Fan Bearing Varieties and Thermal Analysis

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Fans are utilized in many areas across the cement making process, each with varying airflow and pressure requirements. As a result, the equipment design and bearing arrangements can differ greatly as well. This paper explores the variety of bearing types and configurations found in the overall fan market. Installation and performance attributes of each bearing type are reviewed, including ease of mounting, effectiveness of sealing, axial displacement control and running torque. An example bearing system analysis for a fan is presented, including an analysis of the heat generation and operating temperatures via advanced thermal calculations.