

Microstructural physical model of bones

Zdzisław Dzwonnik, Jerzy Jateczak, Leszek Wojtczak

The publication presents microstructural model of bones. It was assumed that a bone is a system of crystal elements distributed regularly in certain junctions of a spacious network introduced the compact bone. The binding of crystal elements by means of collagen-beams was made through microstructural forces of the effects of regular network junctions. The mass of vibrating elements is a mass of crystal spaces of elastic forces are derivatives of elastic energy of a substance binding hydroxyapatite. In the first approximation of this model it is assumed that vibrations of hydroxyapatite are not induced in resonance.