

Control of Noxious Automobile Emissions

MATTHEY BISHOP EXPAND CATALYST PRODUCTION FACILITY

Air pollution from a variety of sources has grown to such an extent that it poses an obvious threat to health, a threat which is most serious in those heavily populated and industrialised areas where climatic conditions prevent the ready dispersal of exhaust fumes. Furthermore, it has been estimated that automobile emissions account for over sixty per cent of air pollution in the U.S.A., and legislation to control the level of such emissions has been introduced in that country.

Over the years extensive research and development has demonstrated that the platinum metals catalysts can make a significant contribution to the control or elimination of many noxious emissions, including the hydrocarbons, carbon monoxide and nitrogen oxides produced by automobile engines. This success has resulted in a substantial increase in demand both for the platinum metals and for the catalyst control units incorporating them.

When used to clean-up automobile emissions the platinum metals must be supported in a way which provides maximum contact between the exhaust

gases and the catalyst, while at the same time causing minimum pressure drop through the unit. Matthey Bishop Incorporated have just opened a new plant in Devon, Pennsylvania, which will enable them to expand their production of such automobile emission control catalysts by over thirty per cent, to a total of six million units per year. Presently favoured designs consist of ceramic honeycombs coated with platinum metals, but technological advances and the trend towards smaller cars are hastening the development of metal supports which, as well as occupying a smaller volume, are less fragile and more resistant to thermal shock.

The new plant, shown here, has been designed to enable Matthey Bishop to respond quickly to the changing needs of the automotive industry. Facilities for the production of metallic supports are contained within the plant and a considerable area is devoted to the development of advanced systems and processes. An extensive engine test laboratory enables catalyst performance to be evaluated on engines made by different manufacturers.

