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Non Liner Phenomena For Stick–Slip Motion Which Take Shape Latent Period of Fretting-Wear Into Nominal-Fixed Joints

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Behaviour of nominal-fixed joint is describe by specific laws for frictional reciprocated interaction. It is defined as micro-slip and stick-slip between contacting surfaces. Micro-slip, as initial condition, consist in an elastic and the plastic deformation and it is important for evolution of fretting-process.The real contact conditions at oscillatory motion undergo changes in the result of fretting cycles: modification stick-slip regime, increasing or decreasing field of sliding and normal pressure of interface. All this and also cycles of preliminary displacement regime and contact fatigue into stick zone is determine a latent period of fretting. Mathematical model of nominal fixed frictional contact (NFFC) at this loading by shear force in plane of contact was propose. This model on the basis of principal thesis of theory microplastic deformation for frictional contact. Put into operation new basis criterion for description plastic property of contact-parameter of plasticity. Transformation of this parameter in boundary preliminary displacement at cyclic loading give information about evolution of fretting damage in mechanical joints,flanges, wires, steel ropes, medical implants and the like.

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