

Title (en)
CYCLONE RECOVERY SYSTEM AND CYCLONE SEPARATOR WITH PERFORATED THIMBLE

Title (de)
RÜCKGEWINNUNGSANLAGE MIT ZYKLON UND ZYKLON MIT PERFORIERTEM TAUCHROHR

Title (fr)
SYSTEME DE RECUPERATION A CYCLONE ET SEPARATEUR CYCLONE A MANCHON PERFORE

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Abstract (en)
[origin: WO9637310A1] Apparatus and process for extracting powder from a stream of powder laden air drawn from a manual powder spray booth in a first embodiment, with a cyclone recovery system, typically containing two cyclone separators (28a, 28b) for separating the powder from the air. The resulting cyclone cleaned air is drawn through a prefilter section (32) by a fan section (34) having serially stacked fans. The prefilter section further separates powder from the cyclone cleaned air. The resulting prefilter cleaned air is next filtered in a final filter section (38) and exhausted to the air surrounding the cyclone recovery system. The invention also relates to an improved cyclone separator (28b) which incorporates a perforated thimble (78) between the downwardly, and upwardly moving vortexes in the cyclone separator (28b) to reduce the pressure drop across the cyclone separator (28a). In a second embodiment, a stream of powder laden air is drawn from an automatic powder spray booth (202) with a cyclone recovery system typically incorporating horizontally disposed cyclone separators (248a-c), each with a perforated thimble (300), a filter module (224) with cartridge filters (226a, 226b), a fan module (230), and a final filter (234). The cyclone separators (28a, 28b) are preferably arranged vertically and have a breakaway design to facilitate cleaning.

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