Morphological characteristics of the wear of MoS_2 filled nylon 6 drawn sheet

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The purpose of the draw process is to convert relatively weak sheets to sheets with greater molecular orientation and the resulting greater strength. Friction and wear properties of MoS2-filled drawn nylon 6 sheets were investigated for anti-wear property. Drawing MoS2-filled nylon 6 sheet was made by single-stage uniaxial drawing process. Friction coefficient of drawing MoS2-filled nylon sheet was measured on a dry condition. The result showed that the friction coefficient was slightly decreased in drawing process. It indicated that anti-wear property of the MoS2-filled nylon 6 sheet had not difference in wear by drawing process. In the tribological point of view, friction coefficient of the drawing MoS2-nylon 6 sheets was approximately 0.15, and then friction coefficient of the drawing MoS2-nylon 6 sheet was stable curve for 120min. But friction coefficient of non-drawing samples shown more smooth line curve after 30 min. Volume loss of drawing MoS2-filled nylon 6 sheet was lower from that of pure nylon. As a result of this investigation, we remarked that wear-resistant of the MoS2-filled nylon 6 sheet has made progress by drawing process.