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(54) Title: IMPROVED PROCESS FOR RECOVERY AND RECYCLE OF AMMONIA FROM A VAPOR STREAM

(57) Abstract: A process for the recovery of unreacted ammonia from the effluent from a reaction zone used to produce acrylonitrile or methacrylonitrile comprising quenching the reactor effluent with an aqueous solution of ammonium phosphate in at least two stages, thereby capturing the ammonia component of the effluent. The captured ammonia may be recovered by heating the aqueous ammonium phosphate, which then may be recycled. Contaminants present in the aqueous ammonium phosphate may be removed, for example by solvent extraction or wet oxidation, prior to recycle.



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