Research materials and structures of space vehicles by multifrequency measuring system on the basis of eddy current transducers

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Strengthening of parts and units of machines, increased reliability and longer service life is an important task of modern aerospace industry. The aim of research was to apply boride coatings on surface of steel parts. Timeliness is subject to necessity to harden surface of steel used in high-load conditions. Samples of coatings on 65 G grade steel, applied by HFC-heating, were obtained. Research of samples with different coatings by means of metallurgical microscope was carried out. Data on samples with different coatings research by means of an eddy current measuring system was obtained and conclusion on electrical conductivity distribution along the sample surface depending on flux quantitative content during boriding was made.