

J. M. BAXI GROUP

# TIDINGS

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J M BAXI GROUP

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## From the Quarter Deck

A happy new year to all. In some ways, 2015 seems to be the start of almost a new era. The new government of India is firmly in the saddle. The states of Telangana and Andhra Pradesh are firmly striding to their respective destinies. Special mention must be made of the massive cyclone that hit Vizag in Andhra Pradesh on 12 October and the incredibly brave and swift response by the state government and the people of Vizag in tackling a gigantic crisis. The monsoon hiccup in India has not led to a major drop in agricultural output thus allowing the rural Indian economic story to grow unhindered. The bold push towards freeing diesel price controls and subsidies has led to the reduction of the financial burden on the government of India. The laying down of economic policies by the government of India for 100 smart cities, the Sagarmala port-led development model and the commitment to reforms of the Indian railways have all been strong steps in the right direction.

Yes, 2014 has seen a lot of positive steps in India.

We at the J. M. Baxi & Co. group of companies have also had a breathless and breathtaking 2014 or shall we say a pathbreaking 2014. We have DICT Sonepat up and running. We have the concession agreement signed for Vizag container terminal and container freight station. We have been awarded the operations and maintenance of the Haldia Container Terminal, which will lead to an enhancement of container handling throughput with improved container handling productivity. We have a multipurpose cargo terminal under consideration in Paradip. We have our sister terminals to DICT Sonepat: Nagpur NICT and Ludhiana LICT under implementation. We have our ship "Vir Varenia" about to arrive. We have worked on our cold chain warehousing initiative, which will be embedded at our various terminals. We were given an opportunity to serve Reliance once

again for its prestigious Jamnagar expansion project. And lastly, with great pleasure and pride, I would like to share with you the opening of our joint venture company in Myanmar, which will provide logistics support to our existing customers for shipments to and from Myanmar.

As is said, the past is past, the future is yet to come, it's the present that matters. And 2015 is the present. We begin 2015 with a firm commitment to go ahead with our principals and partners and to present and pursue new opportunities in the Indian logistics space. One of the fast track projects of the government of India has been the endeavour to resolve the coal block problems. This is expected to enable stalled new power projects to begin production of electricity. It is also believed that the import of coal into India will go up, thereby opening up opportunities for our shipowner principals to deploy tonnage on the Indian trade. Especially important will be our assistance to our principals in having our information and involvement across the entire transportation chain of ship-port-dispatch-transport-deliver cycle to enable our shipowners, shippers and receivers to have the maximum efficiency and productivity.

Similarly, the production as well as import of LNG is expected to be on the fast track and our company is playing and will continue to play a strong role of support and supply to our principals and customers.

Trade, both exports and imports, of agriculture commodities continues to show a robust growth. On the export side, maize, rice, wheat and soya meal are increasingly requiring door-to-door solutions and on the import side, we are seeing good growth on edible oils, chickpeas and food which moves in specialised reefers. Steel and automobiles are expected to have a positive outlook in the coming year after a subdued and at times negative 2014.



Petroleum products and petroleum chemicals along with fertilisers both in acid form and bulk form, are likely to see robust growth in the next 2 to 3 years. The various efforts and initiatives are likely to bear fruit in the coming few quarters.

On the container front, India has crossed the 10 million TEU annual throughput mark and it is not unrealistic to predict that by 2020 India should see a throughput of 20 million TEUs on a conservative estimate. These numbers were calculated on the basis of 6% growth of GDP. However, we all know that India hopes to hit its stride and grow at 8% to 9%. We therefore come back to the issue of infrastructure growth. Increasingly, the connectivity of ports for evacuation and intermediate storage of cargo is currently the critical requirement. We are working closely with the government authorities on this very subject. The other area of opportunity is going to be the increased interest that foreign conglomerates are beginning to show in the Indian growth story. Japan, China and the USA have indicated a likelihood of a cumulative investment of \$100 billion in the next 2 to 3 years across various types of commodities and projects. Many of the companies involved have been long-term partners and customers of our group of companies. We shall continue working closely with them to assist them in their growth efforts in India. I wish one and all a great 2015 and offer my thanks to each and every colleague from the J M BAXI GROUP of companies for having worked hard in 2014 and I am looking forward to your continued commitment in 2015. ■

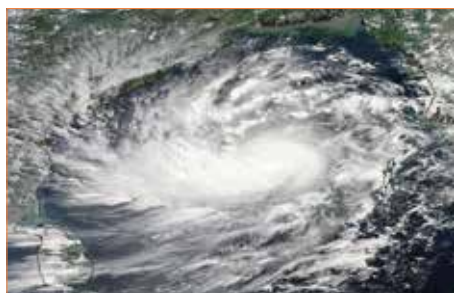
**Krishna B. Kotak**

**Chairman - J M BAXI GROUP**



## Agency & Services

# In The Wake Of The Storm - We Fight Back



**V**isakhapatnam, the City of Destiny, woke up to heavy winds blowing across the Bay of Bengal on 12 October 2014. What followed was an unprecedented battering of the city by the cyclonic storm named Hudhud. The government authorities and residents had braced themselves for the predicted cyclone but no one had anticipated the ferocity and the viciousness with which it made its landfall, devastating everything that came in its way. Visakha Container Terminal (VCT) at the outer harbour of Visakhapatnam Port, and one of the first establishments to come in the way of Hudhud, had a different story to tell.

The news of the very severe cyclonic storm Hudhud was communicated to the city and all establishments well in advance of its actual landfall at Visakhapatnam. Strong winds ranging from 150 to 280 km/h hit the city that day.

For Vizagites, a cyclone warning usually heralds a spate of heavy rain. So townsfolk reluctantly heeded the authorities, please to evacuate and take refuge in safe areas. Rapid action forces, including para-military personnel from various parts of the state, took up strategic positions. Forecasts and warnings were monitored – Visakhapatnam knew this one was going to be different.

After the gale, it was evident

that Visakhapatnam had lost 80% of its green cover. Power and communications were severely disrupted as power lines and poles had been pulled down, towers toppled, and the roads were strewn with fallen trees, shards of glass and debris. Doors, windows and glass panes were shattered, roofs blown away and many structures – temporary and permanent – were decimated. The landscape had in one day changed like no one could ever imagine. The loss to property is estimated at Rs 70,000 crores. There was a total breakdown of rail, road and air transportation. Commercial activities ceased. The city had stalled.

The saving grace was that there was minimal loss of human life. This was attributed mainly due to two things – the preparations by the administration and the resilience of its residents.

With this intensity of the storm, one would be surprised if told that VCT had suffered only a minimal impact. TV broadcasts flashed pictures of the beach road where bus sheds had blown away and hotel frontages were bereft of glass. A mounted aircraft at the war memorial had fallen off its moorings. The sea was lapping up almost beside the beached submarine museum, and in some places onto the beach road. This was while Visakhapatnam had to stay incommunicado with the rest of the world. Grave rumours about

the state of the terminal were also spreading. Many were therefore surprised when VCT broadcast a message on 13 October that the terminal was operational and that all the cargo in the terminal was secured and unaffected.

But the terminal was affected: sheds were bereft of roofs and furniture fixtures and computers had been damaged. Empty containers had been lifted off their stacks and thrown onto the roads along with trees and other debris. Yet the cranes stayed at their moorings; no cargo was damaged, as the pre-planned block stowage of containers had withstood the strength of the wind and the loaded containers were unaffected. Although there was no power supply at the terminal, the backup generator sets catered to the power requirements, including for the refrigerated containers and the quay cranes.

Much earlier, the planning at VCT had started with an initial strategy meeting, which formed a Cyclone Control Centre to keep up to date with their own and incoming meteorological data. Based on inputs, entry into the terminal was restricted from 1400 hrs on 11 October. Special teams were stationed with adequate raincoats, boots, torches, VHF radios, tools, food and water to tackle the situation. By this time, all high wind

# Agency & Services

procedures were enforced, including stowage of containers in the yard, and positioning and shoring of cranes. VCT then braced itself for what was to come. The initial wind started around 6:00 AM and continued until 12:00 noon. An hour later it started again, i.e. after the eye of the storm had passed – more severely than the first time. VCT anemometers recorded a maximum wind-speed of 80.1 m/s or 288 km/h, apparently the only facility in the city to have recorded the wind speed because of its advanced weather station. The officers on duty stood their ground, adapting to the developing situations. Updates and interactions were eventually restricted to VHF communications only.

What happened since was more significant. With only limited access, VCT ensured the restoration of power, lighting and basic communication within the terminal at the earliest opportunity.

The Chairman of J M BAXI GROUP, Krishna Kotak ensured that supplies of provisions, water and other essentials were procured from unaffected areas to supply from VCT expediently. Personnel from the group accompanied the supplies from Kakinada and from Bhubaneswar. The terminal's canteen was opened as a priority, and employees, distributed food supplies from there through the full week. Personnel from the Engineering, Purchase and Stores section, which was badly affected, were accommodated temporarily in the 'Vidya' Centre at VCT.

The team worked round the clock to ensure that the roads were

cleared, debris and trees were removed, equipment inspected and operations restarted. Internal power requirements were met by the in-house generators for a week, for which diesel had been procured in advance in anticipation of this eventuality. By the early morning of 15 October, when the vessel *MV Passat Summer* berthed at VCT, it was business as usual. Two railway rakes arrived, though with some difficulty. They were able to load their containers onto the next vessel, *MV Maersk Dubrovnik*, on 17 October.

The top management was lavish in its praise of the teams efforts in countering the devastation after the storm and becoming operational in the shortest possible time ■

**Sushil Mulchandani**  
Chief Operating Officer - Visakha  
Container Terminal

*"First of all we are proud of our entire Team VCT for having faced the fury of Hudhud as not one of our precious people was either hurt or injured. Well done and our gratitude to the Almighty. Let us all work together to make VCT an even better facility. Every challenge is but also an opportunity."*

**- Krishna Kotak**  
Chairman JMB Group

*"The courage, tenacity and skill displayed by the VCTPL team on the ground was exemplary Well done!"*

**- Anil Singh**  
Senior Vice President  
Subcontinent  
DP World

*"I have been following the events and the team's exemplary behaviour. You should be proud of team Vizag. They have done the right thing under difficult weather circumstances. They have taken all the steps many people hoped they would take under these kind of circumstances. This can only happen when you have the right leadership. I am truly proud to be associated with Vizag and you and the team"*

**- Mohammed Sharaf**  
CEO DP World

*"The focus, discipline, and emotional control displayed with an attitude to protect people and the terminal was exemplary. Kudos to the team."*

**- Anil Wats**  
Chief Operating Officer  
DP World

## Agency & Services

# JNPT Experiences A Project Ro-Ro Operation, Courtesy: BOXCO Logistics

**L**oad-out operations at various ports are standard operations that are handled by Boxco's Project Logistics team regularly. But this one was different.

We were assigned to deliver six Super Over Dimension Cargo (SODC) from Murbad (near Mumbai) to BPCL (at Kochi).

To complete this assignment, we had to carry out a maiden roll-on operation at JNPT port, which made this operation challenging.



JNPT shallow berth



JNPT shallow berth

A lot of attention was paid to the shallow berth at JNPT. We started by briefing the harbour master on the procedure, methodology and SOP for the operation to seek his satisfaction. On his approval, the file proceeded to the Port Planning and Development Department.

A query was raised by them concerning the effective loading of the mooring ropes of the tug and barge on the shore bollards and the calculations for the same. Joining hands with JMB JNPT office, we were well on the way to satisfying all their queries. By the same evening, we had completed the mooring calculations, but alas the PPD officers had left for the day. A five-day-long public holiday was ahead, which could potentially cause the entire operation to collapse.

Mr Venugopal from the agency division advised that a special cleanliness drive was to be held at the port on 2 October, for which the officers would be coming to the office, and we could push to try to get the file cleared on the same day.

2 October: Our remaining cargo of three ODCs had reached the gate on the night of 1 October but was not allowed to be carted in due to the lack of clarity of the berthing and roll-on operations. So, on this day we had to get permission for the roll-on operation and get our cargo carted into the port. At 1100 hrs, we met the PPD officers with the mooring calculations and they promised to get back to us in two weeks (we did not have the liberty of time since tide waits for none).

### WHAT STOOD IN FRONT OF US?

**01**  
The harbour masters apprehensions as this was a first of its kind operation at JNPT.

**02**  
Queries raised by Port Planning and Development Department concerning the effective loading of the mooring ropes of the tug and barge on the shore bollards.

**03**  
A five-day-long holiday in the first week of October was staring at us, which had the potential to fail the whole operation.

**04**  
The dates of high tide of 7-10 October were closing in with no sign of a go ahead from the port.

**05**  
No approval to cart the Over Dimensional Cargo (ODC) / Over-Weighted Cargo (OWC) inside the port due to lack of clarity of berthing and roll-on operations.

### WHAT STOOD WITH US?

**01**  
Detailed advance planning and in-house technical analysis and capabilities.

**02**  
Group synergy in joining hands with JMB JNPT office, which was our base camp, and an excellent rapport of J. M. Baxi & Co. JNPT office with port officials.

**03**  
Past experience of similar operations all over India and a competent technical team.

**04**  
On-hand availability of minute details such as ramp specifications, load per axle, load density per sq. mtr, etc.



# Logistics

Immediately we amended the plan for conventional berthing till they worked out the mooring forces for perpendicular berthing. So, armed with PPD's verbal approval, we went to get the next approval, i.e., the Traffic Department's clearance to give us a berth so that the cargo waiting at the gate could be carted in and the process of berthing the tug and barge could be started. The Traffic Department had its share of apprehensions concerning the tidal currents and the implications for the



Dumb barge approaching SB1 at JNPT

approach walkway of the Gateway Terminal. Our Mr Unnikrishnan of Indian Shipowners Agency Department received an approval from the Traffic Department to cart the cargo into the port without a guarantee of permission to berth.

Halfway through this operation we were extremely apprehensive as the high tide dates (7-10 October) were around the corner, and the port was therefore not giving the green signal. We broke for the day to put our minds together to find a solution.

Due to the port holiday, Mr Unnikrishnan arranged a meeting with the traffic official near his residence. Our Capt. Sanjay Sharma with Mr Sanjay Sarode, Mr Samir Surnis and Mr Venugopal went to meet the official at a nearby restaurant with all the movie clips, pictures, etc., of previous similar operations carried out in India. He was convinced but with a rider to give permission the next day.

The game could swing either way and was turning out to be a nail-biting finish. We camped at Mr Venugopal's



Barge laden with six ODC packages



Barge and tug tied up at SB1 JNPT

house nearby to brainstorm and determine the next step. After lengthy discussions and some quick calls by Mr Unnikrishnan to various authorities, we got permission this time with a rider to berth our barge after the sailing of the present vessel. As luck would have it, the present vessel was under our agency. Mr Samir Surnis and Mr Venugopal managed to get it to sail by the sixth night and vacate the berth for our tug and barge.

Once all the permissions were in place, there were few or no hurdles as far as



Last package being rolled onto the barge

the port operations were concerned, since the barge roll-off operation was possible with parallel berthing ■

● Vessel berthed on 7 October 2014 at 1720 hrs.

● Preparation for loading started upon berthing. We had to wait for high tide for the barge to come in line with the wharf. The first ODC of 117 MT started moving in at 2100 hrs. We could load three ODC during the night tide and balance three ODC during the next tide on the morning of 8 October.

● 8 October 2014: Resumed loading at 0945 hrs and completed at 1030 hrs.

● Thereafter, sea fastening of the ODC continued up to 0700 hrs on 9 October. The tug and barge sailed at 1125 hrs on that day. (We were lucky there was no tanker vessel at an adjacent berth. Otherwise, the hot work would not have been allowed and the barge would have needed to be shifted to an inner anchorage.)

## Logistics

# Deck To Track – JMB's Tryst With Chennai Metro Rail



tunnel or on an elevated stretch. The Project involved seamless and safe operations from the deck to the rails where there can be no margin for error. Utmost care was required for handling the sensitive equipment requiring maintenance of very high safety standards.

**Qualifications** - The CMRL have stringent requirements for carrying out the activity as the operations involved meticulous planning and error proof execution. J. M. Baxi & Co., Chennai was selected after a rigorous screening process for rendering end-to-end services for off-loading of the locomotive from the vessel, transportation and delivery onto the rails inside the depot.

The cargo had not yet arrived, but the documentation and certification of every element of the lifting gear was required in advance to ensure the entire Port & Logistics operation, from the ship's deck to CMRL's Rails were rendered seamlessly.

After reviewing the choice of lifting gear that would meet the Safety specifications, a detailed 'Work Statement' was provided for this activity. This was an elaborate exercise, spanning all intricate details. Each lifting equipment (Cranes) needed to be checked as per manufacturer's specifications, including safe working load at various

**T**he need for implementing Chennai Metro Rail Project was felt by Tamilnadu Government in view of the burgeoning road traffic in the Chennai Metropolis. The Project aims at providing the people of Chennai with a fast and economical mode of transport, which is properly integrated with other forms of public and private transport. The Project involved creation of two initial corridors in the Phase-1. The portions of Corridor-1 with a length of 14.3 kms. From Washermanpet to Saidapet, and Corridor-2 with a length of 9.7 km. from Chennai Central to Annanagar will be underground and the remainder elevated.

### PROJECT STATUS

The estimated cost of this project is Rs.14,000 crores. Of this, the Central

and State Governments together are expected to contribute about 41%. The balance will be met by a loan granted by the Japan International Cooperation Agency (JICA). Chennai Metro Rail Limited (CMRL) has appointed Delhi Metro Rail Corporation as the Prime Consultant for Phase-1 of the project. Phase 1 is expected to be completed by 2014-2015.

### EXECUTION OF WORKS BY J M BAXI GROUP FOR CMRL

#### Diesel Locomotive

As a part of the Project, a Diesel Shunting Locomotive was to be imported as it was required to be used whenever there is a power failure in the Metro Rail grid, to pull out the rakes stranded in the



# Logistics



'NREC Diesel Shunting Locomotive' delivered on rails and Team Boxco under the leadership of Capt. R. Venkatesh

angles of operation. Load density of the site foundation while lifting the Shunting Loco was also ascertained safe. The need for a working ASLI's (Automatic Safe Load Indicators) was a challenge as most cranes in and around Chennai of up to 70MT SWL, even if fitted do not work. Hence without much choice, it was agreed to carry-out a tandem lift using a 275 and 110 MT crane, for 66 MT Diesel Shunting Locomotive! This might however be seen as a rather trivial job for most Project cargo operators! But these were amongst the key requirements for pre-arrival preparations.

The levels of certification required by the independent authority named SEED, included Pollution checks of the Mobile cranes, training of the Crane drivers, validity of their licences, training and experience of the signallers and crane riggers, as well as their visual 'eye testing'. In addition, it was required to receive on the preceding day of the operation, an updated weather report from the Regional Meteorological Dept on the predicted wind speed, direction and probability of precipitation. Clearly all this demanded higher safety margins to deliver a flawless operation.

Finally the long awaited M.V. Rickmers Chittagong arrived at Chennai Port on 11th Nov 2013. The Diesel Shunting Loco was safely stowed in the lower deck of No. 2 hold. All preparations, resources and permissions including transit through the city were ready in-hand, waiting to execute a "Green Channel Movement" to CMRL's Koyambedu Terminal.

The ship's single Heavy Lift Crane was engaged with a Beam, to lift this special cargo. Hop, skip and jump; one single flawless lift and it was smoothly transferred from Deck to Trailer. The transportation post customs clearance happened on the night of 14th Nov 2013 and operations at CMRL for off-loading from trailer to rails, was planned on 15th Nov 2013.

Upon break of dawn, the teams from CMRL, General Safety Consultant EMBYE, Octopus Marine Crane suppliers and J.M. Baxi descended on site. In true professionalism, a 'Tool-Box' talk was delivered by the J.M.Baxi & Co. Operation Head, spelling out the safety procedures, declaration of the names of the signal men to all concerned, marking the 'go / no-go' areas of operations and the contingency plan in case of any emergency.

The lift was well co-ordinated in perfect sync, to place the Loco right on track to full satisfaction of the NREC commissioning Engineer. But there was a need for a trick with the track, to make all the 4 sets of wheels sit on the track. Repeated efforts proved futile as alignment was achievable only for either the Forward or the Rear 2-sets of wheels. Finally, a lightning idea struck! We left the Locomotive semi-aligned on the rails. The 2 lifting cranes were disengaged. Now the powerful Puller which road-transported the Loco, was connected to the mis-aligned end. A tactfully aimed, ruthless pull jerked the Shunting Loco and forced all 4 sets of wheels onto the track. Our mission was safely completed and job well done to perfect satisfaction of the Customer.

## Wheel Lathe Equipment

J. M. Baxi & Co. passed the litmus test with flying colours. The resourcefulness and the professionalism exhibited by J. M. Baxi & Co. won accolades from all quarters and J. M. Baxi & Co. has become 'green channel' choice for

all such intricate operations. We were again approached by CMRL's suppliers of Wheel Lathe equipment - M/S. HYT, based in Pune. Wheel Lathes are required for milling the Metro Car wheel which flare out due to wear and tear. It was yet another intricate operation to extricate this critical equipment over 20 metres through the roof-top, maintaining the crane outside the concrete building in a 'Blind sector'.

On 17.02.2014 as soon as the Crane entered CMRL's gates, a heavy down-pour started. Within minutes, the crane was seen labouring through the mud and weak soil. The gigantic crane was slowly sinking in the soft soil. It was decided to arrest the wheel's free movement while the out-riggers offered support. Implementing this, necessitated transporting big concrete blocks from elsewhere. Terra firma under each wheel was rebuilt to serve as its launching pad. We then retracted the out-riggers. Our rocket (the Mobile Crane) took off. We were able to quickly recover the crane and set it back on the mud track at its best safe speed, positioning it for operation. The crane from its remote location plumbed its long extended boom, straight atop the cargo. As the purlins and associated trestles used as support for the awnings had been removed earlier, we were set for the Lift-Off. This made our job simple and limited to just a single vertical lift, slew, and down, straight out onto the trailer bed. This was again a job well done by the Chennai Stevedoring and Project team, in true spirit of professionalism, against all odds!. JMB is proud to participate in a National Project of this magnitude ■



HYT's wheel Lathe being lowered through the roof onto the installation pit



**DELHI**  
**INTERNATIONAL**  
**CARGO TERMINAL**  
**AT SONEPAT**

22.10.2014

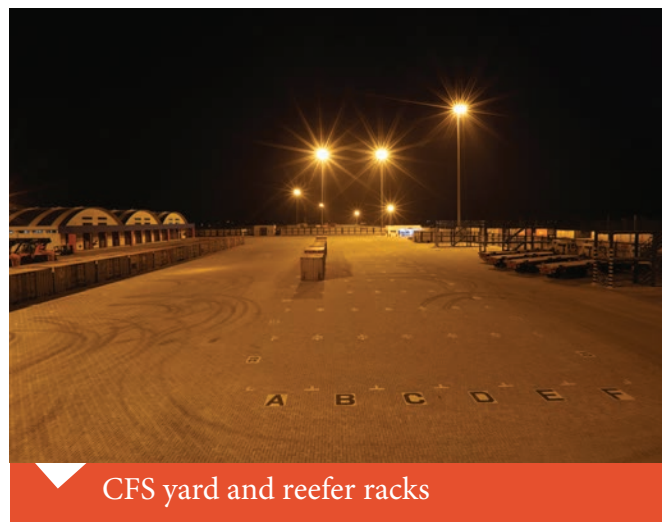




Administration building



CFS - rail siding interchange



CFS yard and reefer racks



Rail siding operations

Diwali, is one of the most fervently celebrated festivals in India. It commemorates the homecoming of Lord Rama after 14 years of exile.

Many eras later, on 22 October 2104, on the penultimate day of Diwali, it was a homecoming of a different kind when the Boxtrans rake chugged into its home terminal, the Delhi International Cargo Terminal at 6:56 in the morning!

Later in the day, in a cheerful, yet sentimental ceremony, after seeking the blessings of Lord Ganesha, as is customary in India, before launching any new endeavour, DICT was thrown open for commercial operations.

Spread over a sprawling 54 acres, DICT is conveniently tucked between the Delhi – Ambala rail trunk route and National Highway 1, midway between the historical towns of Sonapat and Panipat. The sheer ease of accessibility of the facility from the rail and road corridors makes it unique. What also makes it unique is its proximity to merchants/warehouses and its geographical reach into the catchment.

Though there are many facilities that are designed for similar functions as DICT from a user's perspective, invariably, there are always those niggling shortcomings that could have been better thought out, so as to bring greater convenience to the customer. The J M BAXI GROUP, in its 10 decades of existence has, at some point in time, donned all those customer hats that will populate this terminal and therefore, knew what the customers require. With this bank of knowledge, the planners were able to put on the table, designs and layouts that are most appropriate for customer convenience. Now that the terminal is live all that can be said is: “Come and experience it!”

The terminal is equipped with two rake handling lines and a sprawling rail-side handling area, which is more than adequate to service the 130,000 TEUs per annum of throughput in phase one and there is enough adjoining land to enhance the rail handling and cargo handling facilities to cater for 500,000 TEUs in its future phases.

The custom notified EXIM area is currently housed in a 12 acre piece of land, which accommodates 1,00,000

square feet of covered warehousing, a dedicated scrap inspection yard, 96 reefer slots, a 100 MT weighbridge, Gate complexes, high quality lighting and the usual ground slots for exchange of EXIM traffic. The infrastructure is state of art, with provisions for custom officers to work from within this area, rather than make usual twice in a day rounds to attend cargo inspections. What's even more important is the modular nature of the current and future infrastructure plan, which lends great flexibility to customise specific customer needs without much hassle.

The above mentioned EXIM phase along with the Administrative and Utility buildings and existing rail infrastructure, occupies an area of 27 acres, which is just 50% of the available land.

DICT has been designed to be an “integrated” facility in more than one way. While container business seems to be the most visible at the moment, however the facility will handle bulk, break bulk, liquids and refrigerated cargo as well – pretty much everything that is capable of being hauled by either rail or road. In addition to mere

Total container handling capacity 130,000 TEU's per annum in current phase	
<b>GROUND SLOTS</b>	
EXIM	257
PRE STACK	180
DOMESTIC/EMPTY	612
<b>EQUIPMENT</b>	
REACH STACKERS	3 No.
TRI AXLE TRAILERS	75 No.
HYDRA	1 X 14 MT
FORKLIFTS	5 X 3 MT
WEIGHBRIDGE	1 X 100 MT <sup>2</sup>
DOCK LEVELLERS	2 No.
<b>REEFER FACILITIES</b>	
REEFER POINTS	96
PTI POINTS	12
<b>GATES</b>	
IN GATE	
OUT GATE	
RAIL GATE	
EMPTY IN/OUT GATE	
<b>HIGH MASTS</b>	
	11 NOS
<b>CCTV CAMERAS</b>	
	31 NOS
<b>TRAILER PARKING</b>	
	DEDICATED PARKING FOR 150 TRAILERS
<b>FACILITIES</b>	
	100% POWER BACKUP
	MAINTENANCE & REPAIR FACILITY FOR CONTAINERS
	BANK OF BARODA IN PREMISES
	CUSTOMISED PLUG AND PLAY PORTA CABIN
	OFFICE
	24X7 CANTEEN

handling of cargo, the terminal will provide specialised storage space and value added services where ever required. A 50,000 square feet domestic, covered warehouse is on the anvil and so is a controlled temperature and controlled humidity storage facility. The terminal is also integrated in its service deliverables and provides a comprehensive array of business enablers commensurate to trade requirements. Container maintenance repair yard, trailer parking, equipment repair facility, reefer pre-test inspections and pre cooling are some of these.

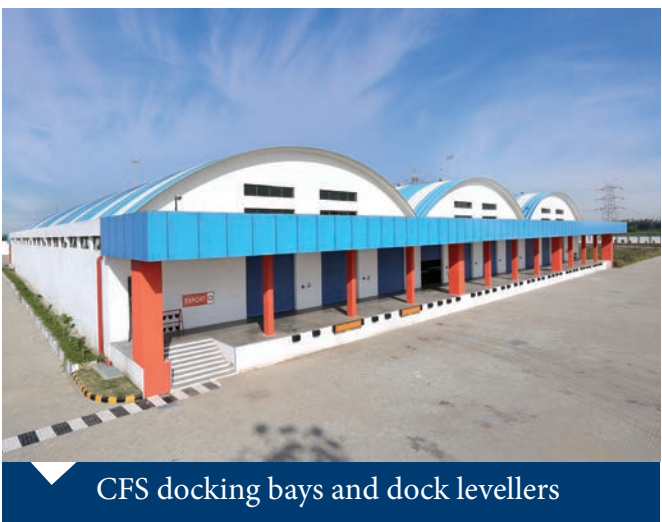
Customs, constitute an integral part of the EXIM operations and spaces and facilities for the same are very well appointed and are probably the best in the industry. The terminal is EDI enabled and ensures that customer discomfort due to network downtime, which is a common feature in most ICD's, is adequately addressed with two levels of redundancies factored in. 50 CHA's have already booked office space at DICT and same is provided in “made to order” porta cabins, which work on a plug and play model. The user can walk in and start his business

in the very first hour as fixtures, furniture, power, telephone and internet connectivity is pre-arranged. There is more space for an equal number to be accommodated as and when the necessity arises.

DICT is equipped with brand new equipment. 3 Kalmar reach-stackers, 3 ton forklifts, 25 owned and 50 leased triple axel trailers, hydra, and crane are a few among others. The terminal boasts of very high level of CCTV coverage, both inside and outside the EXIM areas.

It will be in-appropriate to miss out mentioning the already famous canteen that DICT runs, for staff as well as clients, that follows the very stringent hygiene standard and a menu that is a gastronomic delight – after all, the famed Murthal, known for its food is just a stone's throw away. And DICT is quick to adapt... To summarise, the Warm Red Lion is roaring! Though it wears a benevolent smile, but make no mistakes about its capability as the Lord of its domain! Please await our next despatch after the departure of the 100th train ■

Capt. Rajeev Mittal  
President - ULA & DICT



CFS docking bays and dock levellers



Customer service centre



CFS warehousing

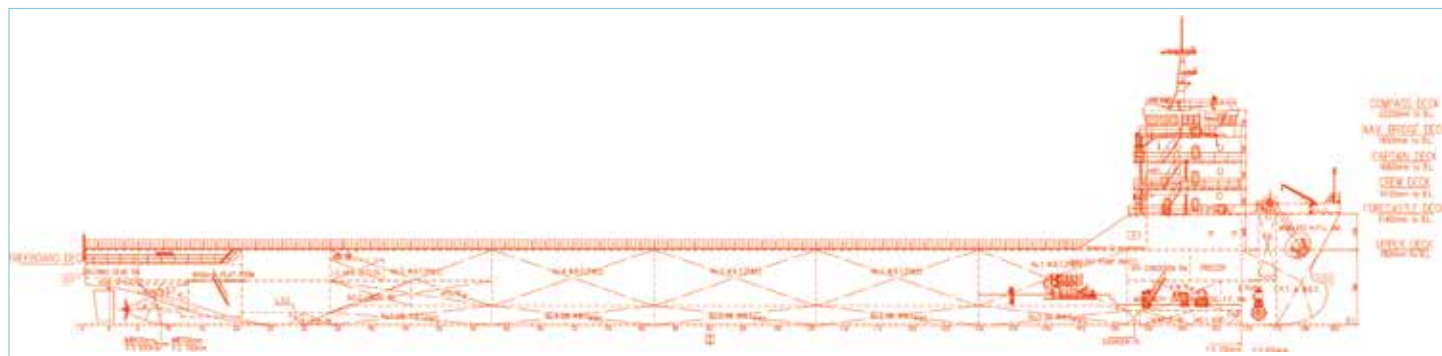


Staff work space



## Logistics

# MV VIR VARENIA: Special Project Module Carrier

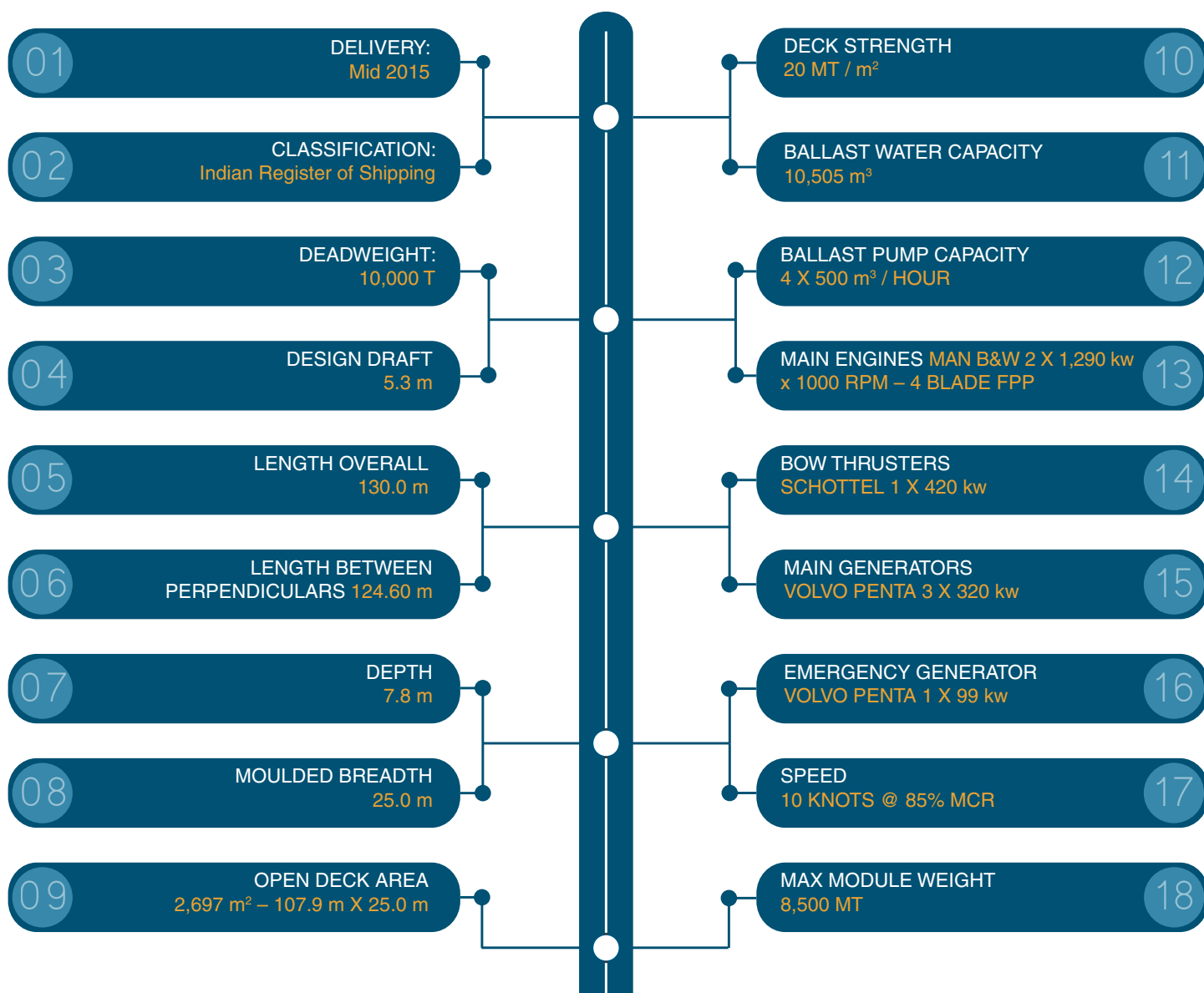


Governments have been evolving policies for growth in major infrastructure and industry, e.g. power generation and transmission,

Vessels such as the MV Vir Varenya are not widely available in the world fleet and are limited to

The vessel has a large free deck area of 110 m x 25 m which will enable it to carry high dimension cargoes onboard. Further, the vessel also has the highest deck strength in its class of vessels which would further mean it would be able to cater to cargoes with concentrated weight in small parcels. Whilst the vessel is classed for international seagoing voyages, it will also be able to navigate shallow waters in inland waterways and coastal shipping routes as it has a low draft. Many riverine ports have high tidal variations and in order to complete cargo loading / unloading operations in short duration of time, the vessel is being equipped with high ballast water pumps capacity. With 4 x 500 cbm ballast pumps the entire cargo

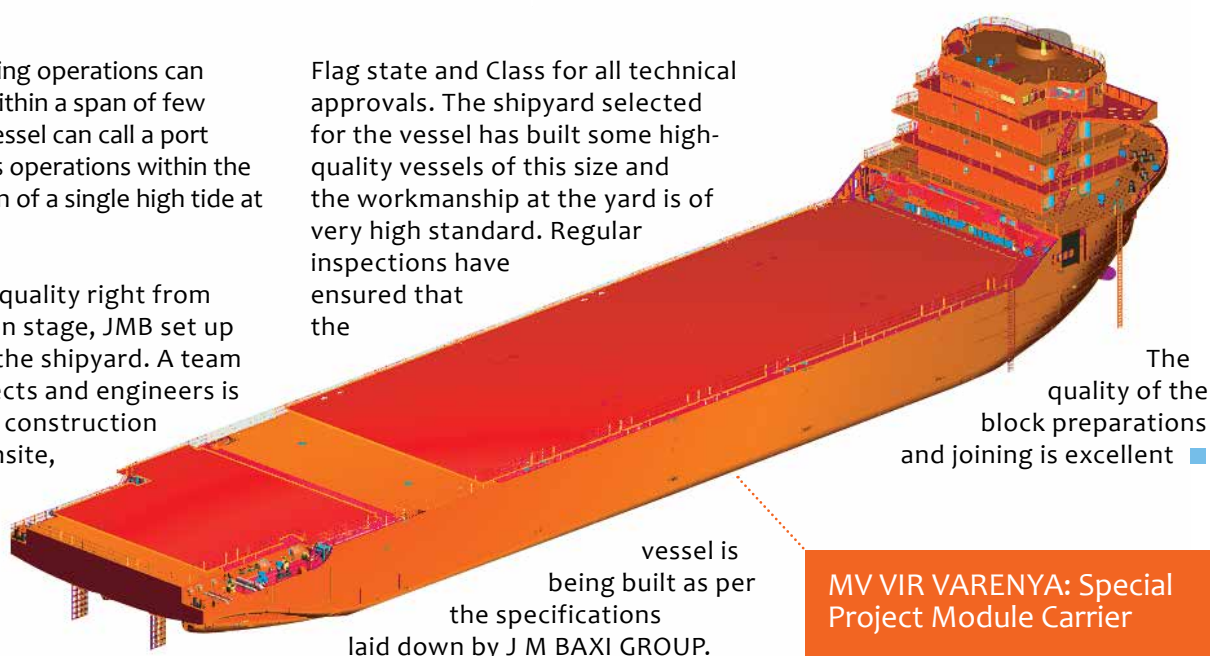
# Logistics



unloading / loading operations can be completed within a span of few hours and the vessel can call a port and complete its operations within the limited time span of a single high tide at many ports.

To ensure high quality right from the construction stage, JMB set up a site office at the shipyard. A team of naval architects and engineers is monitoring the construction of the vessel onsite, supported by the technical team in Mumbai, who have been in touch with the

Flag state and Class for all technical approvals. The shipyard selected for the vessel has built some high-quality vessels of this size and the workmanship at the yard is of very high standard. Regular inspections have ensured that the



## In Conversation

# War Risk Premiums On Ships In Arabian Sea Must Stop

Historically, India has been a seafaring nation with trade and commerce at the forefront of her maritime endeavours. However, owing to the measures taken during the British occupation of India, the Indian merchant marine fleet declined and compared to about 34,500 Indian ships that entered and cleared Indian port in 1857, only about 1700 did so in 1900. Mahatma Gandhi summed it up as **'Indian shipping had to perish so that British shipping might flourish'**.

Nevertheless, Indian shipping has been continuing against all odds and the country has a decent fleet, enabling it to remain in around 20th position in the maritime nations of the world in the recent past. **Amongst various hindrances faced by Indian shipping, one major issue has been the problem of piracy since 2005 and how India is paying for it.**

To deal with the heightened risk due to piracy, the Joint War Committee (JWC) was established in London comprising underwriting representatives from Lloyd's and International Underwriters Association (IUA) to represent the interests of those who write marine hull war business in the London market. It reviewed and updated the shipping areas in terms of their potential for risk.

Enough has been debated on piracy in Somalia, which affects the Gulf of Aden and regions in and around Somalia and East Africa. Based on one or two stray incidents close to the Indian coast, in 2010 the JWC arbitrarily extended the listed war risk area in the Arabian Sea up to longitude 78°, covering the entire west coast of India and the



Umesh Grover is CEO of the Indian National Shipowners Association. A Marine Engineer by profession, he has a career spanning over 43 years, of which 14 years were as a seafarer. On shore, he has handled various key portfolios in the Shipping Corporation of India, from which he recently retired as a member of the Board of Directors. He has been an active participant on various industry forums and has been on consultative committees on maritime affairs of the Government of India.

Arabian Sea. This resulted in increases in insurance premiums and a higher cost for shipping to and from India. Increased insurance costs are passed on to consumers as higher freight costs thereby resulting in an additional price rise domestically and non-competitive exports for India.

The methodology followed by JWC to draw and review the high-risk areas and the rate of premiums charged is non-transparent and arbitrary. Because of the Additional war Risk

Premium (AWRP) charged by JWC, the approximate additional cost incurred per year by Indian traders was about USD 2 billion in FY13.

Thanks to the efforts of the world's navies including the very active role of the Indian navy in combating piracy, not a single incidence of piracy in Somalia



**India has argued at various forums against this extension of the risk area up to India, but to no avail and the agony continues. The question that comes to mind is: "Since when do representatives of insurance companies decide the extent of the risk on the high seas from their London offices?"**

has been reported in the last 2 years. India in any case was never a piracy-infested state as wrongly portrayed by the JWC.

This is totally arbitrary and the traders continue to pay a heavy price. Yes, good things do return even if after a span of 100+ years. The "winds of change" are being felt in India in every segment, including shipping. Development is the agenda of the new government which has just completed 6 months in power. Perhaps this issue will also now be addressed along with larger issues affecting our nation ■



## We Connect

# JMB Evacuates British Experts From The Cyclone Affected Vizag

**A** devastating cyclonic storm Hudhud hit Vizag on 12 October 2014. Hudhud caused extensive damage to the city of Visakhapatnam and the neighbouring districts of Vizianagaram and Srikakulam.

On 14 October 2014, an SOS call was received by the JMB corporate office from the Regional Director of HR Wallingford India to help evacuate two of its experts, James Clarke and Daniel Donnai, who were stuck in Vizag. HR Wallingford is a renowned British company having expertise in hydrographic surveys, marine waters and dredging. Having worked with us on various projects previously they were aware of our reach in the city.

The two experts were stranded in their hotel with no contact with the external world because all communication lines had snapped. The city was in ruins with winds blowing at over 200 km per hour as the eye of the storm passed through Vizag. The airport runway was completely flooded and the terminal roof blown away; roads were blocked with uprooted trees and electrical poles and rail movement completely halted. There were no exit options. With no power supply and water supply, it was a highly distressing situation for them, especially being stuck in foreign shores. Luckily the hotel in which they were staying managed to restore one phone line and they could finally reach out to their Mumbai Office for help.

On receiving the request for help, a plan was drawn for their evacuation. The nearest functional airport was Rajahmundry about 200 kms away.

But the challenge was to reach Rajahmundry since the National Highway was blocked and there were no rail movements. Slowly, the National Highway from Rajahmundry was cleared on priority as the Prime Minister was visiting Vizag to ensure there were speedy relief measures.

The Baxi Office at Mumbai was approached, and they immediately acted and requested Kakinada Branch to help organise the evacuation. The Kakinada J. M. Baxi office immediately swung into action along

with Arya Offshore and organised a vehicle to ferry the harried foreigners out of Vizag by road to Rajahmundry. The evacuation was speedy and required tremendous coordination, which was extremely difficult in such a dire situation. They were picked up by 1700hrs by the Vizag coordinator and transported to Rajahmundry and lodged at a hotel by midnight that day. The two men flew out from Rajahmundry the next day ■

*"As a director of our India office I am indebted to you and thank you heartily for the generous help and support you have provided, especially at such short notice. Allow me to express my deepest gratitude to you and all staff associated who have helped out in this matter. I am indebted and most grateful."*

**- Tim Chesher, Director,  
HR Wallingford India.**

*"It is indeed a great help. We are obliged."*

**- Rajeev Tipnis,  
Regional Director,  
HR Wallingford India.**

## In Focus

# Lessons From

**M**ads Agerup is an officer from the Norwegian Naval Academy, an MBA and an authorised financial analyst (AFA) from the Norwegian School of Business and Economics. He, along with Christian Eide, Morten Andvig and Rune Midtgaard (all from Norway), trekked from the Messner Start on the Filchner Ice Shelf to the Geographic South Pole in 24 days, 8 hours and 57 minutes between 2 December and 26 December 2008, setting a Guinness World Record for the fastest time to trek to the South Pole as an unsupported team.

That the human quest for adventure has no bounds has been proved by the fact that Mads wanted to embark on an expedition to the North Pole after his successful expedition to the South Pole. The expeditions by Mads posed challenges of driving winds, crevices, heavy sleds, drifting ice, huge ridges below the ocean surface creating currents and heavy pack ice, eight to ten hours of skiing each day and temperatures plunging to -40°C.



### PLANNING & PREPARATION

Stressing the importance of planning, Mads quoted his mentor, Roald Amundsen, 'Victory awaits him who has everything in order — luck, people call it. Defeat is certain for him who has neglected to take the necessary precautions in time; this is called bad luck.' The enormous preparations the team put in involved, painstaking research of various expeditions undertaken by previous explorers and consultations with experts in the field. According to Mads, prepare for all eventualities but always have a Plan B, as one can never anticipate everything.

### BE SELF-SUFFICIENT

Carry all you need, plan for all eventualities and be self-sufficient but don't over equip yourself as this will slow you down. The concept was to trek light and trek fast. With a substantially lower starting payload than any other expedition, the team aimed to make faster progress per day. The team carried swimming suits for crossing open waters when walking on ice was not an option. Satellite phones and tracking devices were also carried to track daily movements and send them back home.

### TEAMWORK

Be careful when selecting your team. Create multiple overlapping skill sets, while keeping up the morale and motivation of the team members. Pool all your resources, minimise the resources required to obtain maximum results, capitalise on your group's strengths, and understand your limitations. You have to be a team player to succeed. Partying, and time for fun are essential to keep the spirit of the adventure alive.

### FOCUS

Be wholly focused on achieving the objective. Everything he did, the months of preparation, customising his equipment and everything he had done earlier in his life, led to his readiness for success in the harsh polar environment. Focusing on the key goal and excluding of everything else is the key to success.

### CLOCKWORK

Divide big tasks into small tasks. The planning has to be meticulous. In this case, this was done on an hourly basis with 10 minutes of rest after each hour of trekking. If this was not strictly followed, it may have resulted in a loss of an entire day every week.



## In Focus

# Expedition Life



As part of J M BAXI GROUP's Management Development Programme, a motivational talk was arranged on 3 November 2014 with Mr Mads Agerup, a Norwegian adventurer who has a series of achievements to his credit. Mr Mads is one of the few people to have gone on expeditions to both the North and South Poles. Mr Mads, accompanied by his wife, shared his experiences with the Senior Management Group. The narration of his adventurous expeditions conveyed a deep sense of purpose, planning, coordination, commitment and team building.

All of us live and work in a world filled with chaos and turbulence. Our managers feel it, our clients know it and our competitors are coping with it as well. In today's turbulent workplace environment, the expeditions undertaken by Mads throw up certain key management lessons as shared below.

### MONITOR YOUR PROGRESS

Record and review your progress regularly. You have to ensure that everything is going according to plan. This exercise will enable you to identify weaknesses and rectify them faster.

### EXECUTION - RISK

Be prepared, but expect surprises. Do detailed risk management but do not take foolhardy risks. Be aware of the changes around you, and adapt to them. There will inevitably be surprises that hamper your progress. Be determined. Success will be possible despite many odds. Keep your cool. But know your limitations.

### EXCITEMENT

Be curious and be excited all the time. Be excited about the unexpected challenges you are going to face and the chance to master these challenges. Savour the magnificence of the natural beauty that is unfolding before you. Also be equally excited about returning to your family members and friends at the end of an expedition.

### PUSHING THE LIMIT

The South Pole has been a constant challenge to people's unquenchable quest for adventure. It is both stunningly beautiful and brutal at the same time. Teams need to execute their plans flawlessly, as they are at the mercy of nature. When dealing with conditions that can flip you to the edge of survival in a moment, the margin for error is minuscule. Facing challenges requires patience, determination and untapped resources of physical and mental strength.

### TRAINING

You have to train to do things efficiently, effectively and perfectly. Train till you master a task. Planning to be on skis for 11-12 hours daily plus 8-9 hours of sleep, left very little time for anything else, therefore very efficient camp set-up routines were required, for which lots of coordinated practice was done. Such a rigorous routine demanded expending 8,000-10,000 kcal daily, whereas the energy content of the food ration was only 5500 kcal daily. To meet this twofold gap the team members gained 10-12 kg in weight prior to starting the expedition ■





## Weights & Measures

# Moving Towards Demand-Driven Coal Logistics

(continued from issue VII)

**C**oal mined in Central and Eastern India is moved via coastal shipping. It is loaded at Haldia and Paradip Ports and discharged at Ennore and Tuticorin Ports for the thermal power plants of Tamil Nadu. Lately there has also been coastal trans-shipment of about 7 million tonnes of coal from ports like Krishnapatinam and Gangavaram, which is shipped to Mundra in smaller vessels. Also with the supplementary use of low-ash imported coal to reduce carbon emissions, more imported coal is now transported to the hinterland power plants.

### Coal Demand-Supply Dynamics

With India's plans for new power capacity (75,785 MW of power capacity projected by 2016-17, i.e. for the end of the 12th Five Year Plan), the focus is on super critical Ultra Mega Power Plants (UMPPs), which get their supply of imported coal directly from overseas sources, while pithead and other hinterland power plants will use domestically produced coal, through fuel supply agreements (FSAs) with Coal India Ltd.

However, domestic coal production is still running short of meeting current and future thermal coal demand. While the shortfall will be met

through imports, the strategic focus for Indian companies, including Coal India, is to acquire mines abroad and bring in the coal.

On the supply side, solutions to the constraints in scaling up domestic production of coal and integrating the supply chain have been sought through a policy of allocating captive coal mining blocks to actual users of coal in the private sector.

Cape and Panamax vessels are being used for the regular movement of coal to India from its suppliers in Indonesia, South Africa and Australia. These enable larger parcel-sized movements under long-term contracts of affreightment (COAs).

### Meeting The Logistics Challenge

Bottlenecks in domestic transportation of coal by rail – which accounts for movement of over 75% of domestic coal – include lack of adequate rail networks, shortage of rake capacity and the problem of the timely availability of empty rakes at loading locations. Consequently, the poor evacuation of coal from pitheads and seaports to various consumption points has resulted not only in a substantial increase in logistics costs but also in costly delays in meeting the critical demand from power plants.

Power plants usually work with a coal inventory of 7 to 15 days. However, a majority of power plants suffer due to low inventory levels. Presently, the rake requirement for CIL alone stands at 192 per day (one rake constitutes 59 wagons), while the availability is far less than this. Since domestically produced coal is allocated to users on the basis of coal linkages, the corresponding rail linkages to coal users are, however, provided by the Ministry of Railways, which decides on the basis of traffic demand and optimising route revenue.

Synchronising coal and rail linkages is the key logistics challenge. Railways are still grappling with problems of the imbalance in bulk freight movement due to a sharp decline in port bound movement of iron ore compounded by the one-way hinterland movement of coal imports. As a result, empty rakes need to be moved over long distances.

Increasing rake capacity and adding new rail lines are long-term solutions. There is an immediate need to tweak coal logistics through better inventory planning by end users, improved scheduling of railhead operations and cutting down idle time. These steps can transform coal logistics from being supply centric to being demand driven and shipper centric ■

### COAL-BASED THERMAL POWER & STEEL CAPACITIES, COAL DEMAND PROJECTIONS\*

POWER SECTOR (THERMAL COAL USAGE)			STEEL SECTOR (COKING COAL USAGE)		
CEA assumption @ 90% Plant Load Factor (PLF)	End of 11 <sup>th</sup> Plan 2012	End of 12 <sup>th</sup> Plan 2017		End of 11 <sup>th</sup> Plan 2012	End of 12 <sup>th</sup> Plan 2017
Installed coal-based thermal power capacity (MW)	134,388	210,173	Installed steel capacity (in million tonnes)	89.00	140.00
Additional power capacity	NA	75,785	Additional steel plant capacity (in million tonnes)	-	51.00
Current thermal coal consumption incl. imported thermal coal (in million tonnes)	417.60	682.00	Current coking coal consumption (in million tonnes)	43.20	67.20
Additional thermal coal requirement (in million tonnes)	NA	264.80	Additional coking coal requirement (in million tonnes)	-	24.00

*Note: Aggregate coal demand and consumption estimates are based on assumptions for ash content, the thermal efficiency of coal and Plant Load Factor (PLF), a measure of the utilisation of rated power plant capacity. The projections above are drawn from reports of the Central Electricity Authority (CEA) and Joint Plant Committee (JPC), Ministry of Steel.*

# Port Statistics

## SHIPPING & CARGO PERFORMANCE

QUARTERLY UPDATES ON INDIAN MAJOR & MINOR PORTS (QTY IN MILLION TONNES)

JULY - SEPTEMBER 2014 (II<sup>nd</sup> QUARTER) / APRIL 2014 - SEPTEMBER 2015

### AGRICULTURAL PRODUCTS

	SUGAR		SOYAMEAL		WHEAT		RICE		MAIZE	
	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14
No. of Ships called	11	22	0.000	2	4	17	12	26	4	30
Total Cargo Handled	0.374	0.528	0.000	0.055	0.040	0.393	0.185	0.413	0.104	0.978
Inbound	0.288	0.339	0.000	0.000	0.040	0.040	0.000	0.000	0.000	0.000
Outbound	0.087	0.190	0.000	0.055	0.000	0.353	0.185	0.413	0.104	0.978

### FINISHED FERTILIZERS & FERTILIZER RAW MATERIALS

	UREA		SULPHUR		ROCK PHOSPHATE		DAP		MOP	
	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14
No. of Ships called	18	37	23	41	49	98	19	31	44	72
Total Cargo Handled	0.892	1.894	0.515	2.460	1.920	3.865	0.737	1.187	1.196	2.033
Inbound	0.892	1.894	0.409	0.768	1.920	3.865	0.737	1.187	1.196	2.033
Outbound	0.000	0.000	0.106	0.196	0.000	0.000	0.000	0.000	0.000	0.000

### COAL

	THERMAL COAL		COKING COAL		MET COKE		PET COKE		ANTHRACITE COAL	
	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14
No. of Ships called	68	246	143	306	22	56	21	39	7	16
Total Cargo Handled	8.302	17.370	10.292	20.010	0.625	9.966	0.783	1.488	0.110	0.309
Inbound	2.441	5.379	10.292	20.010	0.607	9.937	0.741	1.400	0.110	0.309
Outbound	5.860	11.990	0.000	0.000	0.018	0.029	0.042	0.088	0.000	0.000

### STEEL & RELATED ORES

	STEEL PRODUCTS		SCRAP METAL		CHROME		MAGNESIUM ORE		IRON ORE	
	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14
No. of Ships called	189	377	1	6	2	4	28	63	88	278
Total Cargo Handled	3.288	5.797	0.033	0.157	0.011	0.019	0.894	1.558	6.369	15.258
Inbound	1.862	3.222	0.033	0.157	0.000	0.000	0.894	1.547	2.485	5.469
Outbound	1.426	2.575	0.000	0.000	0.011	0.019	0.000	0.011	3.884	9.789

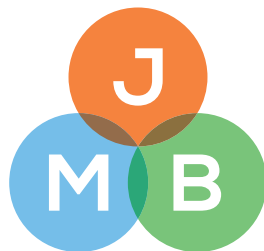
## INDIAN PORT PERFORMANCE - Q2 & FY 2014-15 THROUGHPUT(QTY IN METRIC TONNES)

JULY - SEPTEMBER 2014 (II<sup>nd</sup> QUARTER) / APRIL 2014 - SEPTEMBER 2015 QTY IN MILLION TONNES)

Ports	Types of Ports	NO. OF SHIPS		LIQUID CARGO		BULK CARGO		CONTAINERS (TEUS)		TOTAL CARGO *	
		II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14	II <sup>nd</sup> Qtr	Apr'14-Sep'14
Kandla	■	138	235	0.751	1.376	2.257	2.964	-	-	3.233	4.572
Mumbai	■	557	1123	7.165	12.229	3.455	7.029	9,653	19,678	10.774	19.610
Nhava Sheva	■	119	239	1.039	1.153	0.196	0.416	1,132,307	2,237,372	1.235	1.569
Mormugao	■	104	219	0.357	0.607	2.386	5.153	-	-	2.776	5.894
Mangalore	■	247	501	5.679	10.738	2.650	6.267	16,585	33,821	8.342	17.069
Cochin	■	15	178	4.019	7.604	4.601	5.070	98,179	187,182	8.660	12.863
Tuticorin	■	215	408	0.420	0.724	2.862	7.146	132,739	364,908	3.908	8.881
Chennai	■	299	583	3.396	7.082	6.042	7.661	410,233	789,373	9.777	15.407
Ennore	■	202	403	0.942	1.776	11.203	17.690	-	-	12.206	19.888
Vishakhapatnam	■	480	962	4.667	8.819	13.944	24.847	70,450	134,266	18.690	33.895
Paradip	■	380	756	4.786	9.804	3.787	16.985	-	-	8.590	26.825
Haldia	■	379	713	2.234	4.094	0.014	2.922	32,081	57,082	2.253	7.021
Kolkata	■	81	108	2.810	3.069	5.543	5.543	139,368	257,382	8.391	8.734
Gangavaram	■	74	143	-	-	1.568	7.014	-	-	1.568	7.014
Pipavav	■	8	114	0.123	0.141	13.467	15.007	188,695	391,569	13.593	15.153
Mundra	■	312	639	4.387	9.754	2.831	17.135	662,636	1,345,937	7.400	27.263
Dahej	■	154	313	4.427	9.824	0.337	4.017	-	-	4.770	13.869
Hazira	■	32	98	0.314	0.646	1.976	2.955	34,228	61,505	2.294	3.605
Navlakhi	■	36	66	-	-	1.035	1.035	-	-	1.035	1.035
Kakinada	■	82	188	0.322	0.614	0.106	1.555	-	-	0.651	2.719
<b>Total Vessel Calls at all ports</b>		<b>3,914</b>	<b>7,989</b>	<b>47.838</b>	<b>90.054</b>	<b>80.26</b>	<b>158.411</b>	<b>2,927,154</b>	<b>5,880,075</b>	<b>130.146</b>	<b>252.886</b>

■ Major Port ■ Non-Major Port

\* Total Cargo Includes Liquid Cargo , Bulk Cargo and Other Cargoes and Excludes Containers



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