

# India's steel industry shows the potential for a North-South industrial takeoff

*EIR* correspondents Ortrun and Hartmut Cramer conducted the following interviews during a five-week visit to India in March and April, following the March Non-Aligned summit meeting in New Delhi. As the *EIR* correspondents found, the propaganda being circulated in Europe by such proponents of Malthusian policy as the Club of Rome that development projects in the Third World amount to nothing more than "cathedrals in the desert" is refuted by India's steel industry. The current production levels of India's steel plants, the living standards in the towns built with the plants, and particularly the commitment of the engineers, managers, and workers, show how such development projects can transform a nation.

In the 35 years since independence, India has tripled agricultural production, quadrupled coal production, and increased steel and cement production tenfold. Generation of electricity has been increased 20 times and fertilizer production 200 times, and both a machine-building industry and nuclear industry have been built from nothing. As a result of this industrialization, as well as mass education and modern medical programs, India's population has nearly doubled from 350 million in 1947, and includes an industrial labor force of 50 million, and the fourth-largest number of scientists in the world.

Yet India's industry and agriculture are facing two acute bottlenecks: the lack of sufficient energy and water. Proposals for a National Energy Grid and a National Water Grid, both under discussion throughout the nation, could only be realized by international financial and technological efforts—which could be launched by the new world economic order under discussion at the Non-Aligned summit.

India's 35 years of economic miracles were achieved under the dirigist policies of Jawaharlal Nehru, known in India as the "Symphony of Industrialization." This policy was responsible for the creation of the industrial cities of Jamshedpur, Rourkela, and Ranchi. Jamshedpur was built by the founder of India's steel industry, Jamsetji Tata, after he visited the American steel cities of Birmingham, Pittsburgh, Chattanooga, and Cleveland in 1902. Tata built his city, with the help of American engineers and in the face of

severe British opposition, in the heart of India's ore-rich area. Both Jamshedpur and Rourkela, which was designed with the help of German engineers, not only include excellent education, medical, and social facilities, but also sponsor rural development programs for the surrounding villages.

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## Interview: M. M. Bhatnagar

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### 'We have brought vital know-how to India'

*The Heavy Engineering Corporation (HEC) in Ranchi, one of Asia's largest heavy engineering complexes, was started by the government of India in 1959 with Soviet and Czechoslovakian assistance. It consists of the Roundry Forge Plant, one of the largest in the world; the Heavy Machine Building Plant, the largest of its kind in Asia; and the Heavy Machine Tools plant. HEC is the pioneer of self-reliance in the field in India and possesses the technical know-how, engineering capability, and manufacturing facilities to design, manufacture, and supply a wide range of equipment as well as complete plants to steel and other metallurgical industries on a turnkey basis, from concept to commissioning.*

*HEC's product range includes complete coke ovens, blast furnaces, rolling mills, sintering plants, steel converters, and metallurgical cranes as well as bulk material handling equipment such as wagon loaders, large size excavators, and crushers of various types. Heavy castings, forgings, and a variety of heavy machine tools are designed and manufactured conforming to rigid international standards.*

*HEC has primarily served the Indian core industries like the steel, mining, aluminium, and cement industry, but has also contributed to the heavy electrical industry, the building of ships and railways, and the drilling of deep wells in the drought-affected areas of India.*

*M. M. Bhatnagar, the general manager of the Heavy Machine Building Plant (HMBP) and one of the leading*

managers at HEC, has worked there since the plant began operations in 1960. He has been an engineer at the Tata Power Company in Bombay and the Tata Iron and Steel Company in Jamshedpur. He was trained in Great Britain, the United States, and the Soviet Union, and has made extensive business trips to Europe, United States, U.S.S.R., and Japan. The interview was conducted in Ranchi on March 23 by EIR correspondents Ortrun and Hartmut Cramer.

**EIR:** How did the HEC in Ranchi develop?

**Bhatnagar:** After our independence, when the industrialization of India was being planned, it was decided that a suitably sized foundry for making heavy castings for the steel industry and a machine building plant should be set up in the public sector. During the visit of our late Prime Minister Nehru to the Soviet Union in 1955, he was taken to the Ural Heavy Machine Building Plant there, which also made steel plant machinery. He asked the Soviets to help India to set up a plant like that.

The government of India had also invited some suggestions from the British government for setting up a machine building plant. But since the British suggested only a very small plant, the Indian government went with the Russian plan. The first phase called for 35,000 tons of mechanical equipment for steel plants which later went up to 80,000 tons per year.

Ranchi was chosen as the best site primarily for one reason: Since it was an underdeveloped place in a backward area, the plant would bring prosperity. Also, it was close to the center of the steel belt. Jamshedpur is very near, and there was Bhilai coming up, Rourkela, Durgapur, and so on.

The HEC was formed in December 1958, and we started working here in 1960. The foundry forge was set up with collaboration from the Czechoslovakian government, and the Heavy Machine Building Plant with Soviet assistance. It was more or less a perfect design; the Russians gave assistance in design and drawings, and they educated our workers and engineers in their machine building plants; the Czechoslovaks gave the same assistance for the foundry and forge plant. In 1964, it was decided to add one more plant, the Heavy Machine Tool plant, since the heavy machine tools required did not exist in the country.

**EIR:** How did your side and the Czechoslovakian and the Soviet side cooperate in setting up the plant, the machines, and the training courses? Is this cooperation still continuing?

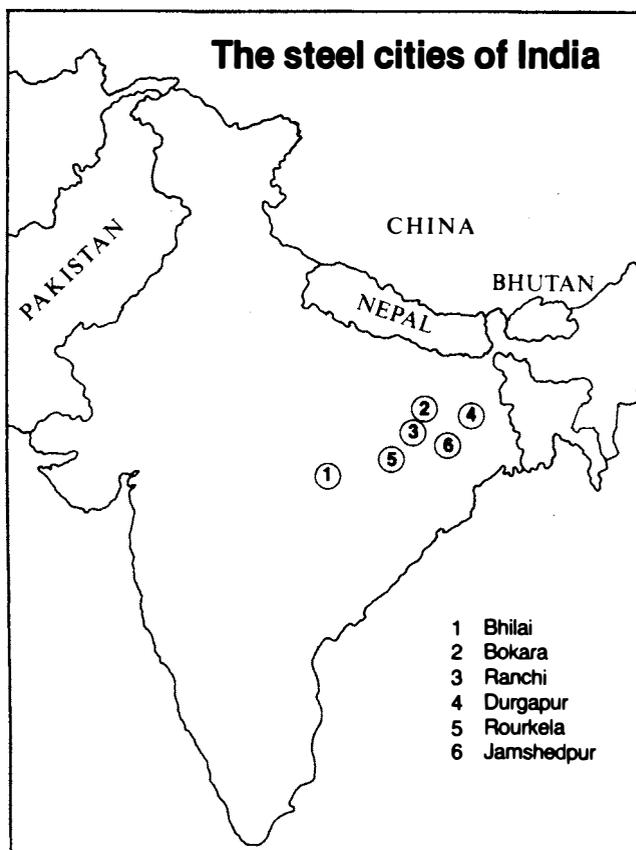
**Bhatnagar:** The cooperation with the Soviets is continuing. With the Czechoslovaks it has come to an end. But I would like to say that we have not remained solely with the Soviets, since in the course of our activities we have found advantages in having collaboration with a lot of firms abroad, including West German and British firms. A similar agreement has just been approved by our government with an American firm and we have just signed an agreement with Hitachi of Japan for modernizing and improving the forging activity. . . .

The steel plants in our country are being built up mainly with Soviet help, since they give technical assistance and credits and go on educating our people. We also have been able to receive a lot of export orders from the Soviet Union to third countries like Cuba, Yugoslavia, Egypt, and Turkey. Whenever they have commitments there, they pass on parts of it to us. This is our agreement with the Soviets.

Then in their country, we have worked out orders for steel plants and mining equipment. When the steel demand here was tapering off a little in the late 1970s, we were looking for new orders and also some diversification. At that time, the Soviet government came forward to give us this help, which is continuing on a year-to-year basis. This year we expect to export about 118 million rupees worth of equipment to the Soviet Union.

Our company has not been a success from the pure commercial angle; we have not been running a profit. There are various reasons for that: it is the only industry of its type in India with a very diverse production range, and at one time also the pricing of work was not adequate. But overall we have saved a lot of foreign exchange, we have brought a lot of know-how, some of it of very vital importance for the country, and developed a storehouse of expertise and trained manpower.

**EIR:** Looking at the results of the Non-Aligned summit in Delhi, do you think that the result will favor the expansion of



the industries here in Ranchi?

**Bhatnagar:** Yes, I think so, because many of the countries who are members of the Non-Aligned are developing or slightly underdeveloped countries, and there should be a lot of opportunities for us to get together with them, helping their own industrialization in the field where we have experience. Algeria is one of those countries, and we had some discussions with them about a month ago; a team from here is about to go there. They have some machine building plants, and they want expertise from us on the design and manufacturing side. . . . So I think there will be a lot of prospects for us.

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## Interview: S. Samarapungavan

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# 'Joint thinking to revive world economy'

*Since 1980, S. Samarapungavan has been the chairman of SAIL, the Steel Authority of India, Ltd. SAIL, formed by the Indian government in January 1973, serves as an umbrella organization for the steel industry in the public sector in India. It oversees five integrated steel plants with 250,000 employees, which produce more than 80 percent of the total Indian steel output of 9.5 million tons of finished steel per year.*

*Samarapungavan, a graduate of Calcutta University, has dedicated his life to the steel industry. Before coming to SAIL as one of its directors in 1978, he was managing director at Bokaro Steel, Ltd. He has frequently led business delegations to the U.S.S.R., Europe, and the United States. The following interview was conducted by Hartmut and Ortrun Cramer on March 28 in New Delhi.*

**EIR:** Could you elaborate on how the steel industry in the public sector in India developed?

**Samarapungavan:** During the independence movement, the Indian National Congress was very acutely aware of the necessity to have an economic plan, because political independence would be a chimera unless it was backed by economic development. During the struggle against the British in 1938, the Economic Planning Commission was formed with Pandit Jawaharlal Nehru presiding over it. When the country became independent, the commission immediately thought in terms of five-year plans. In the first plan, a top priority after development of agriculture and education was the development of basic industries.

At that time, steel production in India was scarcely 1 million tons, produced by two private companies, the Tata Iron and Steel Company and the Indian Iron and Steel Company. In the first five-year plan, three integrated steel plants were projected, one in Bhilai, one in Rourkela, and one in

Durgapur, together with an alloy steel plant there.

The first plant to be conceived was the Rourkela steel plant, with German collaboration. The construction work started there in 1955, and the first blast furnace started production in February 1959. The Bhilai steel plant was commissioned, with Soviet assistance, one day after Rourkela; the blast furnaces started simultaneously in these two plants. Durgapur was launched in 1960 with British collaboration. Shortly after that, the alloy steel plant started up. These plants expanded—Bhilai to 2.5 million tons, Durgapur to 1.6 million, and Rourkela to 1.8 million tons crude steel capacity.

In the mid-1960s, plans came up for an additional steel plant at Bokaro. Initially they fell through, because of certain conditions laid down by the Americans, which were totally unacceptable to the government of India. The plant was built with Soviet assistance, and the first blast furnace was commissioned in 1972. The plant's initial capacity was 1.7 million tons, but it was steadily expanded. Today the plant is operating at 2.5 million tons, and a 4-million-ton capacity will be commissioned this year. Bhilai was expanded to 2.5 million tons of crude steel capacity; it is now scheduled to expand to 4 million tons, and these assets will also be commissioned this year.

**EIR:** What about the Indian Iron and Steel Company?

**Samarapungavan:** The Indian Iron and Steel Company, which was under private control and operated very well until about 1967, declined very badly after that and had to be closed down. The government took over in 1972 and nationalized it three years later. Since then, investment has been made for some of the equipment which had been neglected. The plant has revived quite well, though it is still one of our most obsolete plants.

In the past two years, this plant has come up to a capacity utilization of only 63 percent, whereas Bhilai usually was operating at 95 to 100 percent. Tata Iron and Steel Company, which doubled its capacity from 1 million tons to 2 million tons of crude steel, is also operating at about 100 percent of capacity. Rourkela Steel plant has suffered very badly this year, since there has been a severe drought during the past two or three years, which has affected the hydro-electric power stations which are the main resources supplying the state of Orissa; and the upcoming thermal plants are still having initial problems. This year, the Rourkela capacity utilization has come down to about 80 percent, but last year, when the power situation was much better, they reached 89 percent. Durgapur, for a long time considered to be the sick child in the public sector, has come up quite remarkably well during the last few years, and it is now at 70 percent of capacity utilization.

In the Indian iron and steel industry as a whole, capacity utilization of the integrated steel plants last year was around 80 percent, including the Tata Company, and this year it will be the same. This is in spite of the sharp downfall in capacity in Rourkela of about 9 percent; the other steel plants have