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## Automobile Emissions to be Restricted Further

### A CONTINUING REQUIREMENT FOR PLATINUM METALS CATALYSTS

Throughout the European Community all new cars registered from 1st January 1993 will use platinum group metals autocatalysts to meet stringent exhaust emission standards, and already the European Commission is committed to introducing tougher standards in the future. The "Auto Emissions 2000" symposium, arranged by the European Commission, was held in Brussels on 21st and 22nd September, 1992, to help establish the level of European exhaust emission regulations that will apply to cars towards the end of this decade.

The keynote presentation for the emissions industry was given by Professor F. Pischinger of FEV Motorentechnik, Aachen, Germany. Following discussions with the motor and catalyst industries he concluded that autocatalysts will play a major role in achieving future European Community regulations.

Stage 2 standards which would apply from 1996 have already been proposed and a further tightening is proposed for the year 2000. Total regulated emissions would be reduced from 1993 levels by over 25 per cent for Stage 2, and by 54 per cent for Stage 3. The level of, and the need for, Stage 2 standards was not challenged. There were, however, calls for better air quality monitoring to establish the effect of Stage 1 and Stage 2 standards before committing to Stage 3. Caution was expressed on setting too tight emission control standards for diesel fuelled engines, as this might prejudice the potential of direct injection diesels to limit carbon dioxide emissions.

All groups participating in this and later sessions agreed on the need for better inspection and maintenance in Europe in order to ensure

that emission control standards are met during real world driving conditions, and for realistic distances. Platinum group metals autocatalysts are chosen for their ability to tolerate the rigours of exhaust conditions, for their high activity from cold start conditions and for their capability to meet the challenges of strict inspection and maintenance programmes. A representative from the Shell organisation summarised the U.S. Auto Industry programme by saying that reducing the levels of sulphur in gasoline decreased all other emissions, while increasing the level of oxygenates increased both nitrogen oxides and aldehydes; furthermore increasing aromatics increased most emissions. He emphasised the role that autocatalysts could play in reducing emissions and believes that vehicle emissions will be controlled more quickly by the application of three-way catalysts and carbon-filled canisters than by the development of alternative fuels.

A speaker from AECC, the association that represents the autocatalyst industry, stressed the commitment of that industry to further technical improvements of its products. The results of the so-called "Tesco" programme, involving a fleet of cars operated by the supermarket chain of that name and which have travelled an average of 64,000 km, have demonstrated the good performance under real world driving conditions of cars equipped with platinum metals catalysts. This programme has shown that present generation platinum metals autocatalyst technology can already exceed Stage 1 standards, even after travelling significant distances, and that some cars were already meeting the proposed Stage 2 standards

R.A.S.