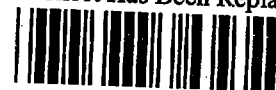


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As printed

**54) Title: PROCESS FOR PLASMACHEMICAL TRANSFORMATION OF N<sub>2</sub>O INTO NO<sub>x</sub> AND/OR INTO DERIVATIVES THEREOF**

**54) Titre: PROCEDE DE TRANSFORMATION PLASMACHIMIQUE DE N<sub>2</sub>O en NO<sub>x</sub> ET/OU EN SES DERIVES**

**57) Abstract**

The present invention relates to a process for the transformation of N<sub>2</sub>O into NO<sub>x</sub> (x = 1 or 2) and/or into its derivatives, comprising forming a gas jet to be treated including N<sub>2</sub>O; directing said jet into the interstitial space (11) of at least two divergent electrodes (10a-10f) to which an electric voltage is applied in order to create at least one arc and/or one electric discharge and being part of a low temperature plasma generator (4), the latter operating by formation of electric discharges sliding between the electrodes (10a-10f), so that the gas circulates along the electrodes from the area (11) of discharges and/or arcs from the area of arcs and/or discharges where said electrodes are the closest to each other; and recovering the gas containing the NO<sub>x</sub> formed. The invention also relates to a device for implementing such process. Application: N<sub>2</sub>O valorization.

**57) Abrégé**

La présente invention a pour objet un procédé de transformation de N<sub>2</sub>O en NO<sub>x</sub> (x = 1 ou 2) et/ou en ses dérivés consistant à former un jet de gaz à traiter comprenant le N<sub>2</sub>O; à diriger ce jet dans l'espace interstitiel (11) d'au moins deux électrodes divergentes (10a-10f) mises sous tension électrique, de manière à créer au moins un arc et/ou une décharge électrique et appartenant à un générateur (4) de plasmas basse température, ce dernier fonctionnant par formation de décharges électriques glissantes entre les électrodes (10a à 10f), de telle sorte que le gaz circule le long des électrodes depuis la zone (11) de décharges et/ou arcs à partir de la zone d'arcs et/ou décharges où ces électrodes sont les plus proches l'une de l'autre; et à récupérer le gaz comprenant le NO<sub>x</sub> formé. L'invention concerne également un dispositif pour la mise en œuvre du procédé. Application: valorisation N<sub>2</sub>O.