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# Performance analysis of a solid desiccant assisted hybrid space cooling system using TRNSYS

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## ABSTRACT

The traditional air conditioners suffer from performance degradation especially in humid conditions. This is due to fact that the excess moisture level in ventilation air considerably increases latent cooling load of the space to be conditioned. The use of desiccant integrated vapor compression hybrid cooling system can alleviate this problem by controlling the temperature and humidity separately. It also reduces energy consumption for obtaining desired thermal comfort. In the present study, TRNSYS simulation studio project has been developed to perform the simulations of the desiccant dehumidifier coupled vapor compression hybrid system for different configurations in summer cooling season. Experimental measurements are also carried out to observe the influence of operating parameters on system performance. The obtained results show that

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