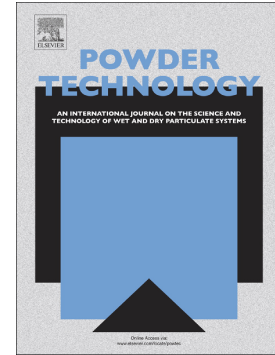


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# Effects of deswirlers position and its centre body shape as well as vortex finder extension downstream on cyclone performance

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## Abstract

The performance of a cyclone is studied when changing the position of the deswirlers in the vortex finder, its centre body shape and a downstream vortex finder extension. This is done with simulations applying a Reynolds stress model for the turbulence. An extension of the vortex finder (from  $2.64 d_{vf}$  to  $6.8 d_{vf}$ ) has almost no effect on cyclone pressure drop or collection efficiency. Moreover, the extension does not affect the pressure losses in the vortex finder. The closer the deswirlers are installed to the vortex finder inlet the more significant are their effects on cyclone performance. A streamlined ellipsoidal shape of the deswirlers centre body is preferable to a cylindrical

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