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The invention relates to processes for catalyst preparation and devices for catalytic cleaning of gas effluents and may be applied at the electric power stations, boiler houses and other installations for cleaning of gas effluents.

The process for catalyst preparation provides for mixing of the active ferruginous waste, aluminous additives, linking, consolidating and pore agents. The obtained mixture is shaped in the form of granular semimanufactured products, for example by pressing, it is dried and calcinated in isothermic conditions at 480...540°C during 2...3 h, then after cooling the particles are magnetized up to saturation.

The device for catalytic cleaning of gas effluents includes the Venturi tube, consisted of the inlet pipe, confuser, neck, diffuser, outlet pipe and cyclone, connected in series with the outlet pipe of the Venturi tube. In the Venturi tube neck, made of diamagnetic material, is installed the catalyst, obtained by the aforementioned process and inside the Venture tube neck is placed a solenoid and a voltage regulator, connected to an alternating-current source.

The result consists in increasing the gas effluents cleaning efficiency and in the environmental protection.