

SIR ARDESHIR DALAL

EVERY section of informed public opinion, and the scientists and industrialists in particular, will warmly welcome the statesman-like decision of the Governor-General to invite Sir Ardeshir Dalal to accept the membership of the Executive Council and assume charge of the newly created Department of Planning and Development.

The Government have felt that planning for the post-war period has now reached a stage at which it requires the exclusive attention of a separate member who will be free from the ordinary Departmental routine.

Sir Ardeshir Dalal is not only an eminent administrator of outstanding ability but an experienced industrialist with an intimate practical knowledge of the industrial needs of this country. He has been closely associated with everyone of the great industrial enterprises of the Tatas and has kept himself in sympathetic touch with the progress of scientific and industrial research. He was elected General President of the Indian Science Congress held in Benares in 1941. He has taken a keen and lively interest in guiding the policy and affairs of the Council of Scientific and Industrial Research and in giving practical shape to the National Laboratories.

As one of the distinguished signatories of the much discussed fifteen year, 10,000 crore "Bombay Plan" for India's industrial regeneration and social advancement, he is fully conver-

sant with the national aspirations in this regard. His wide and varied administrative experience will, at the same time enable him to realise the difficulties which are bound to be encountered in practical materialisation of



the plan. Sir Ardeshir Dalal's appointment as Member will be acclaimed as a practical proof of the Government's earnestness to approach the nationalistic plan of post-war reconstruction with sympathy and understanding.

NEW DEVELOPMENTS IN PLASTICS

A U.S. manufacturer is producing plastic helmet liners for the Army by a simple process, using low-cost molds. In a preforming operation, resin-impregnated cotton ribbons are wound around a hot, oval mandrel by automatic wrapping machines. The fabric "melon" so produced is cut into halves, each a helmet preform. Instead of employing hydraulic presses and elaborate machined steel dies, the company built several inexpensive steel frames. A fixed platform is bolted to the top of the frame, and a movable platform, actuated by means of a small air cylinder, rides between the frame members at the bottom. The cavity of the mold is permanently mounted on the upper platform, and is merely a rough cast iron shape which is chrome plated so that a high finish may be imparted to the completed piece. The force plug of the mold is also a rough casting, somewhat smaller in size than the inside of the helmet liner. Both the force plug and the upper mold cavity are cored for steam. In the molding operation, first a rubber bag and then the preform itself is placed over the force plug, and the mold is

closed. Water of 250 pounds per square inch (17.6 atm.) flows between the plug and the bag; thus, the pressure necessary for molding is obtained. Heat is transferred from the steam-heated plug through the water to the helmet liner. After a six-minute curing cycle, the pressure is released from the rubber bag and the lower platform dropped, whereupon the liner is released by blown air. One girl operator easily manages seven presses.

By the wound preform and air bag method, an estimated 15 to 20 per cent. saving in materials is effected. The fabric will not be crushed, but simply be compressed together to a uniform thickness, free from wrinkles, with a more even distribution of fabric and resin. The method is ideal for producing irregular shapes such as curves and globular forms and is highly adaptable to the production of small lots of high-strength parts to be produced quickly and cheaply. It is expected that this type of construction will prove significant in post-war production of furniture, cars, refrigerators and many other pieces of unusual contours.
