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(54) Title: THERMAL PROCESS FOR REDUCING THE CONCENTRATION OF DINITROGEN DIFLUORIDE AND DINITROGEN TETRAFLUORIDE IN NITROGEN TRIFLUORIDE

(57) Abstract: The concentration of undesirable impurities dinitrogen difluoride and dinitrogen tetrafluoride in a nitrogen trifluoride mixture are reduced by heating the mixture in the gas phase in a vessel with an inner wall selected from electropolished metal, ceramic alumina or sapphire, and recovering a nitrogen trifluoride product having reduced concentration of such impurities. The process is carried out at a temperature of from about 150°C to about 300°C and the vessel is preferably free of packing and has a minimized ratio of the vessel interior surface area to vessel volume in the region of the vessel where the heating step is carried out. The process optionally further includes the step of contacting the inner wall of the vessel with a passivating composition comprising fluorine gas.



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