

Tuesday Morning, April 21, 2026

Exhibitors Keynote Lecture

Room Town & Country A - Session EX-TuM

Exhibitors Keynote Lecture

Moderator: Peter Kelly, Manchester Metropolitan University, UK

11:00am EX-TuM-1 **Thin Film Tribological Coatings to Enhance the Durability of Engineered Bearings and Industrial Motion Components**, **Ryan Evans** [ryan.evans@timken.com], The Timken Company, USA **INVITED**

Thin film tribological coatings can substantially improve the wear resistance of bearings and industrial motion components. This talk reviews proven thin-film solutions, including chemical conversion treatments such as black oxide, electrodeposited Ni-W coatings, and reactively sputtered diamond-like carbon (including WC/a-C:H), and examines their real-world performance on bearings and gears. Case studies cover wind-turbine bearing wear reduction, cost-effective Ni-W implementations, and ball-coating options. The presentation addresses coating-lubricant interactions, coating selection criteria, and implementation challenges required to translate laboratory results into field reliability gains. Attendees will gain actionable guidance and insights for specifying coatings that deliver measurable durability and maintenance benefits in industrial motion applications.

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