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(57) Abstract :
Cyclone separator is the device used Tor dust removal. In contrast to the conventional design,' which only has one feed intake, the cyclone separator in this study has two inlets. The effectiveness of the cyclone separator's particle collection was examined in relation to the inclusion of a secondary intake. By giving the cyclone separator twin inlets, the centrifugal force acting on the particles was changed, changing the effectiveness of particle collection. It was created as a cyclone separator with two inlets. Its performance was examined by experiments using the particle-to-air ratio (particle concentration), the gas flow rate ratio between the two inlets, and the individual gas flow rates in each of the inlets as the parameters. The real performance of the suggested cyclone separator was seen after conducting testing, and it differed in how well it performed in collecting the particles from a gas-solid combination. The entrance gas velocity, collecting efficiency, airflow measurements, and flow rate of air were calculated to investigate the operation of a cyclone separator. The two inlet cyclone separator reveals that the dust is easily removed, centrifugal force is increased, particle collection efficiency becomes eventually quicker and so the time taken for the entire process is reduced.

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