

Technological Advances in the Industrial Field

by G Kishore Babu

There has been a steady improvement in India's economic performance during the 1992-1995 period after the lackluster performance of 1991, when the Gross Domestic Product of the nation increased by just one per cent. Industrial output which suffered a setback in 1991 has recovered and risen to quite a satisfactory level in 1994-1995. This is attributable to the industrial policy initiative undertaken by the Government since July 1991. The thrust of these initiatives has been to increase domestic and external competition through extensive application of market mechanism and upgradation of technology. In other words, the technological upgradation has been accorded a great role in the drama of industrial growth in India.

In line with the emphasis on technological upgradation with new policy, the major Indian industries have witnessed significant advancement in recent times either in terms of enhancement of the existing capacities of production or in those of the induction of new technology into the system.

At present there are 103 large cement plants and about 250 mini cement plants with a total installed capacity of about 74.7 million tonnes. About 85% of this capacity is in the private sector and 15% in the public sector. During 1993-94, production of cement was 57.96 million tonnes against a target of 60 million tonnes. India is producing different varieties of cement such as Ordinary Portland Cement (OPC), Portland Pozzolana Cement (PPC), Portland Blast Furnace Slag Cement (PBFS), High Strength OPC, Oil Well Cement and White Cement. The Cement Industry has achieved significant technological advancement in recent times and large number of cement units based on the old West Process Kilns have been converted into energy efficient and environment friendly Dry Process Plants. These plants now account for about 84% of the total capacity. The industry has assimilated latest technology such as roller presses, vertical roller mills, X-Ray analysers, O-Sepa etc. A number of large plants with capacities of 1

million tonnes and above have been set up with the latest dry process pre-calculator technology and pre-heater. Substantial process has been made in the implementation of the Human Resources Development Project in the Indian Cement Industry for establishing a demand driven, economically viable and self-sustaining training system for upgrading manpower skills in the industry in order to match the needs of modern, environmentally safe production units. The project is being implemented with substantial assistance from the World Bank and the Danish Agency for International Development (DANIDA).

For his purpose, four Regional Training Centres (RTCs) have been set up at the participating cement plants (lead plants). These RTCs would impart training to the personnel of a cluster of cement plants attached to each lead plant. The RTCs have already acquired most of the hardware as well as software and 27 courses have so far been conducted covering

358 persons and training of 214 part-time trainers. 14 training packages have already been developed or are in the process of finalisation. Action has been initiated for developing 10 additional packages indigenously with substantial RTC involvement and for importing 8 more packages.

A pilot project for bulk transportation and distribution of cement at Kalamboli in New Bombay is being implemented, jointly by the Government of India and M/s ACC Ltd. The project is estimated to cost Rs 685 million. The World Bank has agreed to provide a loan of Rs 380 million to finance the plant and equipment out of their Credit Line 3196 IN through ICICI and IDBI. Under this project special high efficiency wagons will be developed for transportation of cement in bulk from factories to the bulk depot where cement will be stored in silos and then distributed in bulk or in bagged condition.

Under the World Bank Credit Line 3196-IN ex-

tended for restructuring the cement industry, a sum of US \$0.4 million has been allocated for undertaking technical studies on important aspects for strengthening the cement industry. These studies are as under:

- Use of lignite as fuel for the manufacture of cement;
- Coal washeries for cement industry;
- Export opportunities for cement plants in coastal areas;
- Bulk cement transport and distribution project at Calcutta and Delhi;
- Mini cement plants; and
- Development of market for bulk cement in India.

The Indian Cement Industry is facing some constraints and these studies will help in appropriate remedial measures being taken. The first five studies are in an advanced stage and draft reports have already been received and the sixth study, viz. development of market for bulk cement in India would be initiated shortly.

Leather
A National Leather Development Programme (NLDP) with UNDP assistance of the order US \$15.05 million and Government inputs of Rs 28.43 crores is currently being implemented by the Government for Integrated Development of the Leather Industry through selected institutions/agencies in the country. It is a four-year programme started in June, 1992 in accordance with the Work Plan. The Programme inter alia covers areas such as human resources development, development of footwear sector, strengthening of research & development, modernisation of the industry, pollution control

and enhancement of exports. The Programme has since established linkages with some of the most reputed international organisations, such as AFIPIC, Paris, and MCT, Melbourne, in the areas of education and training. The Indian institutions have been able to upgrade the training systems for design and manufacture of footwear, garments and assorted

Continued on page 24

Automobile Industry Takes Giant Strides

In India the last two years have seen a boom in the growth rate of domestic sales of commercial vehicles at 23 per cent in 1993-94 and 33 per cent in 1994-95.

The upturn in the world economy in the last two years coupled with easing of import restrictions and enhanced export incentives has also led the Indian commercial manufacturers to make a determined bid for the international markets. Exports of commercial vehicles in 1993-94 showed a sharp rise of nearly 70 per cent over 1992-93 to 12,400 numbers. The growth rate of exports in 1994-95 was an export of 15,900 vehicles amounting to a growth of 30 per cent over the 1993-94 figure.

A major component of the export jump was accounted for by Indian-designed LCVs (light commercial vehicles), the exports of which shot up from 2,903 in 1992-93 to 5,819 in 1993-94.

Most of the Indian export were routed to West Asia, Sri Lanka, Bangladesh, Nepal and Malaysia but India is looking for new markets Egypt, Ghana, Nigeria, Tanzania, Southeast Asia and South America. Two Indian giants have established manufactur-

ing facilities abroad-TELCO in Malaysia and Ashok Leyland in Sri Lanka.

As for the developed countries market, India is making fresh investment in high quality manufacturing technology (such as welding robots in TELCO and automated painting line in Ashok Leyland's Hosur plant), acquiring of ISO 9000 certification and introduction of new ranges of fuel efficient engines (TELCO with Cummins engines, Ashok Leyland with Iveco engines and Bajaj Auto with engines of Mercedes Benz technology) which meet the strict emission standards of the West.

Some of the Japanese technology based LCV manufacturers such as Eicher (with Mitsubishi collaboration), which have indigenised their products in India to a level of over 90 per cent, are now banking on the fact that, due to the soaring value of the yen, they will be able to be more price-competitive than their Japanese collaborators in the Southeast Asian and West Asian markets. One support for this optimism is

that the export of Japanese LCVs has shown a 125 per cent jump in 1994-95 over the previous year's figure.

The current range of commercial vehicles made in India extends from LCVs with a gross vehicle weight (GVW) of less than 2.5 tonnes to multi axle vehicles (MAV) of GVW 22 tonnes. The technological and comfort qualities are reaching the specifications demanded in the developed countries. For example, power steering and air conditioned cabs are standard features in the HCVs and anti-corrosion measures applied to the metal parts such as phosphating, cathodic/anodic protection, PVC coating and waxing surpass international standards. Use of engines having micro-mixing systems for the fuel/air mixture to ensure more complete combustion are increasingly becoming a standard feature in Indian commercial vehicles.

In India there are basically three segments - the small car segment, represented by small engine capacity cars such as Maruti-800, Premier Padmini and Ambassador, the

medium car segment consisting of semi-luxury cars priced at Rs 2.5 lakhs to Rs 3.5 lakhs and introduced some years ago-examples, Premier-118 NE, Contessa Classic and Standard 2000, the third is the large/luxury car segment, comprising luxury cars with bigger engine capacity and modern technological features. These include models like Maruti Esteem, Maruti-1000, Maruti

Zen, Tata Sierra and Tata Esteem. Many reputed foreign car makers are also typing up with Indian parties for introducing well known models in the Indian market.

For the global car giants, which are searching for new markets, India seems to have attractive features like a big population with a growing middle class and a fairly large geographical area when compared to many other countries. Even when compared to China, India has more positive features. The table shows details of the upcoming joint ventures/tie ups:

Likely new products and/or joint ventures

Indian Party	Foreign Collaborator	Likely product to be introduced
Premier Automobiles Ltd	Automobiles Peugeot	Starting with Peugeot 309
Hindustan Motors	General Motors	Opel Astra
Telco	Mercedes	E-220 Series
Telco		Small car of its own technology and design
DCM Toyota	Daewoo Corporation, Korea	Cielo
M&M	Ford	Model to be finalised
Eicher Motors	Volkswagen	A range of models
Bajaj	Likely Volvo	Model to be finalised
1. Shiram group 2. Kinetic Honda 3. Hero Honda	Likely Honda of Japan	Model to be finalised

Continued on page 23

Warmest Felicitations on the occasion of The Republic Day of India

Ashok Leyland
রেডিষ্টক থেকে কিনুন



IVECO 709 TRUCK 3/4 TON IVECO 709 CARGO VAN 3/4 TON



7 TON TRUCK

ডিলার
শিরীন মটরস ১০/বি, ফকিরবাড়ী মার্কেট মিরপুর, ঢাকা। ফোন: ৮০২২১০, ৮০১৮৭৬, ৮০৩৬৬৮, ৮০৩৭৮১
ডি.আই.পি. মটরস লি: সাধী অটোজ লিট মার্কেট, টাঙ্গাইল ১১৭/১, সদর রোড ফোন: ৩১১৪, ৩১১২ বরিশাল
ফোন: ৩০৮৮, ৩০৭৪, ৫৮০৭

একমাত্র পরিবেশকঃ **ইন্ডিয়ান অটোজ লিমিটেড**
পরিবহন ভবন (৯ম তলা) ২১, রাজউক এডিনিউ, ঢাকা-১০০০ ক্যাবল : ইফান
ফোন : ৯৫৫৩১৫৭, ৯৫৫৫৭৯৭, ফ্যাক্স : ০২-৮৩৩৪০০/৯৫৬২০২৮
সার্ভিস স্টেশন : ২৩৭/বি, ডেকলিও শিল্প এলাকা, ঢাকা, ফোন : ৮৮৪০৬২

গতির
দুনিয়ায়
স্বাতন্ত্র্যের
স্বাক্ষর



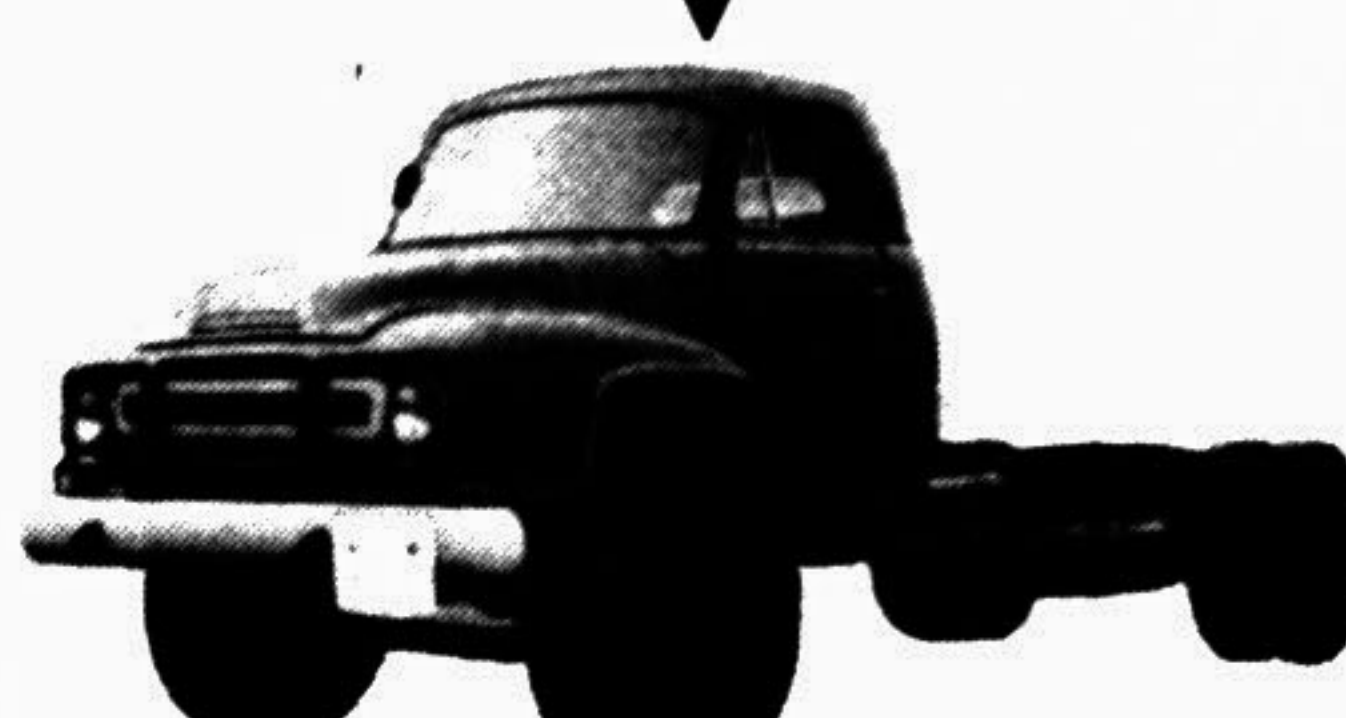
এই প্রথম বাংলাদেশে এল দুরন্ত কেতারী, আছা ও নির্ভরতার প্রতিভু হিন্দুস্তান গ্র্যান্ডসারভার ও কন্টেস্টা ক্লাসিক। বিখ্যাত এই গাড়ীগুলি হিন্দুস্তান মোটরসের তৈরী কমার্সিয়াল কার যেন লাভসারি ট্যাঙ্কি ও সাধারণ ট্যাঙ্কি রূপে দারুন কমর।



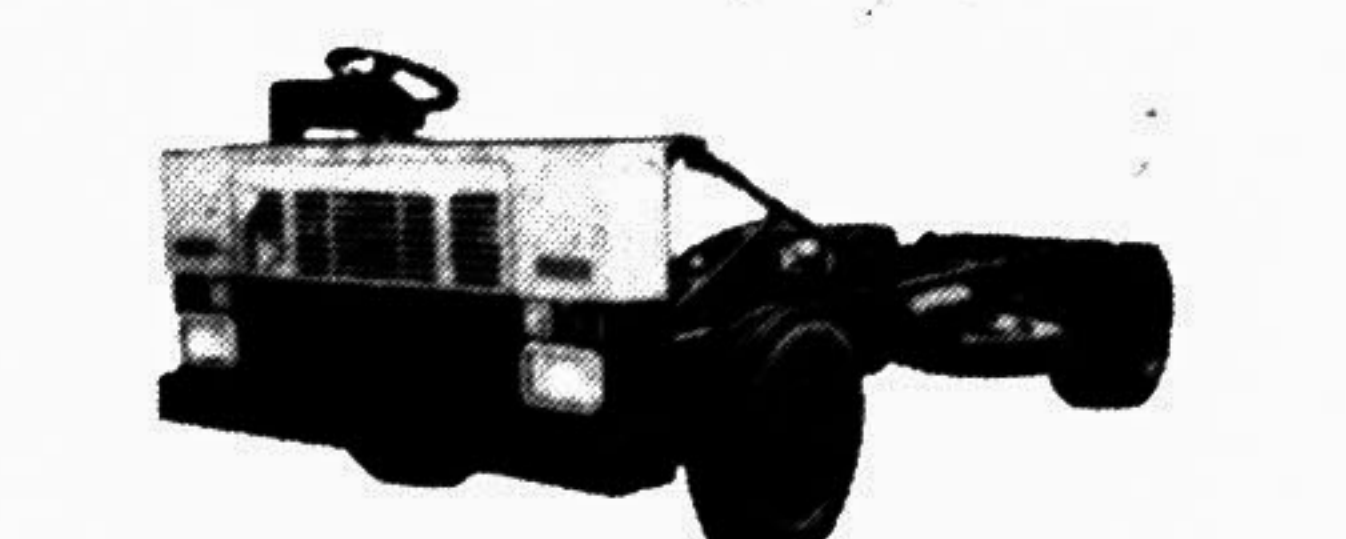
বাংলাদেশের প্রথম বিতরক **এমজাদ অটোমোবাইল**
(ক্যাঙ্কি-মোসারক গ্রুপ অন্তর্ভুক্ত একটি সংস্থা)
১৯, বঙ্গবন্ধু এ্যাভিনিউ, প্রথম তল,
রমনা, ঢাকা, বাংলাদেশ
ফোন : ২৪-৪০৩৮, ফ্যাক্স : ৮৮০-২-৮৬৩০৫৭

Hindustan Motors Limited

সফলতার
সড়কে
অগ্রগতির
বাহক



প্রগতি ইন্ডাস্ট্রিজ লিমিটেড ও হিন্দুস্তান মোটরস এর যৌথ উদ্যোগে প্রস্তুত জে-৬ ট্রাক ও টি-১৫৫ মিনিবাস। বাংলাদেশের রাজ্য উপযোগী মজবুত ডিজাইন এবং সাশ্রয়কারী। কলাই বাহুল্য, বাণিজ্যিক ক্ষেত্রেও প্রতুত লাভদায়ী। ইতিমধ্যেই প্রায় ৮০০০ হিন্দুস্তান কমার্সিয়াল গাড়ী অর্থাৎ ট্রাক ও মিনিবাস বাংলাদেশে চালু আছে।



প্রগতি ইন্ডাস্ট্রিজ লিমিটেড
(বাংলাদেশ সরকারের একটি সংস্থা)
৯৬, অগ্রবাদ কমার্সিয়াল এরিয়া চিটাগং, বাংলাদেশ
ফোন : ৫০-০১৬১ (৫ লাইন), ফ্যাক্স : ৮৮০-৩১-৭১০৭২৫
টেলেক্স : ৬৬২১৮ লিআইএল বিজে, কেবল : অটোপ্রগতি

Hindustan Motors Limited

26th January—
Indian Republic Day.
Our felicitations to the government and people of India on this august occasion.

Your own home gives you a permanent address. It gives you the security and comfort you long for. It gives you a sense of pride and dignity. It also provides a safe shelter for your future generations. Buying an Eastern Housing plot means a secured and profitable investment.

Eastern Housing Limited

Islam Chamber
125/A, Motijheel Commercial Area (3rd floor), Dhaka-1000, Bangladesh
Phone : 9566353, 9566354, 9566303-5
Telex : 632349 IGR BJ, Fax : 880-2-863476