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Self-lubricating Composites Containing MoS_2: A Review

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Abstract

Consistent and concise literature about self-lubricating metallic composites containing MoS_2 is very scarce in particular those analyzing the possible reactions during processing, which are often neglected or even unknown in a variety of publications. In some situations, the composites present a poor lubricating behavior not related to environmental parameters or surface properties, but due to the simple fact that the solid lubricant added is not there anymore, i.e. it has reacted with the matrix or other additives. This review compiled publications from 1945 up to 2017 about the research developments in metal matrix self-lubricating composites containing MoS_2. Information on the tribological properties of such composites according to the varied matrixes, contents, processing conditions, testing temperatures and atmospheres are presented.

Keywords: Metal matrix composite; Solid lubricant; Friction measurement; Wear measurement.

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