



Technological services to industry

Review of 1988

▶ **Significant progress was made during the year in reorienting our business to meet the needs of targeted market sectors. Not all parts of the Group have achieved the necessary market penetration and our financial performance has thus been disappointing. Our confidence in the validity of the general business strategy remains high. Fulmer's range of technological services to industry was further strengthened.**

▶ One of the major highlights was the continued expansion of Yarsley Quality Assured Firms Ltd., which doubled its income for the fourth year in succession. This company achieved much greater recognition during the year as one of the UK's leading quality management consultancy and certification authorities. It now includes many UK companies of national and international repute among its clients and registered companies, particularly in Europe and Singapore. The number of registered companies has increased substantially.

▶ Contract research and development activities continued to expand with contracts awarded and renewed reaching an all time record. One of the major technological achievements during the year was the establishment of Fulmer as a centre of expertise for acoustic emission.

▶ A major contract was won from Chevron for the installation of a system on the Ninian Southern Rig; a contract was completed for Guinness and Alumask for the detection of leaks in aluminium beer casks, and a contract begun with the French firm of Coflexip.

▶ Sensor development continued with the production of mechanical silicon sensors on wafer scale bases. A cost effective process has been developed for fabricating pressure sensors with controlled sensitivities. PVdF development continued with the fabrication of PVdF microfilms for use in diving communications; a novel feature was the fabrication of the PVdF elements into a freestanding dome of a four layer laminate. These microfilms are both water resistant and can withstand rapid pressure changes.

▶ Instrumentation development included an ultrasonic monitor to measure on-line the concentration of sugar solutions for the food industry and the Fulmer wear debris monitor was successfully used in the steel and motor components industries. The abrasivity concept has been extended to paper and plastics.

Review of 1988

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 - ▶ Materials technology has been identified as one of the four major enabling technologies for the 21st century. Fulmer continues to invest to maintain its ability to produce the most advanced materials for defence, aerospace and other industries.
 - ▶ Consultancy and testing work, particularly for the building industry, continued to expand; wear test procedures have been developed for floor tiles and pavers. Research into the thermal transmission properties of blockwork walls showed the necessity to improve the insulating characteristics of the mortar used to build the walls.
 - ▶ The incorporation of the magnetic media expertise into Fulmer has proceeded satisfactorily. Major contracts have included investigations into reliability of striped magnetic coatings, such as used in credit cards, railway tickets, etc. and the assessment of novel resins in magnetic media formulations. A new service offered by Fulmer's Magnetic Media Group is project approval for audio and video tapes. The Fulmer approved scheme is designed to take the risk out of buying unknown audio and video tapes. It enables purchasers to ensure the performance of economically priced magnetic media from the growing number of suppliers world-wide. We are able to refer a new current supply to Fulmer for project approval, which is carried out at the suppliers' expense.
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- ▶ All of these activities have improved Fulmer's services, in its main markets of health care, information technology, the chemical and mechanical engineering, materials processing and building industries.
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