

WRC 590

Explosives Round ① centre
open first time since 1949

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Friday June 14 1968.

Explosives R. and D. Centre open first time since 1945

THE EXPLOSIVES Research and Development Establishment at Waltham Abbey was opened to the press by the Ministry of Technology for the first time yesterday since its foundation in 1945.

An increasing proportion of E.R.D.E.'s work is now devoted to non-military applications as well as the development of explosives and propellants.

One group in the Establishment has been working on the development of new polymers in connexion with large flexible storage containers used for flexible barges and pillow tanks having stuck or stitched joints in the proofed fabric skin. These joints and the fabrics themselves are found to age rapidly under certain conditions. E.R.D.E. has prepared polymers with

predetermined properties by controlling their chemical structures. Considerable progress has been made by the introduction of asbestos and other fibres into plastics. Breaking strengths have been increased by up to 200 per cent, and the flex modulus by 500 per cent. This work is of particular importance to makers of air-cushion vehicle skirts, solid rubber tyres for tracked vehicles, and aircraft arrester tapes.

Solid propellants under development for the Services have produced many industrial applications, such as explosively driven rivet guns, line-throwing rockets, and in quarrying and mining. One innovation is the use of enormous pressures, available in explosions, and which cannot be obtained easily otherwise, to modify certain materials so that they may be used as catalysts in chemical processes.

Ingenious testing facilities have been developed at the Establishment to enable work on new and untried explosives to be carried out in safety. In the remote processing facility quantities equivalent to 15lb. of TNT can be transported from storage, accurately dispensed, vacuum mixed and moulded, heat-cured in isolated ovens, assembled into test rounds, inspected by X-ray, and fired, all completely by remote control with the operators fully protected and separated from the explosives at all stages.

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