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(54) Title: NO_X REDUCTION COMPOSITIONS FOR USE IN FCC PROCESSES

(57) Abstract: Compositions for reduction of gas phase reduced nitrogen species and NO_X generated during a partial or incomplete combustion catalytic cracking process, preferably, a fluid catalytic cracking process, are disclosed. The compositions comprise (i) an acidic metal oxide containing substantially no zeolite, (ii) an alkali metal, alkaline earth metal, and mixtures thereof, (iii) an oxygen storage component, and (iv) a noble metal component, preferably rhodium or iridium, and mixtures thereof, are disclosed. Preferably, the compositions are used as separate additives particles circulated along with the circulating FCC catalyst inventory. Reduced emissions of gas phase reduced nitrogen species and NO_X in an effluent off gas of a partial or incomplete combustion FCC regenerator provide for an overall NO_X reduction as the effluent gas stream is passed from the FCC regenerator to a CO boiler, whereby as CO is oxidized to CO_2 a lesser amount of the reduced nitrogen species is oxidized to NO_X.