

Preface

The mechanical properties of a material are those properties that involve a reaction to an applied load. The mechanical properties of metals determine the range of usefulness of a material and establish the service life that can be expected. Mechanical properties are also used to help classify and identify material. The most common properties considered are strength, ductility, hardness, impact resistance, and fracture toughness. Most structural materials are anisotropic, which means that their material properties vary with orientation. The variation in properties can be due to directionality in the microstructure (texture) from forming or cold working operation, the controlled alignment of fiber reinforcement and a variety of other causes. Mechanical properties are generally specific to product form such as sheet, plate, extrusion, casting, forging, and etc. Additionally, it is common to see mechanical property listed by the directional grain structure of the material. In products such as sheet and plate, the rolling direction is called the longitudinal direction, the width of the product is called the transverse direction, and the thickness is called the short transverse direction. The grain orientations in standard wrought forms of metallic products are shown the image.

2013 2nd International Conference on Mechanical Properties of Materials and Information Technology (ICMPMIT 2013) will be held on August 17-19, 2013, Hong Kong.

2013 2nd International Conference on Mechanical Properties of Materials and Information Technology (ICMPMIT 2013) is the premier forum for the presentation of new advances and research results in the fields of Mechanical Properties of Materials and Information Technology. The conference will bring together leading researchers, engineers and scientists in the domain of interest from around the world.

Based on the review reports, about 133 papers were accepted to be presented in ICMPMIT2013 by the chairs. This proceeding contains the selected papers which discuss the most interesting and up-to date topics, for example, Advanced Materials and Processing Technology, Product Design and Manufacturing Technology, Applied Mechanics and Measurement Technology, Mechatronics, Automation and Signal Processing, Communication and Information Technology in Engineering and so on.

All the authors were asked to prepare extended contribution in order to allow for possibly comprehensive descriptions of the issues. We express our thanks to all the members of the Keynote Speaker, General Chairs, Programs Chair, International Committee and Volunteers who worked so hard to prepare the conference ICMPMIT 2013.

Zhang Jun and Honghua Tan

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