufacturing (AMMM 2013) will be held on August 17-18, 2013, Hong Kong.

AMMM 2013 will be the most comprehensive conference focused on the various aspects of advances in Intelligent Systems and Control. Our conference provides a chance for academic and industry professionals to discuss recent progress in the area of Intelligent Systems and Control. The selected, peer reviewed paper from AMMM 2013 focus on four topics: (1) Applied Mechanics, (2) Materials Science and Materials Processing Technology, (3) Design and Manufacturing, and (4) Computer Aided Design for Materials and Manufacturing. We expect that the conference and its publications will be a trigger for further related research and technology improvements in this importance subject.

Special thanks to the authors, the committee members and the sponsors. I hope all the participants can obtain useful information from the proceedings.

Dayun Xu

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