Development of Simulator to Accurately Reproduce Snow Accretion Phenomenon for Railway Vehicles Traveling in Snowy Areas

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When accreted snow drops off train bogies, it might damage railway ground facilities along tracks, train devices, etc. To establish countermeasures against such snow accretion damage, we have developed a snow accretion analysis method to understand the snow accretion process. The "snow accretion analysis method" developed in this research consists of an "airflow calculation", a "trajectory calculation" and a "snow accretion calculation". In this research, we performed two kinds of snowfall wind tunnels to validate the proposed simulator.