

contact between individual gauzes and to avoid any free spaces between them. This is achieved by using gauzes that are perfectly flat and free from folds or buckles that could separate them from each other.

Numerous studies of the kinetics of the principal reaction have been made (14, 15, 16). Among the postulated intermediates are hydroxylamine, nitroxyl, NHO, and the radical NH. It is generally agreed that reaction proceeds between ammonia and an activated oxygen boundary layer that covers most of the platinum surface.

The formation of nitric oxide is favoured by low operating pressures and, since the reaction has a positive temperature coefficient, also by high temperatures. The optimum temperature, moreover, increases with the rate of gas flow.

The concluding part of Mr Connor's article, dealing principally with the problem of platinum losses from gauzes during operation and with the production and handling of gauzes, will be published in the April issue of Platinum Metals Review.

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Further Increase in Platinum Production at Rustenburg

Any concern felt by users of platinum about the availability of metal to meet their future needs should have been relieved by the announcement recently made by Rustenburg Platinum Mines of their further plans to increase production.

Temporary measures introduced last year to secure a relatively quick increase in output are to be replaced with permanent facilities giving an annual capacity of about 600,000 ounces of platinum by the autumn of this year.

Preliminary work has been started on a further scheme, involving the acceleration of shaft sinking programmes, further extension to the reduction works and smelter plant and the expansion of numerous mining facilities. This, together with the extension of refining plant now being undertaken by Johnson Matthey and by Matte Smelters, will result in a refined platinum capacity of some 750,000 ounces a year. This increased flow of metal, which compares with an output of about 200,000 ounces a year in 1963, will begin to reach users in 1969 and will be fully effective by 1971.

The estimated ore reserves available to Rustenburg are considered to be sufficient to permit production at this rate well beyond the turn of the century.

