Research of Renovation Possibility of Machine Tools Damage by Adhesive Bonding Technology

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Nowadays, there is a huge number of machine tools of various damage degree all over the world and it is necessary to renovate them. Some parts can be renovated by the adhesive bonding technology. However, it is necessary to quantify the degradation process. The aim of experiments was to set the influence of cutting fluid on the strength changes of adhesive bonds. In cases of satisfactory results it is possible to use with success the adhesive bonding technology for the renovation of damaged parts of machine tools. On the basis of the performed experiments it can be said that the resultant strength of adhesive bonds decreases during the time at simultaneous acting of the cutting fluid. From the experiments results the same influence on the degradation process of various adhesives was not proved. It came to a stagnation of the adhesive bond strength decrease after 75 days on the average.

Keywords: adhesive bonding technology, cutting fluid, degradation, failure area, renovation

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