Spin filters reduce switchgear failure

Tshwane-based Rand Technical Services (RTS), offers a robust, highly-effective inertial spin filter technology for industrial dust and exhaust separation. Ian Fraser, managing director of RTS, says : "Spin filter units are a high-efficiency application of cyclone technology. Air to be separated is blown through a module that consists of a series of small vortexes. The air flow is induced to spin by fixed vanes at the entry to the vortexes, and centrifugal force then drives the dirt particles to the outside of the vortex." The dirt laden air is purged through vents built into the outside of each aperture. A purge fan is used to keep the dirt laden waste air in flight, from where it is either dispersed or collected as required. Clean air then exits to process. The units are highly energy-efficient, as only the auxiliary purge fans that direct the 'dirty' air out of the air stream require power. According to Fraser, the spin filters are constructed in modules that can be built up into large panels, sized to match required air flow and so offering an unlimited capacity on engineered systems. The smallest available unit, containing one inertial spin filter block, handles from 1000 to 2500 Nm3 per hour , and upper range capacity is only determined by the application, and the available space. Spin filters provide sufficient filtration for most environmental applications, such as transformer rooms and control rooms, without the addition of secondary filters. A substantial reduction in switchgear and other electrical system breakdown is claimed once spin filters are installed.

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