

## **FUNCTIONALLY GRADED MATERIALS – MULTISCALE MODELLING**

Summary – The paper presents a method for multiscale modelling of graded materials, on the example of fiber composite with varying fiber diameter. The aim of modelling was to determine the macroscopic material properties, which define changes in graded material. Calculations were based on stress analysis by means finite element method and numerical homogenization.

Keywords: multiscale modelling, numerical homogenization, graded materials, fiber composites, finite element method