

carries a heavy traffic, which can be diverted over the Institute's test tracks for experimental purposes. The foundation-stone of the Institute was laid by the Hon'ble Shri N. Gopalaswamy Iyengar, the then Minister for Transport, Government of India, on September 6, 1950, and the construction of the Institute buildings commenced in February, 1951. Research work started concurrently in a temporary laboratory building constructed mostly from American pre-fabricated wood work.

The functions of the Central Road Research Institute are: fundamental research on the behaviour of materials used in road construction; correlation of test results on standard materials with those under practical conditions for enabling reliable estimates to be formed of the behaviour of road materials; tests on soils and study of soil mechanics; research connected with standards and specifications for roads and road-building plant machinery; design of instruments for road tests; studies on road characteristics under different conditions, incidence of accidents, road safety devices and road statistics; collaborative research projects with engineering colleges, research institutes and industrial concerns; technical advice and assistance; dissemination of results of road research by pamphlets, films, etc., for the benefit of road engineers and training of road technologists.

Special emphasis will be laid on low-cost, all-weather rural roads and their construction from locally available material. Test tracks will be laid in various parts of India and the results obtained in the Central Institute will be checked under service conditions prevailing in various localities.

The work of the Institute is to be organised under the following divisions: (1) Soils, (2) Flexible Pavements (Bituminous Materials), (3) Rigid Pavements (Mineral Materials), (4) Road, and (5) Traffic Engineering and Economic Research. Other sections of the Institute are: Workshop, Museum, Library and Intelligence, Photography and Drawing, Publications, Administration, Purchases and Stores.

Efficiency has been a primary consideration governing the design and layout of the Institute and architectural features have received due consideration. The total capital cost of the buildings, fittings and equipment is estimated at Rs. 29.64 lakhs. A sum of Rs. 19 lakhs has been spent on equipment and construction work so far.

Equipped on a scale which we have learnt to associate with the present Government of India, we indeed hope and trust that the new Institute would also contribute its legitimate share in furthering the progress and prosperity of our country.

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## DON TO VOLGA

THE meeting of the waters of the Volga and the Don, through the newly-completed canal that links the two great rivers, fulfils an ancient dream of the Russian people. Over sixty miles long, the canal joins the river systems of the Black Sea Basin with the navigable rivers of the Volga and north-west basins, and links the White, Baltic and Caspian Seas with the Sea of Azov and the Black Sea.

The construction of the Tsimlyansk dam is a particularly fine piece of engineering achievement. Huge dams which are subjected to the pressure of an enormous mass of water are usually founded on rock. At Tsimlyansk, however, the dam raising the level of the Don to a height of over 85 feet and capable during the spring floods of letting through up to 4½ mil-

lion gallons of water per second had to be built on fine sand. Scientists and engineers boldly tackled this difficult task for the first time and solved it in a brilliant manner. Using enormous and intricate devices, special extinguishers, scoops, etc., the speed of the water has been cut down to a twenty-fifth, thus making it absolutely safe even for sand. To safeguard the dam from sub-soil waters, steel piles were driven into the ground by vibration.

The Volga Don construction which includes a ship canal, an electric power station and a huge irrigation system was completed in less than three years while the greater part of the work has been put through during the last twelve months.

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