The determination of contact pressure for the cylindrical bodies in the inter-actions of bodies and coatings

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The research deals with the problem of determining the contact pressure between two contacting cylindrical bodies, each body being covered with a thin coating. We consider the contact scheme between cylindrical solids and soft coatings and propose a calculation algorithm, which allows us to simplify the contact scheme of cylindrical bodies with thin elastic soft coatings for the large number of phenomena occurring in the contact area to be considered. Taking into account the previously suggested formula describing the nonlinear friction, we found the contact pressure. We determined conditions under which there is no catastrophic wear.

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