

عنوان مقاله:

SURFACE TEMPERATURES AND FRETTING CORROSION OF STEEL UNDER CONDITIONS OF FRETTING CONTACT

محل انتشار:

سومین کنگره ملی خوردگی ایران (سال: 1372)

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نویسنده:

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خلاصه مقاله:

A study has been recently been completed on the tribological behavior of thin polymeric films under conditions of fretting contact. The initial results of that research – which included the development and use of a new device coupled to an infrared radiometric microscope – were presented at the Japan International Conference in 1990 and published in the conference proceedings. That study grew out of research conducted over the past several years to investigate why some polymer coatings quickly while others protect steel against fretting corrosion and fretting wear. Detailed findings of the more recent research – including direct measurements of surface temperatures produced when polymer-coated steel specimens are subjected to fretting contact against a sapphire optical flat, photo/video observations of the contact regions and measurements of friction wear and real area(s) of contact – will be presented in future papers. However in the initial phase of this research, it was decided to carry out some experiments with uncoated steel specimens as a basis for later comparison of polymer film effects. Using the IR microscope system, direct measurements of surface temperatures produced by fretting contact of steel on sapphire were made. The results of this initial study were interesting to us. Appreciable quantities of iron oxides were quickly produced in the contact zone while the measured surface temperatures were generally quite low.

کلمات کلیدی:

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