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**DEPENDENCE OF ROLLING FRICTION COEFFICIENT FROM COMPRESSING FORCE AND CURVATURE OF CONTACTING SURFACES**

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***Research methodology.*** *For the development of the article the method of research of contact of two cylinder bodies has been used in obedience to the publications of Vorob’ev Yu. V., Petrukovec M. I., Sviridenyuk A. I. and Spicyna I. N., and contact durability — Föppl L., Heinrich G., Desoyer K, that at the modern development of computer technique allows to bring in certain corrections in the method of synthesis of cyclic mechanisms taking into account the values of coefficients of rolling friction.*

***Results.*** *The researches of contact of roller with a protuberant profile show that the size of half-width of the contact area increases with the increase of radius of profile curvature and arrives at a maximum at a contact with a plane, and at the contact of with a concave profile it is opposite — with diminishing of radius of contacting surface, the size of half-width of contact area increases. Therefore for project calculations you should apply the specified value of the coefficient of friction according to the resulted graph or table.*

***Novelty.*** *On the basis of existent methods of calculation of contact strip width and contact tensions, the method of the specified calculation of coefficients of rolling friction has been developed depending on the geometrical form of contacting bodies and operating efforts in the area of contact.*

***The practical significance.*** *The suggested method of calculation of the specified values of coefficients of rolling friction allows to perfect the methods of synthesis and can be used for the development of new or the modernization of existent mechanisms with higher kinematics pairs.*