

English summary

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Statistical prediction of fatigue life

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Summary. The paper presents some of the statistical fatigue design methods which are in common use today. The author has developed a method which is based on the distribution of the initial cracks. This method is discussed more closely. In addition to the fatigue limit, this method is applicable in predicting the finite fatigue life also. The effect of various technological effects due to different fabrication methods has been described. The paper demonstrates that only statistical design methods provide adequate reliability in fatigue design.

Key words: fatigue strength, statistical size effects, prediction of fatigue life, technological size effect

