

Preface

The special issue is dedicated to some actual engineering achievements analysis in modern machinery design and construction.

Analysis of biomaterial coating of stainless steel as a corrosion inhibitor in conditions of saliva medium, investigation of the substitution effect of mussel shell powder on the mechanical properties of concrete, numerical modelling approach for the tensile test of materials, and development of vibration-damping strategies for a motor pump assembly, utilizing advanced numerical techniques to improve operational stability and minimize undesired vibrations are presented in this edition. Development of the extrusion-based food 3D printer machine, results of experimental study of the liquid cold plate cooling system for lithium-ion battery in the electric vehicle, and research on the effect of thermal coating temperature on the fatigue performance of wind turbine blade bolt connections are also presented here.

The special edition will be helpful to specialists in machinery, construction, and numerical approaches in the analysis of the mechanical properties of engineering materials.