

SYMPOSIUM ON INTERNAL COMBUSTION ENGINES

A Symposium on Internal Combustion Engines was held in the premises of the Indian Institute of Science, Bangalore, under the joint auspices of the C.S.I.R. and the Indian Institute of Science on the 5th and 6th of April 1952. The occasion was well attended and representatives of various Departments of the Government of India, the National Laboratories, the I.C.E. Industry, Oil Companies and Universities participated in the activities.

The inaugural session was held under the Chairmanship of Dr. J. C. Ghosh, who presented a brief review of the position of the I. C. Industry in the country and the various activities of the Council of Scientific and Industrial Research, at the Indian Institute of Science, Bengal Engineering College and other Industrial firms that were working towards the progress of the Industry. Dr. H. A. Havemann explained the details of the Gas Turbine test house, diesel and aero engine developments and other work carried out in the Internal Combustion Engineering Laboratory. Dr. S. R. Sen Gupta gave a brief account of the research work on Gas Turbine conducted at the Bengal Engineering College, Sibpur. Prof. M. S. Thacker gave an outline of what assistance the various Departments in the Institute were giving and would continue to give, towards the furtherance of research for and progress of the I. C. Industry.

The delegates were then taken round the Internal Combustion Engineering Laboratory and shown various items of research work under progress. U-type two-stroke Diesel engines, Low Pressure Fuel Injection in Diesel Engines, Aero engine with Fuel Injection for Aircraft Propulsion, Cyclone Gas Producers, Injection Device for Pulverised Fuel, Test-rig for Derwent V Aero-gas Turbine, Test-rig for Gas Turbine Combustion Chambers, High Speed Diesel Engines running on heavy fuels, Hot Air Engine, were some among the special exhibits.

Items of research in progress related to: Effects of Turbulence on Combustion, Heat Transfer in Oscillating Gases, Cyclone Air Filtration. The morning session came to a

close after a demonstration run of the turbojet engine in the Internal Combustion Engineering Laboratory.

The afternoon session held under the Chairmanship of Dr. S. R. Sen Gupta was devoted entirely to a discussion of the "Design Trends in I.C. Engines". 12 Papers were presented, dealing with petrol engines for road transport, automotive engines running on producer gas, a new hot air engine, low pressure injection for Diesel engines, scavenging of two-stroke Diesel engines, experimental aero-engine, testing of gas turbines, progress of Diesel engine manufacture in the country, etc.

The morning session on the 6th was presided over by Dr. J. W. Whitaker to discuss "Fuel and Combustion Problems". 12 Papers were presented dealing with the production of power alcohol, use of heavier fuels in Diesel engines, cyclone gas producer, indigenous fuels for I.C. Engines, some aspects of combustion in I.C. Engines, injection of pulverised fuel into pressurised chambers, standardised tests for lubricants, etc.

During the afternoon session, presided over by Prof. M. S. Thacker, a number of papers were presented dealing with the Production, Materials and Component Manufacture. Papers were read on spheroidal graphite, cast iron and meehanite in I.C. Industry, high duty materials for engine components, air-cleaners, gears, mechanical wear, etc.

The last part of the afternoon session was devoted to the discussion of technical aid to industry by research organisations. The discussion was very lively, and representatives of manufacturers, heads of research organisations and university professors took part. As a result of these discussions it was possible to define what industry expects from technical institutions and in turn, what help the technical institutions require from industry to carry out the suggestions made by representatives from industry.

Fuller details of the proceedings will be published in book form by the Council of Scientific and Industrial Research in due course.