
Evaluation of hoisting machines performance in the presence of fatigue cracks

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The article deals with theoretical contributions of assessing stress-strain state of metal elements of hoisting machines (PMG) in the presence of such damages as fatigue cracks. We assessed the operability of the damaged crane fabricated metals and presented the results of this analytical research analysis. The findings of the research provide us with a technique of assessing hoisting machine operability when detecting fatigue cracks in their fabricated metals. The research has focused on actions for extending the service life of the crane fabricated metals having fatigue cracks, including repair work for strengthening the damaged parts of hoisting machines by filling-in cracks in vertical plates of beams, in cord plates and in plates of fastening ally arms. We offer a checking calculation method for fabricated metals, taking into account repair work done.

Keywords: framed metals, hoisting machines, checking calculations, fatigue cracks, performance assessment.

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