L&T Earthmover News

Vol. 20, No. 1 January-March 2007

# L&T TIES UP WITH SCANIA OF SWEDEN

*(L to R) Mr. S. Raghavan, Executive Vice-President, Construction Equipment Business Sector, L&T; Mr. Mikael Kyander, Senior Account Manager, Scania; Mr. J.P. Nayak, President (Machinery & Industrial Products Division) , L&T and Mr. S.K. Mittra, Vice-President, Construction & Mining Equipment Business Unit, L&T, after executing Distributorship Agreement.*

Larsen & Toubro Limited has entered into a distributorship agreement with Swedish heavy vehicle major Scania to distribute its range of multi-axle trucks in India. These heavy-duty trucks, in the 300 – 500 hp range, will cater to the needs of the construction & mining sectors and will be marketed by L&T's Construction & Mining Tipper Business (CMTB). The trucks will complement L&T's range of Hydraulic Excavators that are widely used in mining and construction projects around the country.

Scania with a turnover of US $ 8.8 billion, is a leader in the production of tucks of capacities exceeding 16 tonnes, heavy-duty buses and engines for mining, power generation and marine applications. Currently, about one million Scania vehicles are in operation in 100 countries in Europe, Latin America, Asia, Africa and Australia.

This relationship will further strengthen L&T's strong presence in the mining and construction sectors. Offerings to these sectors from L&T's Construction & Mining Equipment Business Unit include a broad range of hydraulic excavators, dozers, motor graders, wheel loaders, dump trucks, mobile crushers and surface miners.

# Fuel Management

Technological advancement can be identified as the single most important contributor for bringing us from stone age to jet age. Distances on the globe have reduced and cities have come closer – thanks to the high-speed transport and communication systems. Over the last 50 years or so, if you keep aside the population growth, the growth in automobile sector has been the most prominent and profound. Today, city planners at times seem more worried about parking places and roads than anything else. Though our lives have definitely become more comfortable with these luxuries – yet they come with inherent risks. Millions of litres of fuel are being burnt everyday and the smoke coming out, engulfs our atmosphere. With rapid urbanization, which also means reducing our forests and trees, ecological imbalance has started taking its toll. Global warming, acid rain, depletion of ozone layer, change in climatic pattern, unpredictable weather conditions are all cumulative result of pollution.

Over the last decade or so, scientists and technologists are focusing their entire attention towards emission control and means to reduce load on natural resources. Emission regulations are being framed (for both 'on road' and 'off- road' engines), implemented and made stricter with every passing day. Manufacturers on the other hand are working overtime to produce engines that emit less pollutant and consume less fuel. Apart from automobile, other industries too have understood the need for environment protection. Environment protection is always on top of the priority list of CEOs and Managers. More and more manufacturing houses are adhering to the ISO 14000 norms and display their environment policy more prominently than their products, which is an expression of their commitment towards caring for the environment and mother nature. The revolution to make the world more greener and a less polluted place has begun and we all have a part to play.

If we focus alone on diesel engines, strict norms are in place that regulate the allowable emissions. EPA – Environmental Protection Agency in United States, European Union – EU, Ministry of Construction – MOC in Japan are some of the Law making bodies around the world. The following table (Fig.-1) gives the EPA Norm for Off road diesel engine, which is most stringent requirement today.

$No_x$, Particulate matter and Hydro Carbon are measured in gms/ Hp-hour and their limits are based on the engine size, and year of manufacture. Some of the steps adopted by engine manufacturers to meet these stringent norms are:

a. Use of air to air after-cooler
b. Redesigned piston crown and combustion chamber
c. Electronically controlled High pressure fuel injection system with infinitely variable injection timing
d. Use of pulse exhaust manifold and wastegated turbocharger…
e. Use of exhaust gas re-circulation

| Regions | Emissions regulations | Output class | Enforcement date NOx | Nitrogen Oxide HC | Hydrocarbon NMHC+NOx | Nonmethane hydrocarbon + Nitrogen Oxide PM | Suspended particulate matter Black smoke | density at abrupt acceleration with no load Unit |
|---|---|---|---|---|---|---|---|---|
| | | | | (g/kWh) (%) | | | | |
| Japan | Law concerning emissions control of specified special vehicles | 75-130kW | 2007/10 | 3.6 | 0.4 | – | 0.2 | 25 |
| | | 130-56kW | 2006/10 | 3.06 | 0.4 | – | 0.17 | 25 |
| USA | EPA Tier3 | 75-130kW | 2007/10 | – | – | 4.0 | 0.3 | – |
| | | 130-56kW | 2006/10 | – | – | 4.0 | 0.2 | – |
| Europe | Stage3A | 75-130kW | 2007/10 | – | – | 4.0 | 0.3 | – |
| | | 130-56kW | 2006/10 | – | – | 4.0 | 0.2 | – |

Examples of Komatsu machines conforming to the regulations
- 75 - 130kW : PC160 - PC200-8
- 130 - 560kW : PC220-8 - PC1250-8, WA380-6 - WA600-6

*Fig.-1*

Use of electronically controlled high-pressure fuel injection has revolutionized fuel system and high injection pressures in the range of 1200 to 1700 bars are achieved. Compared to this the fuel injection pressures of the conventional inline fuel system are only in the range of 250-300 bars. Currently manufactures are using one of the following fuel systems.

Common Rail Injection – CRI, *(Also referred to by some manufacturers as CRDI – Common Rail Direct Injection).*

High Pressure injection – HPI

Hydraulically actuated electronic Unit Injection system – HEUI

CRI and HPI engines are in use on Komatsu Mining machines like Hydraulic Excavators, Dozers, Wheel Loaders, Dump Trucks etc. CRI is used on all 125 and 140 series engines (PC400-7, PC600-6&7, HM300, D275A-5) while HPI is used on 170 series engines (HD465, PC1250-7, D375A-5, WA700-5).

An outline diagram of CRI fuel system as used on PC400-7/ PC600-7 is shown alongside (Fig.-2)

The fuel pump develops very high pressure(in the range of 1200-1400 bars) and stores fuel in the common rail. From the common rail each injector is fed with fuel under high pressure and is ready for injection. Injection takes place when the controller sends a signal to the two way electromagnetic valve. Duration and time of injection is decided by the controller based on the input signals from the various sensors which monitor the engine speed, the load, and the mode of operation selected by the operator, the ambient air temperature, the water temperature and many more. The components of this system have clearances in the range of microns, so that fuel under such high pressure does not leak between the clearances. Under such situations only a very clean fuel can ensure long service life of the fuel system

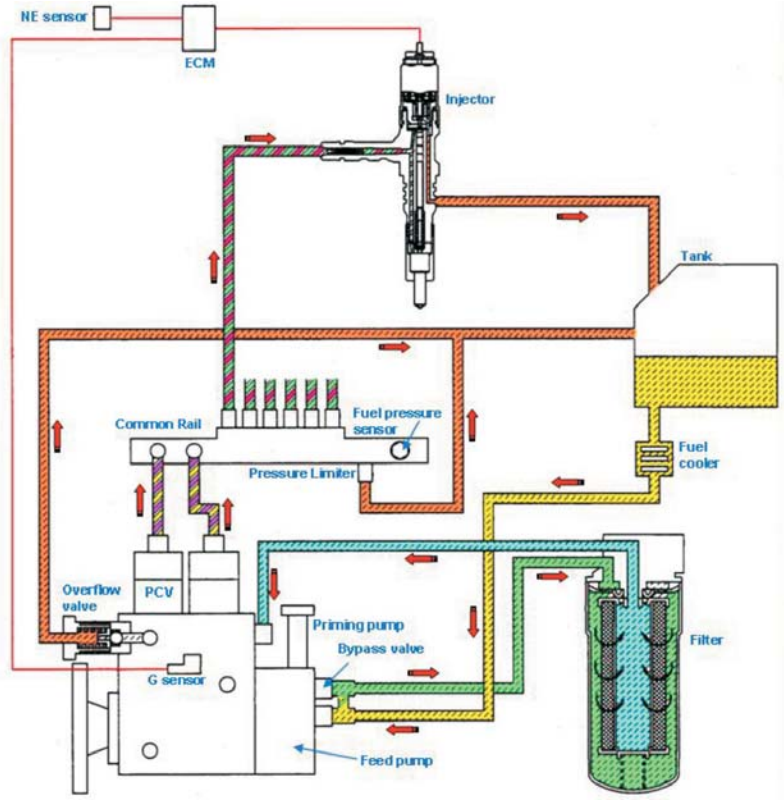



*Fig.-2*

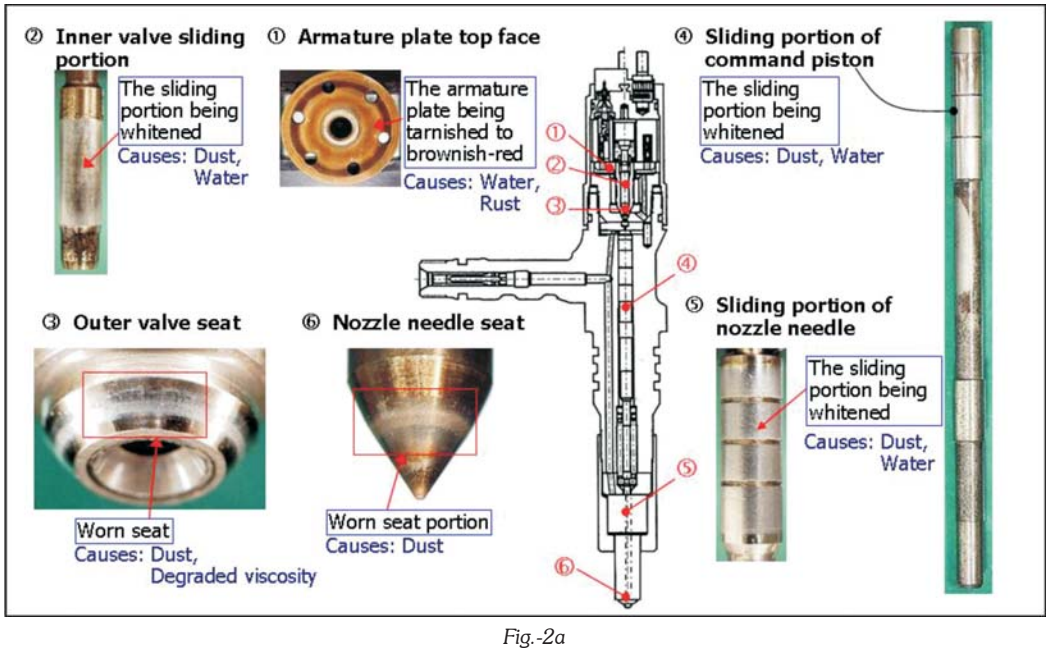



*Fig.-2a*

components. This is where the role of users in providing clean fuel to the pump becomes more important than the designers of this system. Ingress of dust and water into the fuel system has to be controlled more strictly compared to conventional fuel system. Accordingly a 5-micron primary fuel filter and a 2-micron secondary filter are used. (To have an idea, a human hair is around 30-50 microns in diameter, white blood cell is 25 microns, red blood cell is around 8 microns and bacteria is around 2 microns) Study indicates that around 85% of fuel system failures are related to the ingress of water and dust entry into the system. The wear pattern of injector components , that are primarily caused by dirty fuel are shown in Fig. 2a above.

The high precision primary and secondary filters are the lifelines of this fuel system.

Genuine filters are made with this specific function in mind, and are the only guarantee that the fuel system is fed with good fuel. Imitation filters try to compete on price and are ready to compromise on the quality. Imitation filter manufacturers rarely shoulder the blame for a system disorder; the entire responsibility is passed on to the engine manufacturer.

Certain precautions need to be taken by the maintenance crew while replacing the filter such as:

a. The 2 micron main filter should be fitted without filling it with fuel. This will avoid ingress of dust during the filing process. Fill the filter by using the priming pump, which will ensure that fuel that has been cleaned by the primary filter is only entering the filter. Take care to properly install the O-ring

b. The primary filter too should be replaced with due care. While removing and fitting the water separator bowl take care to install the O-ring properly. The sequence of operations are captured graphically in Fig. 3.

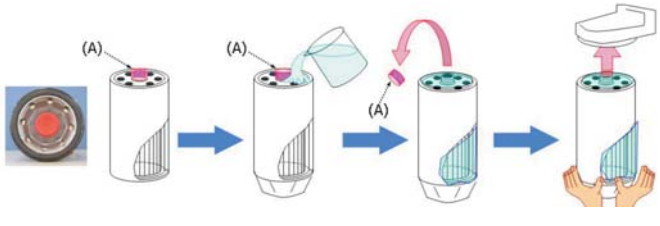



*Fig.-3*

c. Water entry into the fuel system can cause rust in the components and cause sliding wear to the parts of the pump and injector. Water entry to the system can be avoided by regularly draining water and sediment from the fuel tank before starting. If not done, it is easily mixed with fuel and finds its way to the fuel pump. Proper fuel filling practice will also reduce chances of water entry. (Fig.-4)

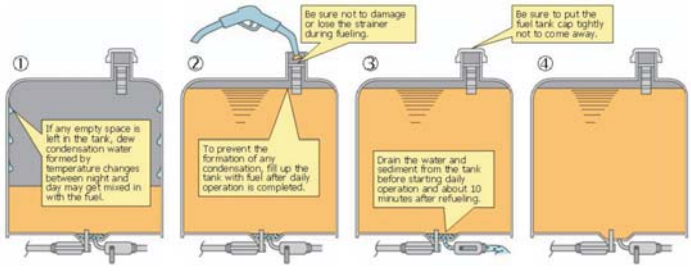



*Fig.-4*

d. Poor fuel storage practice also assists in the ingress of dust and contaminants in fuel. When filling from drum ensure that dust accumulated in the top edge and at the bottom do not enter the tank.(Fig.-5)


*Fig.-5*

e. Fleet owners and large site can plan for a two level fuel storage scheme as shown below. This is a one time investment which will reap rich dividends in the long run. (Fig.-6)

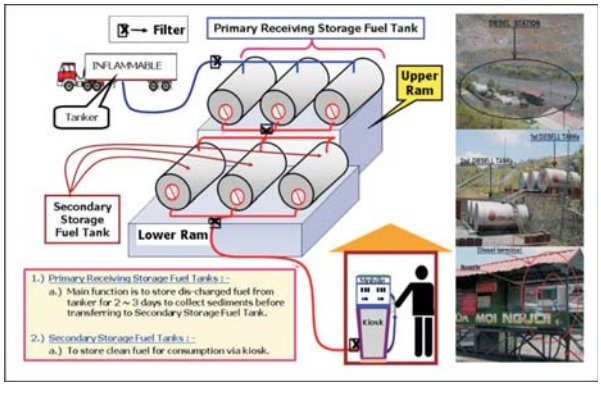



*Fig.-6*

With technological advancements taking place at brisk pace, there is an urgent need to upgrade facilities, develop good work practices & habits and optimize use of these machines. Users will have to become partners in this endevour and jointly work to make this earth a better place.

*Keep track of L&T Earthmovers News. We shall cover something equally interesting in the next issue also.*

# L&T-Komatsu PC130-7 Hydraulic Excavator rolls out

Larsen & Toubro Limited (L&T), which offers a wide range of construction, mining, earthmoving and road building equipment, achieved yet another milestone when its Construction & Mining Equipment Business Unit delivered the first L&T-Komatsu manufactured Hydraulic Excavator Model PC130-7 in Bangalore on February 22, 2007. This hydraulic excavator, which comes with Komatsu's GALEO brand, has a host of powerful and convenient features that make it the most versatile machine in its class, for a wide range of applications.


*The first L&T-Komatsu PC130-7 Hydraulic Excavator, which was launched at Bangalore on February 22, 2007*

L&T-Komatsu PC130-7 comes with a revolutionary system called HydrauMind. This is a technologically sophisticated yet mechanically simple system, which controls the operations of the excavator. Essentially hydraulic, this system brings higher power, better manoeuvrability and controllability to the operators' fingertips. For example, when the ground condition changes in digging, HydrauMind automatically adjusts the hydraulic oil pressure to accommodate the change. All the components in the machine, work in synergy with the optimum combination of speed and power.

The spacious operator's cabin has an ergonomically-designed seat that can tilt and slide forward and backward, together with the work equipment and control levers, to ensure the best working position for the operator at all times.


*Mr. S. Raghavan, Executive Vice President, Construction Equipment Business Sector, Larsen & Toubro Limited, handing over a plaque to the customer, Mr. Vilas Gadhave, proprietor of M/s. Ultimate Engineering Company, Solapur*

The machine has 4 working modes making it adaptable for working in different operating conditions. It comes with a self-diagnostic monitor, which cautions the operator if any abnormalities arise in the machine while working.

The snap-ring type bucket pin fixture facilitates easy bucket replacement - just a screwdriver is needed. The swing holding brake of the machine automatically prevents any hydraulic drift after the swing is stopped. It enables comfortable swing operation on uneven terrain and slopes. The other field-proven features in the machine are: double lock electric connectors for increased reliability; and a fuel-efficient 89 HP engine.

L&T-Komatsu PC130-7 hydraulic excavator is manufactured in Bangalore by L&T-Komatsu Limited – L&T's joint venture with Komatsu Asia & Pacific Pte Ltd. This manufacturing facility in Bangalore has ISO 9001 accreditation for design, manufacture and service, and ISO 14001 certification for Environment Management System.

For more details, please contact: Larsen & Toubro Limited, Construction Equipment Business, 10/1 Palace Road, Laxminarayan Complex, First Floor, Bangalore 560 052. Tel: (080) 40401700. Fax: (080) 22250309. Email: ceb@pro.ltindia.com

# CMB TRAINING CA

For the benefit of customers of Construction & Mining Equipment Business Unit (CMB), Training Programmes offered by L&T, have

| | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May 2007 | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| June | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | | | | | | 4/PC71/PC200-6/Pune Operators/Mechanics | | | | | | 5/PC300-7/B'lore Engineers/Foremen | | | | | | 6/L& |
| July | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | | | 10/Excavator Hyd Systems/B'lore Engineers/Foremen | | | | | | | | 12/Kom.Dozer/B'lore Engineers/Foremen | | | | | | | |
| | | | | | | 11/PC200-6/Delhi Operators/Mechanics | | | | | 13/PC200-6/PC300-7 Jamshedpur Operators/Mechanics | | | | | 14/PC130-7/PC300-7/Bhopal Operators/Mechanics | | |
| August | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | | | | 20/PC200-6/B'lore Mechanics/Supervisors | | | | | | 21/L&T300(E)/B'lore Engineers/Foremen/HT Electricians | | | | | | | |
| | | | | | | | | | | | | | 22/PC200-6/ Gandhinagar Operators/Mechanics | | | | | |
| September | 30 | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | | | | | | | | | | | 29/L&T300 Trouble-shooting/B'lore Engineers/Foremen | | | | | | 31/Kom. Wheel L Engineers/F | |
| | | | | | | | | | | | | | | | | 30/PC200-6/ Raigarh Operators/Mechanics | | |
| October | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| | | | | | 35/PC200-6/B'lore Engineers/Foremen | | | | | | | 37/L&T72/90-3/B'lore Mechanics/Supervisors | | | | | | |
| | | | | | | 36/L&T72/90-3/Chandigarh Operators/Mechanics | | | | | | | | | | 38/PC300-7/ Mysore Operators/Mechanics | | |
| November | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | | | | | | | | | 41/Kom.Dozer/B'lore Engineers/Foremen | | | | | | | | 43/Excavato Engin | |
| | | | | | | 40/Kom. Grader/Kanpur Operators/Mechanics | | | 42/PC200-6/Katni Operators/Mechanics | | | | | | | | | |
| December | 30 | 31 | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | | | | | | | | | | | 48/L&T300 Trouble-shooting/B'lore Engineers/Foremen | | | | | 50/Kom. Dump Truck/B'lore Engineers/Foremen | | |
| | | | | | | | | | | | | | 49/PC130-7/Chandigarh Operators/Mechanics | | | | | |
| January 2008 | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | | | | | | 55/Kom.Grader/B'lore Mechanics/Supervisors | | | | | | |
| February | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | | | | | | | | | | | | 59/PC200-6/B'lore Engineers/Foremen | | | | | 61/Excavato Engi | |
| | | | | | | | | | | | | 60/L&T300/ Durgapur Mechanics/Supervisors | | | | | | |

Key for Course Fee:

Special programme for Managers / Executives / Engineers & Foremen : Rs. 2,000/-

Programme for Engineers & Foremen : Rs. 1,750/-

Programme for

Programme for

Note: For course contents, please refer to Training Programme Booklet.

Kom : KOMATSU

B'lore : Bangalore

# LENDAR 2007-2008

been scheduled in Bangalore and other Service Stations. Table below gives the Training Schedule for the period May 07-February 08

| T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | |
| 1/PC200-6/B'lore Mechanics/Supervisors | | | | | | 2/L&T300/B'lore Mechanics/Supervisors | | | | | | 3/PC200-6/PC300-7/Kolkata Operators/Mechanics | | | | |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| T300 Trouble-shooting/B'lore Engineers/Foremen | | | | | | | 8/PC200-6/B'lore Engineers/Foremen | | | | | | | 9/PC600-7/PC1250-7/B'lore Engineers/Foremen | | |
| | 7/PC200-6/Jaipur Operators/Mechanics | | | | | | | | | | | | | | | |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | | |
| 15/Kom.Grader/B'lore Mechanics/Supervisors | | | | | | | 18/PC130-7/B'lore Mechanics/Supervisor | | | | | | | | | |
| | 16/PC200-6/PC300-7/Salem Operators/Mechanics | | | | 17/PC200-6/Hospet Operators/Mechanics | | | 19/PC300-7/PC400-7/Goa Operators/Mechanics | | | | | | | | |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
| 23/Surfaace Miner-KSM-304/B'lore Engineers/Foremen | | | | | | | | | | | 27/Kom.Machine Electricals/B'lore Mechanics/Supervisors | | | | | |
| | 24/PC200-6/Jhansi Operators /Mechanics | | | | 25/PC300-7/Ongole Operators/Mechanics | | | 26/PC71/ PC200-6/Navi Mumbai Operator/Mechanics | | | 28/PC200-6/Kochi Operators/Mechanics | | | | | |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| oader /B'lore Foremen | | | | | | | 32/PC300-7/B'lore Mechanics/Supervisors | | | | 34/PC200-6/Barbil Operators/Mechanics | | | | | |
| | | | | | | | | 33/PC200-6/Udaipur Operators/Mechanics | | | | | | | | |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | |
| | | | | | | | 39/PC71/B'lore Mechanics/Supervisors | | | | | | | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| r Hyd Systems/B'lore neers/Foremen | | | | | | 45/L&T300/B'lore Mechanics/Supervisors | | | | | | 47/PC130-7/B'lore Engineers/Foremen | | | | |
| | 44/Kom. Dozer/ Wheel Loader/ Durgapur Operators/Mechanics | | | | | | | 46/PC200-6/Chennai Operators/ Mechanics | | | | | | | | |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 51/PC200-6/B'lore Mechanics/Supervisors | | | | 53/Scania Trucks/B'lore Engineers/Foremen | | | 54/PC400-7/B'lore Engineers/Foremen | | | | | | | | | |
| 52/L&T300/Dhanbad Mechanics/Supervisors | | | | | | | | | | | | | | | | |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | |
| 56/PC300-7/B'lore Engineers/Foremen | | | | 57/PC600-7/PC1250-7/B'lore Engineers/Foremen | | | | | | | | 58/Kom.Machine Electricals/B'lore Mechanics/Supervisors | | | | |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | |
| r Hyd Systems/B'lore neers/Foremen | | | | | | | 62/Scania Truck/B'lore Engineers/Foremen | | | | | 63/L&T300 Trouble-shooting/B'lore Engineers/Foremen | | | | |

Mechanics & Supervisors : Rs. 1,500/-
Operators & Mechanics : Rs. 750/-

**LARSEN & TOUBRO LIMITED**
Construction & Mining Equipment Business Unit
Product Support Department
Bangalore

## International Engineering & Technology Fair

Confederation of Indian Industry (CII) organized the 3rd 'The India Infrastructure Show" as part of the International Engineering & Technology Fair at Pragati Maidan, New Delhi from 13th to 16th February 2007. Japan External Trade Organisation (JETRO) was the partner for the event.

Komatsu Limited, Japan, participated in the Japan Pavilion with a photographic display of their products. Komatsu India Pvt. Ltd., Chennai exhibited a model of their Chennai factory, for the benefit of the visitors.


*Photograph shows the view of Komatsu Stall*

## Customer Meet At Pune

Construction Equipment Business of Larsen & Toubro Limited in association with the Pune Dealer – Aryan Earthmovers, sponsored an event at the meeting organised by Pune Earthmovers' Association at Yash Lawn, Pune.

During the event, demonstrations of L&T-Komatsu PC71 & L&T-Komatsu PC200-6 machines were organized for the benefit of participants. A large number of the Association members from the contractor fraternity attended the meet.


The event was well received and appreciated by the Pune Earthmovers Association and its members.

## Customer Meet and Machine Demo of PC130-7

A customer meet and machine demonstration of Komatsu Model PC130-7 Hydraulic Excavator were organized at Vapi, Gujarat on 15th November 2006.

Mr. Bhavesh L Nandwana, a quarry owner based at Vapi and owner of first Komatsu PC130-7 in Gujarat, spared his equipment for the demonstration.

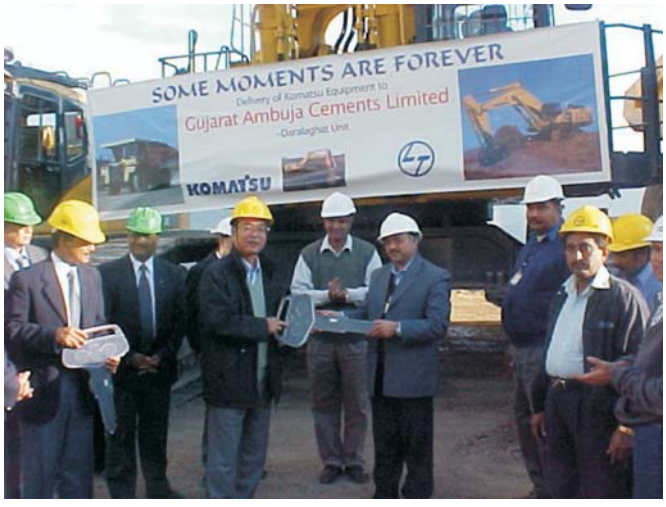
Vapi, Daman & Silvassa have a large number of active stone quarries. All quarry owners operating in and around these areas were invited. Customers from areas as far as Ankleshwar, Bharuch and Surat also visited the demonstration. Equipment features were explained in detail to all the customers.

*Presentation on Construction & Mining Equipment offered by L&T.*


*Equipment features being explained to the prospective customers.*

# Darlaghat... A New Experience... A New Goal...!!


*Mr. Arvind K. Garg, Jt. General Manager, Construction Equipment Business, L&T handing over a silver plaque to Mr. S.K. Tezwani, General Manager – Technical, GACL, Darlaghat Unit. Mr. R.K. Sharma, General Manager – Mines (extreme right) and Mr. S. Chatterjee (extreme left), DGM, Construction Equipment Business, L&T applaud the auspicious occasion.*




*Mr. Seiichi Abe (fourth from left), GM – Quality Assurance & Design, Komatsu India Pvt. Ltd. handing over the symbolic key to Mr. S.K. Mantri, Asst. Vice-President – Accounts, GACL, Darlaghat Unit.*

Gujarat Ambuja Cements Limited (GACL), set up in 1986, has a total cement producing capacity of 16 MTPA. GACL has plants at different locations in Western, Northern and Central India. Its Darlaghat Unit, located in Himachal Pradesh, is a 2.4 MTPA capacity cement plant catering to the demand of North Indian Market.

The Darlaghat unit of GACL is one of the largest and efficient cement producers in India, besides having the distinction of producing cement at lower cost.

For replacing GACL's aging mining equipment, L&T offered Komatsu's range of new generation equipment for better availability, productivity, lower operating costs, and efficient after-sales-support. GACL, after convincing themselves on these aspects, have placed order for Komatsu Hydraulic Excavators and Dump Trucks.

*PC1250 Loading Shovel, PC600 Loading Shovel and HD465 Dump Trucks being inducted into equipment fleet at GACL, Darlaghat (HP) Unit.*


*Officials of GACL, L&T and KAP/KIPL posing in front of the Hydraulic Excavators.*

L&T has since supplied Komatsu Hydraulic Excavators and Dump Trucks to Darlaghat Unit and commissioned it successfully in February 2007.

# One Man, Three Businesses

*Mr. Abdul Hakim*

Mr. Abdul Hakim, Director of A.M Enterprises has come a long way in his life. In search of better avenues, he had migrated from Midnapore to Haldia, where he got an opportunity to work with Haldia Carryon & Construction (P) Ltd. (HCCL). Having acquired the required skills, knowledge and established contact in this field, Mr. Hakim decided to simultaneously create his own identity.

Being a staunch believer in commitment and performance, he ventured into P.B Enterprises and A.M Enterprises. At present, Mr. Hakim is a Partner in A.M. Enterprises and P.B. Enterprises and a Director with Haldia Carryon & Construction (P) Ltd.

In 1993, A.M. Enterprises ventured into construction work as its main line of business. Though Mr. Hakim was handling different types of activities at Haldia, his entry into this line was not new to him, as his father was already involved in construction work. Initially this work was carried out with the help of hired construction equipment, to speed up the work. Later A.M. Enterprises decided to own construction equipment and in 1998 they purchased their first hydraulic excavator, Model L&T 72.

The newly bought L&T 72 was extensively used by A.M. Enterprises for their work and during idle time, it was hired out. While Mr Hakim's business has been flourishing, his good reputation has also spread around through his well-wishers and friends.

In 2003, Mr. Hakim started P.B. Enterprises which is mainly into hiring business in remote locations / sites in Assam, Tripura, Mizoram, etc. Currently, they have a fleet of 4 Nos. L&T-Komatsu PC200-6 and 1 No. L&T 90-3. Mr. Hakim says, 'My being a Director in P.B. Enterprises is not a hindrance for me to concentrate on the activities of HCCL. Mr. Partho Banerjee, who is a partner in P. B. Enterprises, handles the day-to-day activities in that firm. Because of this, we have a clear vision that the activities of HCCL, A.M. Enterprises and P.B Enterprises are different and there is no clash'. According to Mr. Hakim, these set ups are operating independently.

On individual projects, the managers concerned handle the day-to-day jobs and provide the machine performance report on monthly basis. Selection of operators is on the basis of work experience. These experienced operators can handle the trouble-shooting in case of any emergency.

According to Mr. Hakim, on an average, his machines are operating 10 months in a year. Though the hiring of equipment is doing well, customers prefer to hire L&T-Komatsu PC200-6. The hiring rate is determined based on the strata to be handled.

The vision of P.B Enterprises and A.M Enterprises is to own 25 machines and focus on hiring market. They would like their machine to work 12 hours a day and extend their area of operation, depending upon the volume of work.

Mr. Hakim says that he is happy to be associated with big projects, to name a few - Afcons, L&T-ECC and HBL.

# Let Every Day

*"Imagine life as a game in which you are juggling some five balls in the air. You name them - work, family, health, friends and spirit and you're keeping all of these in the air.*

*You will soon understand that work is a rubber ball. If you drop it, it will bounce back. But the other four balls- family, health, friends and spirit - are made of glass. If you drop one of these, they will be irrevocably scuffed, marked, nicked, damaged or even shattered. They will never be the same. You must understand that and strive for Balance in your life." How.*

*Don't undermine your worth by comparing yourself with others. It is because we are different that each of us is special.*

*Don't set your goals by what other people deem important. Only you know what is best for you.*

*Don't take for granted the things closest to your heart. Cling to them as you would your life, for without them, life is meaningless.*

*Don't let your life slip through your fingers by living in the past or for the future. By living your life one day at a time, you live all the days of your life.*

# Drive to Succeed

*Mr. Rangalal Barik*

Mr. Rangalal Barik, Proprietor of Sagar Engineering at Haldia has added the construction equipment hiring business to his business portfolio. Now he feels the decision is right. Having come from different backgrounds the husband and wife team are running the multi-activity business, from tanker to construction equipment hiring to hospitality business. Mr. Barik comments, "it is the interest and the will to achieve that drives the individual to take risks and succeed." From his college days, Mr. Barik wanted to be different. A keen football player during his hey day, Mr. Barik says, "though I have been told about the benefits of the excavating machine, to take the decision to buy the machine took some time. Finance was another hurdle during that time for a new entrant.

Looking back as a businessman, Mr. Barik recalls: "my association with the tanker business spans over 26 years. I am still an active participant in all the events of this line." Mr. Barik is also the Secretary of Haldia Tanker Owners' Association. Entry to the construction equipment hiring business was in 2003 with an L&T-Komatsu PC 200-6 hydraulic excavator and he reveals that the financing was done by L&T-Finance Limited. Now the group owns four L&T-Komatsu PC 200-6 machines. As testified by Mr. Barik, "all the machines are operating at Assam/Tripura through contractors. We only hire out the machines on hourly contract basis."

Mr. Barik believes in maintaining the machines as per OEM's guidelines. He has engaged a team of people to take care of the maintenance of the machines. The maintenance part is taken care of at the site by the manager along with the operators. Experienced operators are selected for the job.

Mr. Barik says, "while giving the machine on hire, we do enquire about the nature of the job; then only the machines are deployed. These machines are operated approximately 270 hrs. in a month due to the locational factor."

To take care of Mr. Barik's area of diversification covering tanker business, hotel and construction equipment, his wife shares the responsibilities of accounting of the business. In Mr. Barik's words: "I do the business, she handles the accounts."

A happily married man with two daughters and a son who are studying, Mr. Barik also devotes time to social service. He organizes regular blood donation camps and donates ambulances to the needy, besides the Geetha Pravachanas.

A self-made man, Mr. Barik is totally committed to business and hardly gets any time to plan for scheduled holidays.

## be a Good day

*Don't give up when you still have something to give. Nothing is really over until the moment you stop trying.*

*Don't be afraid to admit that you are less than perfect. It is this fragile thread that binds us to each together.*

*Don't be afraid to encounter risks. It is by taking chances that we learn how to be brave.*

*Don't shut love out of your life by saying it's impossible to find time.*

*The quickest way to receive love is to give; the fastest way to lose love is to hold it too tightly; and the best way to keep love is to give it wings.*

*Don't run through life so fast that you forget not only where you've been, but also where you are going.*

*Don't forget, a person's greatest emotional need is to feel appreciated.*

*Don't be afraid to learn. Knowledge is weightless, a treasure you can always carry easily.*

*Don't use time or words carelessly. Neither can be retrieved.*

*Life is not a race, but a journey to be savoured each step of the way.*

# Mr. Sakane & Mr. Noji visit L&T-Komatsu Limited

Mr. Masahiro Sakane, Chairman, Komatsu Ltd., Japan, visited L&T-Komatsu Limited, on 29th March 2007. Two days prior to this, Mr. Kunio Noji, President and Chief Executive Officer, Komatsu Ltd., Japan, also visited LTK.

On this occasion, LTK made presentations to them on improvement projects taken up at the plant and also with suppliers, to develop strong supply chain to meet the projected demand. Both Mr. Sakane & Mr. Noji were impressed with the initiatives taken up by LTK and called for continued efforts towards improvements, in meeting the market demand and giving quality product to customers.

*Group photograph shows Mr. Sakane (fourth from left) flanked by officials of Komatsu Limited, LTK and L&T.*

To mark the occasion of the visit to LTK by the dignitaries from Komatsu Limited, Japan, saplings were planted.

# OHSAS 18001:1999

L&T-Komatsu Limited (LTK) was certified for ISO 14001:1996 during 1999 for Environmental Management System and OHSAS 18001:1999 during 2003 for Occupational Health and Safety Management System. At that time the theoretical adequacies of both the systems were met by developing a single Apex manual followed by level 2, 3, and 4 documents and practical adequacy was ascertained by BVQI during surveillance audits, separately.



During 2005, LTK updated to ISO 14001:2004 version for Environmental Management System. In the year 2006 BVQI introduced IMS system and suggested to LTK to make use of it.

After finding out what needs to be done, LTK signed a contract with BV(formerly BVQI) for IMS of Environment, Occupational Health and Safety Management Systems and following issues were addressed.

a. Visualizing "EHS" issues as one
b. Alignment
c. Reviewing Apex manual and other level procedures
d. Training auditors
e. Internal Audits and
f. Management Review

After these preparations were over, initial review by BV was conducted during September 2006. The "GAPS" highlighted were addressed. Certification audit was conducted during February 2007. The entire journey has taken around six months.

- EHS-IMS resulted in revision of issues, namely,
- CAPA and review,
- EHS competence,
- Vendor training and audit,
- AAI and HIRA for new projects,
- Legal compliance & others, (mainly requirements of L&T and Komatsu)
- Formation of Resource Conservation Committee and
- New set of objectives & targets.

Also, LTK will be audited by BV once a year. Thus, LTK is the first company among L&T Group to get certified for Integrated Management System of OHSAS 18001:1999 and ISO14001:2004 and integration has brought emotionally the requirements of the latest versions of the standard together, simplifying the work, documents.

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