

# 26th National Symposium on Cryogenics and Superconductivity

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## Wear properties of Polytetrafluoroethylene (PTFE) at cryogenic temperatures

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### Content :

Liquid lubricants like oil and grease cannot be used for cryogenic applications, since they solidify at these low temperatures. For these applications, solid lubricants like Polytetrafluoroethylene (PTFE) and its carbon composites are extensively used. In this experimental study, the tribological properties of cryotreated and untreated PTFE and its composites are studied at room and cryogenic temperatures. A dedicated pin on disc type cryotribometer has been designed and developed to study the wear. Results of tribological experiments carried for fixed time duration of 10 minutes, constant speed of 400rpm and track diameter of 60mm under the applied load of 10N are studied and analysed.

Primary authors : Mr. NADIG, Durgesh (Indian Institute of Science, Bangalore)

Co-authors : Mr. MAHISHI, Chandan (Indian Institute of Science, Bangalore) ; Mr. GEORGE, Paul (Liquid Propulsion System Centre, ISRO, Valiyamala) ; Mr. H, Sudharshan (Indian Institute of Science, Bangalore) ; Mr. V.K, Pavan (Indian Institute of Science, Bangalore) ; Mr. DUBEY, Anshuman (Ducom Instruments, Bangalore)

Presenter : Mr. MAHISHI, Chandan (Indian Institute of Science, Bangalore)

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