Simulating the interaction of cylindrical and spherical bodies with coatings when there is wear and heat release

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The scheme of the contact between cylindrical and spherical solids and soft coatings has been considered. Using a nonlinear expression for the friction factor dependence on the contact pressure and temperature of coating the relation of maximum contact temperature and contact pressure has been obtained. The critical speed values at which submelting one of the coatings occurs have been found. The results can be used for solving many engineering problems because they are presented as simple formulae.

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