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## EDITORIAL NOTES

The Steel producing industry in India is a key industry, for on the improvement of its production depends the progress of a number of other industries which derive their supplies from it.

The total producing capacity of all the steel producing firms in India is just over one and a half million tons a year. The actual production, has for sometime been under a million tons. But the total requirements of Indian Industries are estimated at two and a half million tons. There is therefore a great field yet for development.

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A target period of two years has been fixed for completion of the Assam-India Railway link. The Darjeeling-Himalayan Railway extension from Kishengunj to Siliguri will be converted to metre gauge. A new metre-gauge line will be constructed from Siliguri to Bagrakot *via* Sevak over a new major bridge across the Teesta River. From Bagrakot to Madarihat there is already a metre-gauge line which will be extended to Hasimara. From Hasimara, the line will follow the existing Assam Railway line up to a point between Rajabhatkhawa and Alipur Duar. From this point a new line will be constructed up to Fakiragram and a major bridge will be constructed over the Sonkosh River.

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A Rs. 7½ crores scheme for the development of the Madras Harbour is in hand which when completed will make it one of Asia's largest sea-ports.

The scheme consists of immediate erection of 21 electric cranes and construction of modern warehouses on the beach and the long-term plan consists of construction of a wet dock at an approximate cost of Rs. 3½ crores which will accommodate four 600 ft. ships at a time with provision for extension to take an additional six ships of 500 ft.

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Mr. Homer M. Hadley, consulting engineer, Seattle, Wash advocates reinforcing bars placed in bundles instead of having the usual spacing, as this saves depth and width in concrete joists supporting decks and as material costs are decreased, due to less concrete yardage and also less dead weight to support. He has successfully designed and executed a 120 ft. long and 24 ft. wide road bridge for Whatcom County, Wash, with reinforcements in bundles. Prior to this he made two beams—one reinforced by 1 in. square bars and the other made up of four ½ in. square bars in bundle. These beams were tested to destruction and there was little difference in ultimate strength. In fact the beam with bundle reinforcements proved slightly stronger.

According to Mr. Hadley, an important essential in the use of reinforcements in bundles is that each bar must be individually well anchored. (Engineering News Record--April, 1948).

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The commerce Minister recently stated that 57 Steamers of 142,512 tons gross owned by Indians and 54 of 296,676 tons gross owned by non-Indians were employed in the coastal trade of India. The gross tonnage owned by Indians for the vast coast line of India is glaringly inadequate. The decision of the Government to have Shipbuilding yards at Calcutta, Bombay and Kathiawar in addition to that at Vizagapatam is a move in the right direction.

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Massive hydro-electric plant destined to play an important role in India's industrial power development projects is now under construction at Scotland's Clydeside. Three turbines of 20,000 H. P. each and three generators of 14,000 K. W. each are being manufactured at the Scotstoun Engineering Works on the Clyde Bank for shipment to India. This heavy industry, which is new to Scotland, has been introduced by Messrs Harland & Wolff Ltd.