

Preface

This special edition is dedicated to the results of engineering research properties of materials for various branches of engineering as well as construction.

Steel, alloys, welding of dissimilar steels, mechanical properties and microstructure of structural metals, review of metal additive manufacturing in the automobile industry, etc. are the topics of research of the first chapter.

The next two chapters are dedicated to polymer and composite materials and also to special nanomaterials such as nanocrystalline copper ferrite and aerogels containing copper nanoparticles and graphene.

The fourth chapter presents research results on building materials properties and the creation of an artificial neural network model for the stress concentration factors analysis in structural joints.

The special publication will be useful to specialists in machinery, materials science and construction.