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Halt to Port Development ? - Key Projects Dropped

In a shocking development, the Union Shipping Ministry has trimmed the size of its ambitious National Maritime Port Development Programme (NMDP), owing to a dampening of investor enthusiasm, and in some cases, lack of availability of land. State governments too haven't shown enough interest when it comes to implementation of projects. As if this is not enough, the Union Environment Ministry has placed 3 months moratorium on clearances to new and old port development projects last September.

Hardly two months back, the Shipping Ministry has given the estimate of investment requirements of Rs.35,000 crore for the port sector over 2-3 years. This has been worked out to around Rs.10,000 crore in Equity and Rs.25,000 crore in debt. According to Shri S. Hajera, President of National Ship Owners' Association (INSA), the large investment needed is mainly on account of tonnage to be dropped. As much as 4 millions GT (Gross Tonnage) is due to be dropped. Of this, around 1.6 million GT is single-haul tankers about to be phased out in 2010 and also the 20 years plus vessels have to be scrapped immediately. A large chunk of Indian vessels are said to be old needing replacement. As our EXIM Trade is growing and considering that our tonnage trade should go up to 15 million GT in five years or so, the country is supposed to invest not only in the 6 million GT new capacity (India's existing capacity is 9.3 million GT), but also in the 4 million GT, that needs to be scrapped.

But as said earlier, raising the required money for port development is easier said than done. Shipowners always demand soft loans. Banks are not at all obliging. The government, on its part, is not taking kindly to bank guarantee and the domestic landing rates are unviable.

What was needed urgently is to find out some solution to the problem, but surprisingly and shockingly, the Shipping Ministry seems to have opted the easy way. It has just dropped 22 Key Projects out of the 276 originally identified to increase the capacity of 12 major ports in the country.

The biggest victim of the above decision is New Mangalore Port in Karnataka, where there was plan for creating outer harbour for development of additional port facilities. The harbour's development plan was of Rs.1325 crore and it was planned for use by oil firms - Mangalore Refinery and Petro-Chemicals Ltd and ONGC for their captive use.

Other important dropped projects include deepening of channel and lagoon area to create draft of 14 meter, which would have generated business opportunity of Rs.390 crore for the developer at New Mangalore Port, and building of International Ship Repair Complex at Cochin Port, at an investment of Rs.315 crore. The other dropped projects pertain to Paradip Port in Orissa, Vishakhapatnam Port in Andhra Pradesh, Chennai Port in Tamil Nadu, Murmugao Port in Goa and Kandla Port in Gujarat.

NMDP was launched in the year 2005 to award 276 projects by March 2012 for expanding the capacity of major ports from around 400 million tonne in 2004-05 with a total investment of Rs.62231 crore. As per the Ministry's estimate, major ports need a capacity to handle 918 million tonne by 2013-14. At present, the 12 major ports handle just over 500 millions tonne of cargo.

But to add to the woes of the Shipping Ministry, its sister Environment Ministry has placed a moratorium on clearances to any new or old port development projects on the recommendation of an Expert Committee headed by M S Swaminathan. This Ministry has argued that liberal approvals for port capacity expansion may damage the country coastline and cautious approach is needed for granting approvals, and hence the moratorium. It has not accepted the plea of shipping Ministry to lift moratorium even for projects already at an advanced stage of clearance. By 2012, the union Government wants to increase the capacity of all ports by 1.5 billion tonne, but when its own two Ministries are at loggerheads and there seems no effort at conciliation, one fails to know what would be the fate of ports development, and ultimately of the Indian economy, all other problems apart.

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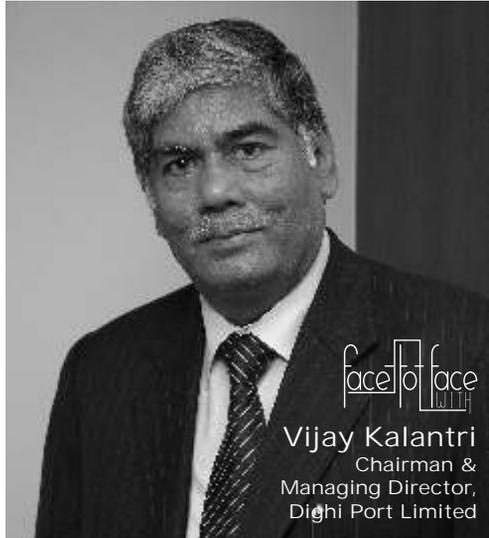
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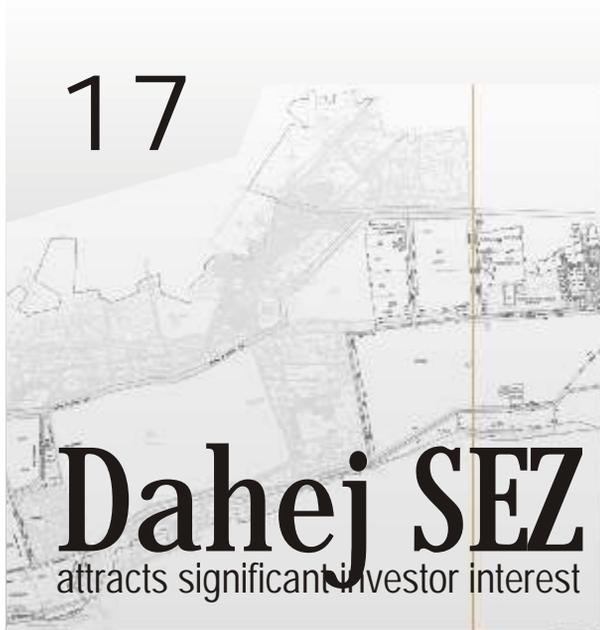
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Shri Vijay Kalantri-Chairman & Managing Director of Dighi Port Limited is a well-known leading industrialist with a vast experience in the field of Finance & Infrastructure.

Shri Kalantri's business acumen and farsightedness has propelled him to take on the challenging venture of Dighi Port, a mega project. Maharashtra's first Greenfield Port at Dighi, Raigad, the port is nearby ready and will be operational by early 2010. The Port is being built on as an integrated infrastructure format which encompasses a Special Economic Zone inclusive of a Free Trade Warehousing Zone and a logistics hub within the Delhi Mumbai Industrial corridor. Dighi Port will be the first port under the public private partnership in Maharashtra under the BOOST system.

Shri Vijay Kalantri is also on the Board of Directors of various leading industries such as VIP Industries Ltd., Man Industries Ltd., Indian Acrylics, Hindustan Housing finance & Development Corp. and Vindhyaal Hydro Power Projects Ltd.

Besides being an industrialist Shri Kalantri is associated with leading national international industry chambers and other trade promotion organizations. He is the President of All India Association of Industries (AIAD), Vice Chairman of World Trade Centre, Mumbai and is Director International of World Trade Centre, New York.

He has led and participated at various delegations representing business and industry internationally. He participates at the round table conference of the "World Economic Forum" every year and has also attended the "World Trade Organization" ministerial conferences at Singapore, Geneva and Seattle. He has been honoured with several National and International awards and is also the "recipient of the highest civilians award of Poland," Commander Cross of the Order of Merit, conferred on him by the President of Poland to a non Polish civilian.

Shri Vijay Kalantri 's contribution towards entrenching effective collaboration into infrastructure delivery practices has unlocked the next generation of infrastructure assets through the development of Dighi Port.

During the interaction with Indian port and Infrastructure Review, Shri Vijay Kalantri shared his perception about the Port industry's development in the years to come. Here are the excerpts:

Q As a leading player in the industry, could you highlight major changes in the port industry which you have witnessed during your career?

No Change

Q As an industry leader, what are the challenges and obstacles which you have witnessed during your career? And what now?

We have faced challenges at all stages - be it political, bureaucratic, regulatory, land acquisition or local. We as a team have somehow managed to overcome it and the results are here for all to see.

In terms of future plans we are already looking at a coal based power project, we also plan to set up a port based Free Trade Warehousing Zone at the proposed SEZ, and the Rail corridor which will connect Dighi to Indapur-Mangaon for which we have already signed an SPV.

We plan to have the entire value chain under one umbrella at one location which will also result in cutting down logistic costs to the customer.

Q What makes you inspired to take on the challenging venture of Dighi Port, a mega project.

Infrastructure projects - that too a Greenfield Project is always a challenge. Keeping in view of the time when the project was planned in the late 1990s, we were well aware and ready for the hurdles that lay ahead.

Dighi Port will redefine the way port & shipping business takes place in the country. It is not only a mere modern port but an integrated port-based economic corridor is being developed, which will in turn ensure the socio-economic growth of the region.

Dighi Port will be more than just a loading and unloading point, the port is designed to provide multiple products that may not be a part of a traditional port. These products will be the value added components such as the Special Economic Zone (SEZ) inclusive of a Free Trade Warehousing Zone (FTWZ) along with a rail and road network.

Though the challenges are there, we are confident of launching according to schedule and the highly professional team that we have got together is working round the clock to make this happen.



The unique feature of Dighi are its natural endowments, and once commissioned Dighi Port will be an all weather port in Maharashtra with facilities for bulk, break bulk, coal, automobiles and container cargo. Dighi Port, is the largest Greenfield port in terms of scalability and segregation of cargo. Dighi Port will be the first port in maharashtra to have a dedicated facility to handle coal cargo - a significant move as Maharashtra has a requirement of 12 million tonnes coal out of which 6 million tonnes is serviced by ports outside the state as it does not have any direct berthing facility for handling coal cargo.

Q What are the unique features and the future potential of the Dighi port?

The unique feature of Dighi are its natural endowments, and once commissioned Dighi Port will be an all weather port in Maharashtra with facilities for bulk, break bulk, coal, automobiles and container cargo. Dighi Port, is the largest Greenfield port in terms of scalability and segregation of cargo.

Dighi Port will be the first port in maharashtra to have a dedicated facility to handle coal cargo - a significant move as Maharashtra has a requirement of 12 million tonnes coal out of which 6 million tonnes is serviced by ports outside the state as it does not have any direct berthing facility for handling coal cargo.

As part of our business development plan, we have concluded Heads of Agreement/MoU's with certain anchor customers and are in the process of ensuring large volumes of cargo.

Q At present what is the current status of the project?

All major contracts have been awarded and development work is on full swing. The first berth will be commissioned by early next year followed by two more berths by mid 2010.

Q Could you share your experiences of "World Economic Forum" and also about the "World Trade Organization" ministerial conferences at Singapore, Geneva and Seattle?

The Forum provides a unique platform for dialogue and meeting of minds whereby macroeconomic perspectives and issues are evolved. It offers reliable predictions of world economic environment for future. Through this Forum, national governments are enabled to plan and strategize decision making in an appropriate manner. Forum participants get an opportunity to better understand global issues, processes and mechanism to solve global problems. It is an ideal meeting place for leaders in government and business to share their views with their counterparts.

Forum members are companies that are driving the world economy forward. Thus they play a leading role in shaping the future of their industry and region.

The successive ministerial conferences have paved the way for progressive liberalization of international trade. Member countries have used the ministerial conferences to articulate their needs and aspirations in response to the evolving trading scenario. International trade has grown phenomenally to reach a level of nearly 14 trillion dollars in 2007. India as a member of WTO is in full compliance

with the obligations set forth by the WTO agreements. India has also played a significant role in various ministerial conferences championing and supporting the cause of the developing world.

Q Economic slowdown hits every industry more or less, According to you, how the shipping industry is affected and how it is coming out?

It was a difficult year for the shipping industry. The slowdown in exports and massive reductions in freight rates has impacted the shipping companies. But at the same time it has also given rise to new opportunities for ship builders and ship owners as this is the right time for building and acquisition of assets available at low cost

Q According to you, how the Port industry's development is seen in the years to come? What are the targets? How much investment needed?

India has emerged as a major destination for marine transport and container operations. Despite the global slowdown in 2008-09 the cargo handled by Indian ports totaled to 736 metric tons. There was 2.1 per cent increase compared to the volume handled the previous year. Non-major ports handled 28 per cent of the overall seaborne trade.

In the coming years the cargo handling of Indian ports is projected to grow at an overall of 7.7% p.a. with minor ports growing at a rate of 8.5% compared to 7.4% for major ports. Traffic is estimated to reach 960 million tonnes by 2013-14 and containerized cargo is expected to grow at 15.5% (CAGR) over the next 7 years.

Though the bulk of Indian trade is carried by sea routes, the existing port infrastructure is insufficient to handle trade flows effectively. The current capacity at major ports is overstretched. In recent years, major investments in port construction have centered on container as well as bulk facilities. Modern equipment exists for container and bulk handling. The equipment - mix for handling general cargo has to be planned and provided in a manner that suits the needs of each port.

In keeping with general policy of liberalization and globalization of economy of the Government of India, the Port sector has been thrown open to private sector participation. Private Sector participation in provision of port facilities at various major ports is envisaged in a big way. In order to handle the increase in the sea-borne traffic on account of increase in foreign and coastal trade, major expansion is required in the port infrastructure sector in the country and this will need mobilization of substantial resources. It is expected that the private sector participation would help bringing in latest technology and improved management techniques.



There are mega plans for Indian ports. By the end of the Eleventh Plan Period, the total traffic handled by the ports in India is expected to cross the one-billion mark. The Shipping Ministry's National Maritime Development Programme involves a total investment of Rs 1,00,339 crore over a period of 10 years to ensure co-ordinated development of port infrastructure, tonnage acquisition, maritime training, coastal shipping, aid to navigation, shipbuilding and building up IWT infrastructure.

As the Indian economy integrates with the global, maritime infrastructure will play an ever growing role. This rapid growth in trade can be sustained only if the port infrastructure keeps pace with the increasing volumes of cargo.

Indian ports needs to acquire the infrastructure to handle increased growth in sea traffic. The ports should cater for additional berths for ships and a long term plan. A five year roll on plan for 20 years needs to be drawn up to attract the foreign investments in India. In order to attract more private participation in the sector, the govt. as far as possible should only be a facilitator and not an operator of a port. The plan proposes an additional port handling capacity of 530 MMTA in Major Ports. Investment need of \$4.5 billion (Rs.20, 250 crores) for improving minor ports.

The following are some suggestions for the vision forward:

- PP mode/opportunities for private sector
- Attracting international investments and partners
- Technologies for modernization (e-based systems)
- Procedural bottlenecks for project implementation to be removed.
- Better co-ordination with States and Consistency in State Policies (Infrastructure)
- Linkages/Correlation with Trade and SEZs in particular
- The budgetary support for ports, shipping, inland water transport, and the ship-building and ship repair sectors should be enhanced.
- Multimodal Transport Operations should be given thrust/emphasize
 - ‡ Opportunity for Private sector
 - ‡ Concept of Door-to Door cargo logistics system.

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A Simulation Model for Analysing Terminal Management Operations



Globally, container terminals are trying to expand capacity and increase performance at a minimum of investments. Often the container terminal operations are changing to meet increased customer demands as well as to adapt to new technologies. This paper proposes a simulation model for container terminal system analysis. A simulation model is developed, called SIMPORT, which uses a Multi-Agents Systems approach that provides a modular and scalable method of modeling the entities in the container terminal domain. SIMPORT is used to test various berth assignment management policies and yard stacking management policies in the context of a case study of a major container terminal in India. The results indicate that by arranging the stacks according the 'ship profile', the port in India was able to reduce the waiting time of container ships and thus save costs. The increasing costs of container terminal development do justify the use of computer simulation to assist in planning and policy making.

Congestion and increasing cargo dwell times is a common scene in many of the world's ports. Over 255 million TEU (twenty-foot equivalent unit steel container) was handled in 2003 by container terminals (CTs) world wide representing an increase of more than 30 million TEU from the year before Cass (2004). The current CT capacity in many parts of the world is not able to handle the growing volumes (cf. Henesey 2004). The hypothesis studied in this work is that by modeling the decisions through simulation an increase in a CT's performance can be realized without having to acquire expensive property or equipment. Often the construction or building of a new CT is not possible and expansion is limited, placing emphasis on operating a terminal as efficiently as possible. CT managers attempt to devise new scenarios to reduce costs and provide more services with the resources that they have. In many cases, it is not known in advance whether a particular strategy can produce increased terminal throughput.

The proposed CT simulator, SIMPORT (SIMulated container PORT), is developed to be used as a tool for CT managers to test various management policies for increasing performance while considering costs, yard and berth configurations (please see Appendix A for costs for purchasing types of CT equipment). The SIMPORT system is unique in that it adopts a Multi-Agent Systems (MAS) approach in which the decision makers and entities are modeled as a system of computational agents able to "reason" and communicate with each other in reaching goals. This technique provides a realistic handling of the containers in the simulation in that several agents are communicating and taking decisions based on policies. A policy is expressed on how a ship is to be handled during operations. The agents handle the communication between each other as in a real world CT system, e.g. the ship reports to the stevedore, the stevedore asks the terminal manager.

SIMPORT is developed as a part of a Decision Support System (DSS) in order to assist CT managers in the yard layout, container stacking policies and the assignment of container ships to be berthed using simulation. The SIMPORT consists of a simulated representation of physical entities in a CT (cranes, berths, quays, transport equipment, containers, and ships). A management system that represents the decision making entities of a CT by issuing and sending documents (i.e. ship schedule, resource schedule, waiting time, crane schedule, etc.) Together, the two parts of SIMPORT assists in analyzing berth schedules for arriving ships under various yard and container stacking policies. The objective of SIMPORT is to find policies that efficiently use the resources available during the operating time when a container ship is being handled at a berth. The policies used in the simulation are able to be compared in monetary terms for both the ship and terminal.

evaluating policies involved in the berth assignment problem, such as considering the impact of yard configurations and in developing new interesting management policies. As mentioned by Ojala (1992), simulation used as a part of a Decision Support Systems (DSS) can be beneficial to port organizations. According to Leathrum and Karlberg (2000), the primary purpose for the use of simulation is to determine the necessary resources in order to complete the processes (e.g., loading and unloading a container ship) within certain constraints. Though much research has concentrated on optimizing the resources at the operational level, this paper seeks to examine strategic planning and tactical decisions that are made by the CT managers. As observed through port visits and interviews, decisions are often made from set plans, established layouts or procedures and policies. The simulation of berth assignment and stacking policies with SIMPORT is not expected to provide optimal solutions for resource scheduling; its goal is to provide a means of analyzing and evaluating terminal management policies. However, it can conceptually be used as part of an automatic optimization procedure. The balancing of transferring containers with the efficiency in stacking containers in the yard could be improved leading to cost savings and higher CT performance.

In the next section the background is described in more detail. This is followed by the presentation of the simulation model and experiments performed with SIMPORT. Finally, conclusions and pointers to future work are provided.

Background on Container Terminal Management

CT management is characterized as complex in that performance is determined by a variety of inputs, outputs, actors, intrinsic characteristics and external influences Persyn (1998). The vessel operators are interested in minimizing "ship turn-around time", i.e. the loading and discharging of containers should be done as quickly as possible. In addition, the CT operators are trying to provide a fast ship turn-around time service while attempting to minimize their costs. According to Villalon (1998), a typical container ship of 4,000 to 5,000 TEU incurs a daily operating cost in excess of \$40,000, and the cost of containers to fill it are in the \$10-to-15 million range, not including the supporting CT equipment and infrastructure, including multi-million-dollar gantry cranes. An average container ship spends 60% of its time in port Kia (2000).

According to Nishimura et al. (2001), the berth allocation plays a primary role in minimizing the ship turn-around time, the time that a container ship is worked depends on where the ship is berthed. Ship turn-around time is one of the main performance measures used in port operations. To shorten the ship turn-around time, in this paper, the

The use of simulation tools such as SIMPORT can assist in

potential of CT managers of increasing production capacity by better management decisions, which often have non-optimal objectives, is investigated. The storage system or yard operations of the CT is viewed by many managers as what “steers” the overall CT performance Miller (2002). The stacking density of the containers and the equipment employed can influence the capacity of the yard immensely. The yard operations are heavily interdependent upon the other operations in order to maintain good container handling performance. Different berthing points may influence the handling time and distances being traveled by the transporters in order to “work” a container ship. The problem of assigning transporters to retrieve or send a container to a stack location is complex in that specific containers must be placed in specific locations while not making unnecessary moves or adversely affecting the gantry crane. A properly laid-out terminal can benefit the performance of a CT by segregating containers according to various characteristics; such as by port of discharge, commodity, ship line, size and type.

The main problem with developing tools for CT management is to model the complexities that exist in the tasks of planning, scheduling, and controlling. Existing methods that are used in planning and analyzing CTs such as queuing theory, linear programming and traditional simulation have had mixed success Bruzzone (1999) and Ferber (1999). The use of agent technology has been suggested to be a viable approach for decision making in CTs when managing uncertainty or evaluating decisions are complex (c.f. a survey paper by Davidsson et al., 2004). Papers that have investigated solutions using agent technology such as Buchheit et al. (1992); Gambardella et al. (1998); Rebollo et al. (2000); Carrascosa et al. (2001); Rebollo et al. (2001); Degano and Pellegrino (2002); Lee et al. (2002) and Thurston and Hu (2002) have mostly focused on techniques for

automating or controlling the CT. In this paper the view taken is to assist human CT managers by assisting the decision making process in a CT as part of a DSS. The decision making is seen from a strategic to a tactical level.

SIMPORT Model Architecture and Policies

The SIMPORT model is a much extended and improved version from a prototype called BAMS (Berth Allocation Management System) Henesey et al. (2004). SIMPORT models the yard and stack configurations in more detail and allows for testing additional policies. The SIMPORT consists of two parts, a CT system that models the physical entities in the CT and a management system that models the actual managers. The motivation for developing a CT simulator platform from which to run experiments is due to the limited access to port and terminal simulators that have been built by industry and academic researchers.

SIMPORT was developed using MS Visual Studio 6.0 using the C++ programming language for Windows and is aimed for further research, e.g. the implementation of a market-based approach (see Henesey, 2003). To store the data, the Microsoft Access database was used in which the database is connected via ODBC. The number of input variables used for the configuration of the simulated CT is over 50. The most important input variables include: quay length; berth spacing; yard capacity; speed and size of the gantry cranes and straddle carriers (SC), a type of machinery for carrying and stacking containers; and yard stack positions and types. The managers that correspond to agents in the software program are the following: ship schedule organizer agent; stevedore agent; ship agent, straddle carrier agent, crane agent and terminal agent. Table I describes the roles and goals for the agent types that are used in the

Table 1 : SIMPORT agent types, their roles and goals in the simulation

Actors/Agents	Roles	Goals
ship schedule organizer agent	Constantly searching for arriving ships to place and schedule them at the CT.	Seeks to schedule ships according to Policies.
stevedore agent	Communicates between ship and terminal manager.	Service ship agent requests with minimal costs.
ship agent	Communicates its demands to ship stevedore agent.	Ensure that ship is turn-around as fast as possible. Seeks to minimize the cost of being berthed at a CT.
straddle carrier agent	Moves containers from quay to stack and from stack to the quay by communicating with stevedore agent and with crane agents.	Move containers to locations as fast as possible and ensure that crane is idle.
crane agent	Loads/unloads containers from ships and communicates with stevedore agent and straddle carrier agents.	Lift containers as fast as possible and ‘feed’ straddle carrier with containers
terminal agent	Assigns cranes and acts as an overall manager.	Terminal resources are used efficiently when serving ships. Tries to make profit From handling ships.

SIMPOR. The agents make their decisions based on the information in the messages they receive from each other. The intelligence level of the agents can be considered reactive in that a specific action in the CT is executed upon a certain message. The reactive agent's goals are only implicitly represented by the rules, and the desired behavior is difficult to ensure.

To make the system as scalable and reusable as possible SIMPORT is divided into several sub-systems (c.f. Henesey et al, 2004). Each sub-system has its own responsibilities and includes several smaller classes and systems. To make the system as reusable and easy to upgrade/add features, several user interfaces are implemented in the system. This has provided much assistance in adding/modifying parts of the system without disturbing the other parts. A description of SIMPORT is provided in Figure 1, illustrating the communication and coordination between the agents.

In the model, a SC agent is provided with a complete route as soon as it knows its next destination. A SC determines its next destination through communication with the crane agent in order to establish a routing. The SC moves to that position and subsequently establishes its next position by communicating back to management agents that it has reached its assigned destination and is

waiting for another task.

A SC moves through a container yard to perform a series of tasks. A task may be defined as a SC stopping at a container handling activity such as a storage location or at a quay crane. A task is comprised of one or more container processing transactions. Once a SC has completed a transaction, its current status within its task is updated, and the next destination for the SC is discerned through the model rules. The task provides essential information for moving a SC to various positions in the CT. Its function is to provide specific yard destinations rather than the container processing sequence. The SIMPORT model contains rules which determine an appropriate yard location based on current yard conditions, CT management policies and attributes of the SC. In Fig. 2, a diagram of a CT, which was used in the experiments, illustrates the algorithms in berth assignment of ships. In addition, the yard layout of container stacks and the configuration of containers in the stacks are presented in the diagram. Because the CT yard is arranged into a series of rows and stacks of containers, it is possible to move in different streets to reach a particular stack. However in the simulation the terminal is adopting a recognized rule that is widely used in CTs the SCs always travel along one-way streets in order to avoid accidents.

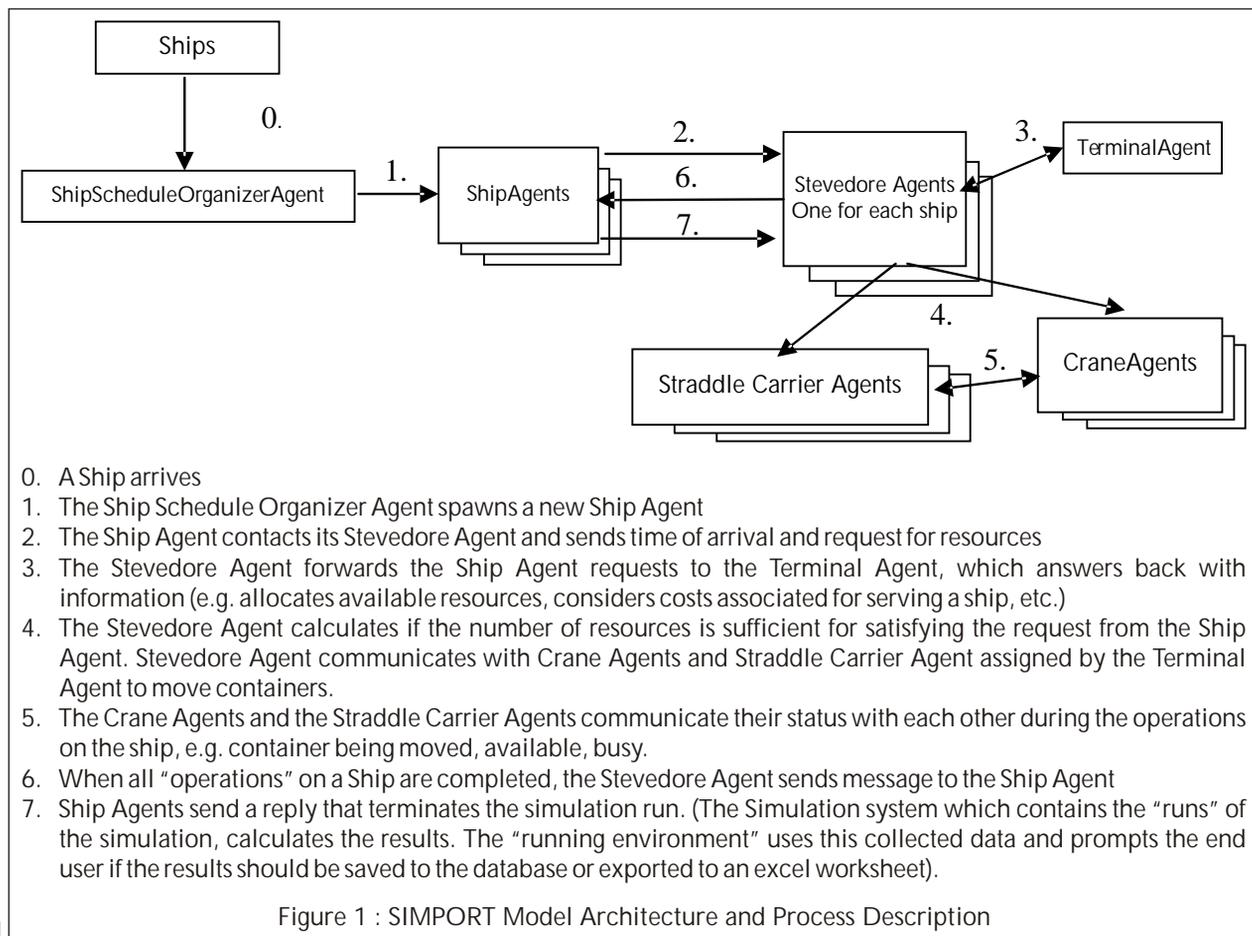


Figure 1 : SIMPORT Model Architecture and Process Description

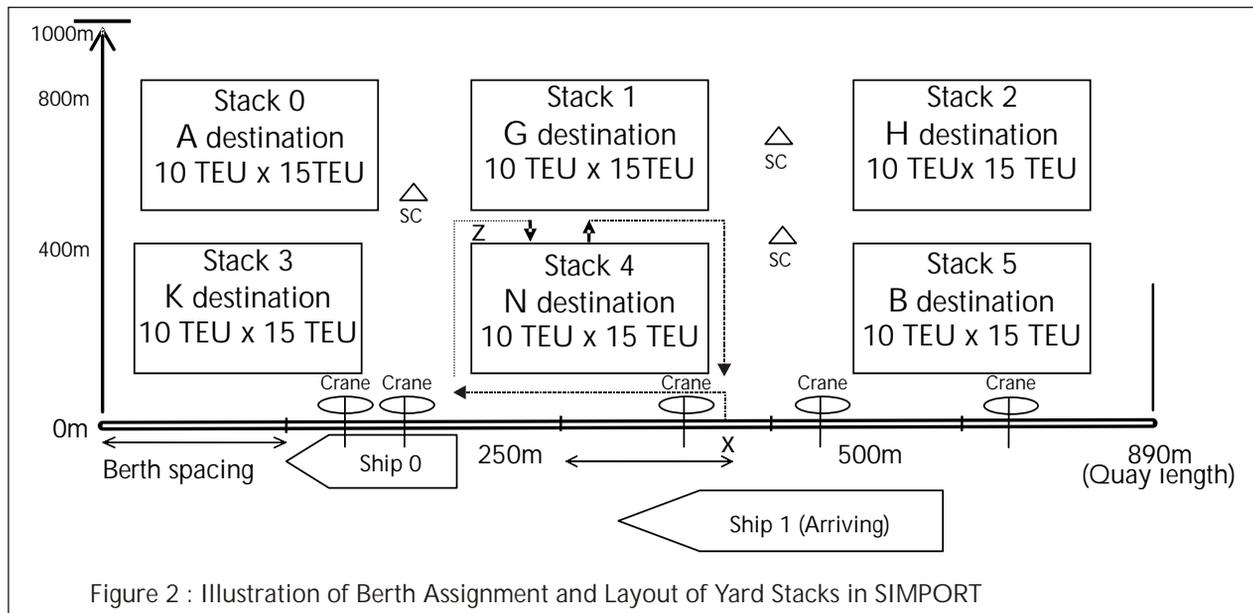


Figure 2 : Illustration of Berth Assignment and Layout of Yard Stacks in SIMPORT

Policies

The SIMPORT model is designed to be utilized by the terminal managers of a major CT in order to evaluate proposed policies for yard layouts, sequence of ships, berthing assignments and container handling strategies. To compare proposed alternatives for a given terminal, three primary measures of performance are defined:

- Ship turn-around time needed to complete a stevedoring operation for a container vessel. This offers an indicator of berth productivity and ship turn around-time in relation to the overall yard configuration.
- Cost for the time that resources are assigned to work a ship.
- Distances traveled for each of the SCs used to serve a crane assigned to a ship are saved.

In the experiments presented here, there are two types of policies usually made by CT managers: for berth assignment and for sequencing of ships to be worked. The berth allocation policies that are evaluated are Berth Closest to the Stack Policy (BCSP) and the Shortest ship Turn-around Time Policy (STTP). The BCSP places a ship closest to a 'target' stack. The target stack is the stack that will be the most visited by the SCs during the operations, i.e. the one that have the largest sum of (i) containers to be stored and (ii) containers to be fetched. The BCSP will wait until a berth that is closest to the stack is available. The STTP objective is to place ships to berth positions in order to minimize the total ship turn-around-time for each arriving ship.

The two sequence policies that are tested are the First In First Out (FIFO) and the Highest Earning First (HEF). The sequence policies decide the order in which a ship will be served at the CT. The FIFO assigns a container ship first to

be served depending on its arrival time. The HEF assigns a ship a berth and resources according to the number of containers to be handled. The more containers worked, the higher the earnings are for the terminal in serving the ship. The HEF is determined from a list of ships in a ship schedule that are expected to arrive during a twenty-four hour period.

In determining the berth point for an arriving ship the STTP calculates the Waiting Time during the simulation from a potential set of berth points. The number of possible berth points depends on the berth spacing as well as a ship's length plus a buffer distance. The ship Waiting Time may include time left in serving another ship that is occupying a part of the quay. The computation of the Service Time is based on the number of SCs employed, the routes covered by SCs and their average speed. A route is calculated from the Berth Point along the quay, x to the far left position of a stack, z (see Fig. 2.). The routes are measured in meters. The sums of all the routes traveled by each SC are totaled to provide the distance being covered by the SCs for each ship. From the sum of the Service Time and Waiting Time, the STTP will place a ship wherever the shortest ship turn-around-time is achieved. The STTP can be characterized as considering the time dimension, whereas BCSP is considering the space dimension when determining to place the ship.

SIMPORT Model Validation

The SIMPORT was validated by comparing the output of the model with actual field collected measurements from a real CT in India. Model validation as defined by Schlesinger et al. (1979) to mean "substantiation that a computerized model within its domain of applicability possess a satisfactory range of accuracy consistent with the intended application of the model", this definition is

considered in developing and using SIMPORT. The existing configurations of the CT under study were entered into the model. A particular daytime work shift was chosen; with the stevedoring plans of real container vessels were placed into the dataset (an example of one ship is illustrated in Fig.3). The measures of performance provided by the SIMPORT were compared with actual field observations from the real CT. Additional field visits were made and some key observations were that each container ship would have a certain "ship profile" in how the containers were stacked in the ship's bays. This was attributed to the personal choices of the ship planner. The SIMPORT model rules were refined to reflect these differences, and the validation procedure was repeated. The second validation process produced results that were similar to the field observations and led to further testing leading to 16 scenarios to be analyzed. The testing of the simulated CT in India could proceed with confidence in the evaluation of alternate physical layouts and operational scenarios.

Implementation of SIMPORT and Initial Results

The primary objective of the project is that the SIMPORT should be flexible to changes in layout in the yard and berth as well as container management policies. The SIMPORT can be modified to reflect any of these types of changes. The manager system produced berth assignment schedules using the management policies described above for a small case simulation with three ships. Their physical characteristics (lengths, number of bays, and container characteristics) were configured into each ship and stored in a database. The ships are being worked according to the sequence policies, berthing policies, and storage management policies. The storage management policies are defined by two types of policies; one policy called ship line in which the containers are stacked according to the ship line that they belong to. The second storage management policy is destination, which refers that all containers are stacked according to the destination they are going to. An illustration of the process flow for running a CT simulation in SIMPORT is described in Appendix B. The input to a simulation experiment includes the following:

- Berthing Policy: Shortest Ship turn-around Time Policy (STTP) or Berth Closest to Stack Policy (BCSP).
- Sequencing Policy: First Come First Serve (FIFO) or Highest Earning First (HEF).
- Storage management policies: Ship Line or Destination.

Sequence of arriving ships: The data was provided by CT managers in India for making the scenarios; the arrival time intervals of the 3 container ships (3 x 200m), the number of containers and the type of container, e.g. reefer, hazard, and standard, to load (export) and discharge (import) from each bay. In Fig. 3, the

assignment of containers was conducted through a random function and is illustrated.

	Export	Import	Total per Bay
Bay 1	37	16	53
Bay 2	20	9	29
Bay 3	42	2	44
Bay 4	31	38	69
Bay 5	20	15	35
Bay 6	20	20	40
Bay 7	24	12	36
Bay 8	24	41	65
Bay 9	34	28	62
Bay10	48	43	91
Total	300	224	Total # of TEU 524

Ship0 (Anna)

Figure 3 : Example of Ship Configurations and Container Assignments to each Bay on arriving Ships

The input variables that are experimented in SIMPORT:

- Berth Assignment Policies (Positioning and Sequencing):
 - BCSP and FIFO
 - BCSP and HEF
 - STTP and FIFO
 - STTP and HEF
- Yard Stacking Management Policies:
 - Stacks by Destination
 - Stacks by Ship Line
- Ship Profile (Ship Bay Stowage Configurations):
 - Random
 - in that containers are randomly placed in bays in a ship
 - Fixed
 - which places the containers in exact fixed bays in a ship
- Quay length: The length in meters along the CT that is able to serve docked container ships is tested at 890 m to reflect the actual CT in India.
- Terminal width: The width in meters is set at 1000m as it is the same in India.
- Berth spacing: The spacing is fixed at 200 m reflecting the actual CT in India.

The output from the simulation experiment includes the following:

- Berth assignment plan: Schedule for assigning ships to berth points along the quay.
- Crane assignment: Cranes are assigned and their final locations are stored.
- Cost: Terminal handling costs that are charged by CT in handling a TEU
- Straddle Carrier assignment: SCs are assigned to a specific Crane.

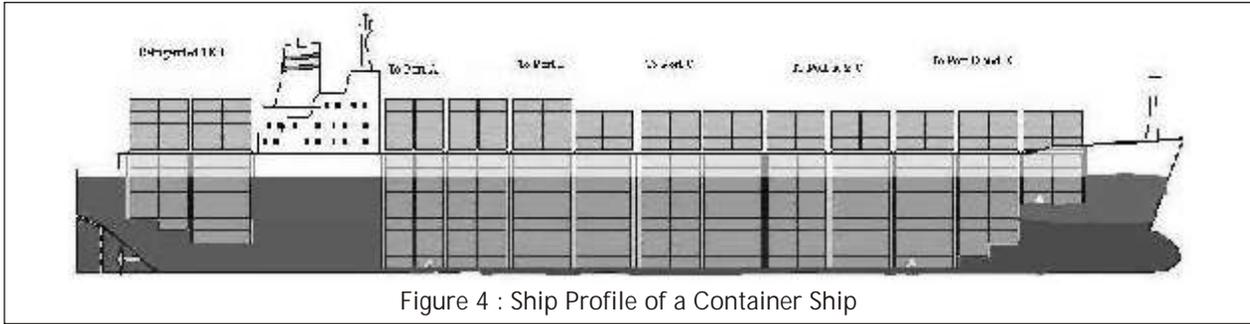


Figure 4 : Ship Profile of a Container Ship

- Performance measures:
 1. Distance: Measured in meters the distance traveled by SCs in order to move the containers (the ones to be discharged) from the gantry cranes to the yard stacks and to move the containers to be loaded from the yards stacks to the gantry cranes
 2. Service time: The total time ship turn-around time, measured in hours, for all ships
 3. Profit: Ship profit is calculated from the initial estimated cost from the actual cost by multiplying the hourly ship costs with the scheduled ship time, which is then subtracted from the actual ship turn-around time.

A ship profile is often observed in many terminals and ports in which CT managers will attempt to establish stacks based on the bay assignment for a given vessel. The method in which the containers are placed in the bays of the ship influences the ship profile and the CT operations. This strategy is used more in common with vessels that are involved in a strict port rotation that experiences very little deviation. For example, if the container vessel has a rotation where it loads containers in port A while calling port B, port C, port D and port E; please see Fig.4 for a description of ship profile.

The simulation experiments compared and evaluated policies of the real CT in India. Real data that was provided by the management was employed into the

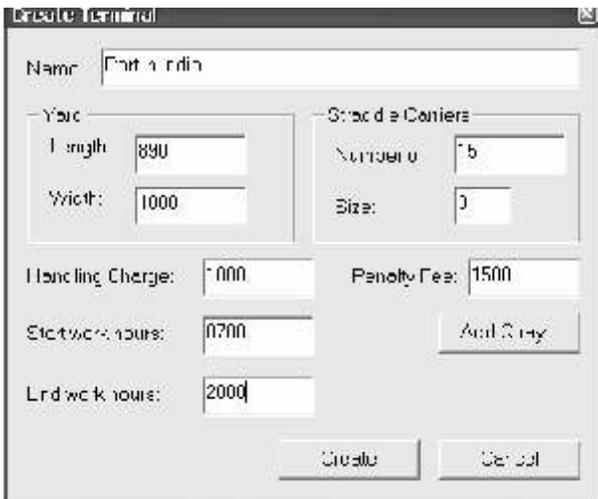


Figure 5 : Create Terminal GUI

simulation experiments, i.e. working hours, berth sizes and terminal configurations, etc. A screen shot of the 'Create Terminal' screen is provided in Fig.5, indicating that the yard configurations, handling charges associated at the CT the penalty costs (hours for working outside normal hours) and the start and ending times for normal hours are considered as input for the SIMPORT agents so that calculations can be made.

Results of the SIMPORT Simulation Project

The managers of a CT in India provided data and layouts of their terminal for analysis. The Indian CT was encountering ship turn-around time of 3-4 days and was considering means of increasing quay crane throughput from 30 lifts per hour to 40 lifts per hour. The simulation model was used to evaluate revised layout configurations for the yard and berthing policies at the berth. The test results for a single experiment are illustrated in Fig.6, which evaluates the different types of berthing policies, sequencing policies experimented and storage management policies using data provided by the real CT in India.

In Table II the results of the individual experiments are compiled into one table. The tests were conducted to

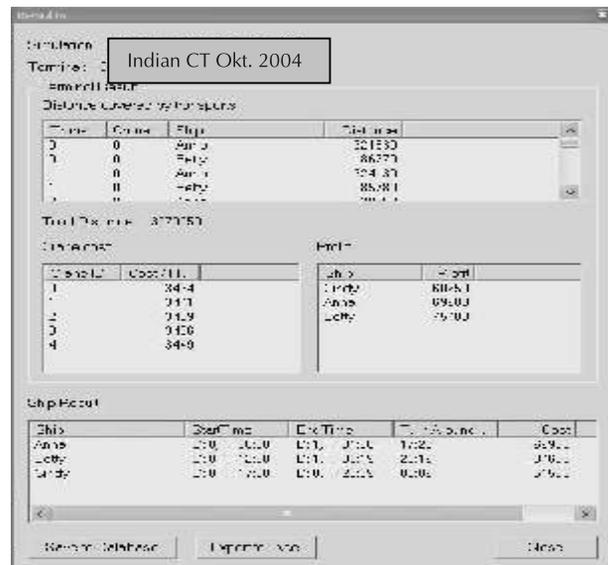


Figure 6 : Screen shot of the results using the STTP policy with FIFO sequencing policy

analyze the relationships of stacking policies, scheduling policies, berthing policies and ship bay stowage configurations in developing improved CT performance. A list of 16 scenarios was compiled from interviews with CT managers and is simulated in SIMPORT. The total distance for each combination of policies is compared from; ship profits and ship turn around times for the arriving ships. Though SIMPORT calculates the individual crane profits and individual ship profits and costs, they are summarized in the results in Table II.

In testing the layout changes between stacking by destination and by ship line, interesting results were obtained coupled with the container ship bay configuration being either fixed or random. Meaning that the containers were randomly stowed in bays in a vessel where as fixed stowage would refer to having containers loaded into bays designated by their destination. The use of ship line as a storage management policy indicated that there was minimal difference in results on distance of SCs traveled, ship turn-around times and operational costs. The use of the destination storage management policy revealed improvements of about nearly 10% for all 16 policies which means better utilization and faster turn around time when comparing stacking by 'ship line'. A general finding from the simulation study indicated that rearranging the yard increased efficient SC distance traveled. The results suggested positively that Berth productivity and the Yard configuration are linked, and the effect of increasing productivity of any isolated

activity (e.g. lower distance traveled) must also be examined upon overall terminal operations. Continuing testing with SIMPORT on the ship bay configurations disclosed that there is a strong correlation between ship bay configurations with the other policies.

The scenario that had the fastest ship turn around time was scenario 14 at 41 hours and 10 minutes. However, the profit for the ships was reduced in that more resources were assigned in working those ships faster. The first scenario, scenario 1 had the best operating profit for the ships worked but had the third highest ship turn around time at 44 hours and 7 minutes. The lowest distances covered for the SCs was 2,698,905 meters in scenario 2 in which the ships are placed on a berth that is closest to the most worked stack in yard. This would lead to lower distances but with a potential high turn around time. The ship turn-around time in scenario 2 is 57 minutes more than the fastest time and less than one hour and 37 minutes from the average ship turn around time of 43 hours 41 minutes. In addition, the ship profits are 7.5% higher than the average profit of €206,202. A decision maker would have to consider these "trade-offs" in setting policies for the CT management personnel to use.

Conclusion and Future Work

The initial simulation experiments with SIMPORT have provided a useful example of using a multi agent system in a CT. The results seem to indicate that simulation as a

Table 2 : Test Results of CT Management Policies and Ship-Bay Stowage Configurations

Scenario	Container Terminal Management Policies			Ship / Bay Stowage Config.	Sum of Distance Traveled by SCs in meters	Sum of Ship Turn - Around Times in Hours	Sum of Container Operational Profit in Euro
	Berthing policy	Scheduling policy	Stacking policy				
Scenario 1	BCSP	HEF	Dest.	Random	2760759	44:07:00	€ 226 500
Scenario 2	BCSP	HEF	Dest.	Fixed	2698905	42:03:00	€ 221 755
Scenario 3	BCSP	HEF	Ship line	Random	3067510	45:59:00	€ 223 000
Scenario 4	BCSP	HEF	Ship line	Fixed	3050050	44:19:00	€ 217 570
Scenario 5	BCSP	FIFO	Dest.	Random	2781045	43:51:00	€ 212 540
Scenario 6	BCSP	FIFO	Dest.	Fixed	2753205	42:45:00	€ 200 220
Scenario 7	BCSP	FIFO	Ship line	Random	3090050	44:15:00	€ 220 200
Scenario 8	BCSP	FIFO	Ship line	Fixed	3005045	43:22:00	€ 206 560
Scenario 9	STTP	HEF	Dest.	Random	2763045	42:38:00	€ 198 800
Scenario 10	STTP	HEF	Dest.	Fixed	2725450	41:28:00	€ 185 040
Scenario 11	STTP	HEF	Ship line	Random	3070050	43:07:00	€ 205 550
Scenario 12	STTP	HEF	Ship line	Fixed	2984655	42:34:00	€ 200 250
Scenario 13	STTP	FIFO	Dest.	Random	2763045	42:31:00	€ 196 800
Scenario 14	STTP	FIFO	Dest.	Fixed	2704050	41:10:00	€ 180 750
Scenario 15	STTP	FIFO	Ship line	Random	3070050	42:57:00	€ 205 250
Scenario 16	STTP	FIFO	Ship line	Fixed	2984655	42:07:00	€ 198 450

backbone for a DSS can be useful for evaluating various CT management policies, e.g. berthing strategies, container yard stacking strategies, and sequencing of ships. SIMPORT suggests that the more 'informed' CT managers are, the better the choice of CT management policy. The choice of yard stack policies and berthing policies both have a strong influence on ship turn-around time and distances traveled by the SCs. The use of monetary terms has provided additional insight to the utilization and performance of the cranes, and the profits made by the various agents during the simulation. Computer simulation is suggested as an approach that may assist CT managers in making decisions without interrupting the operations and thus consequently avoiding mistakes which may be costly (cf. Henesey et al. 2004).

The use of real data provided by the container terminal in India assisted greatly in setting up the experiments. The results from the SIMPORT were later communicated back to the Indian CT management, leading to a few changes in container terminal management. The most significant change being the configuration of the yard according to destination. The latest correspondence with

the management at the real container terminal was positive and suggested continuing improvements with SIMPORT, e.g. situation when one of the cranes or straddle carriers is down, etc.

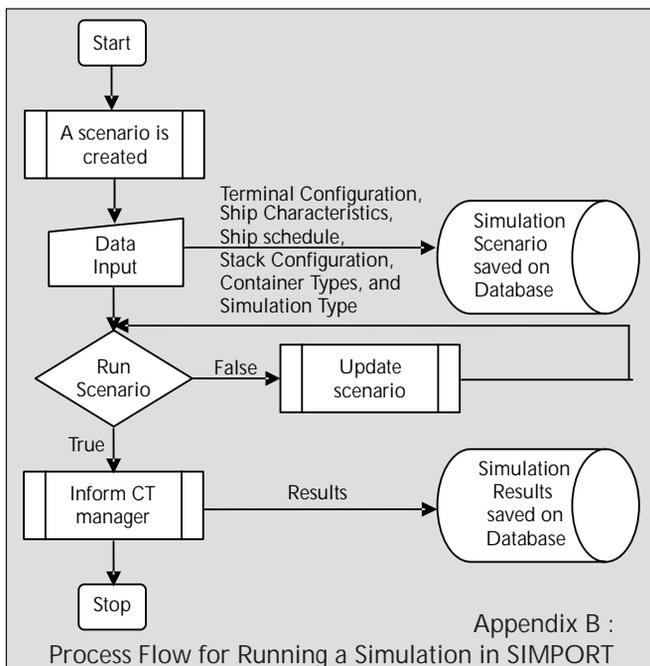
The use of agents in modeling and simulating the complexities associated with the CT has greatly assisted in capturing the organization and the tasks that are executed for operations. The experience with simulating the CT has assisted greatly in understanding and identifying problems from a methodological perspective.

SIMPORT currently handles the marine side flows with the yard operations and future work is to extend it to model the inland side flows in more detail. However, SIMPORT could simulate a transshipment CTs like those found in ports such as Hong Kong and Singapore, where most of the containers are discharged at the terminal for loading onto another vessel. In addition improve algorithms are needed for the agents to make better decisions. Testing of a longer time horizon with multiple ships (currently three ships are used) is considered for SIMPORT in the near future. The agents in the management system are considered to be reactive with much communication taking place between them. The next stage of the research would be to refine the management system agents to be proactive and making complex decisions. For example, the yard could be better represented by an agent in selecting yard location and stack configurations according to a list of rules. The possible extension of SIMPORT to test a market driven approach in handling containers in a CT is the aim of the research.

Appendix A : Costs in Purchasing Container Terminal Equipment and Developing Infrastructure

Container Gantry	€ 5,000,000
Mobile Crane	€ 2,500,000
Transtainer	€ 1,000,000
Straddle Carrier	€ 600,000
Reach Stacker/ Front Loader	€ 300,000
Meter of Quay Length	€ 50,000
Per Square meter of yard	€ 50

Source : MARCONSULT Performances of Container Terminals Report 2003 Genoa – June 2003. Marconsult. S.R.L.



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Project:
Ro Ro Ferry Service in
Gulf of Cambay Between
Port VICTOR (Saurashtra)
and SURAT (South Gujarat)



Dahej SEZ

attracts significant investor interest

The Dahej special economic zone (SEZ) in Gujarat is the fourth largest SEZ in the country with a notified area of 1,718.93 hectares. The multi-product SEZ, notified on December 20, 2006, is one of the few large-scale SEZ projects being implemented in the country. The SEZ is being developed by Dahej SEZ Limited, a special purpose vehicle (SPV) formed under a joint venture (JV) between the Gujarat Industrial Development Corporation (GIDC) and the Oil and Natural Gas Corporation (ONGC). The SEZ will predominantly cater to the chemical and petrochemical sectors, which contribute about 60 per cent to the state's gross domestic product.

Location and connectivity

The SEZ is located in Dahej village in Bharuch district, close to many industry-intensive cities. A key locational advantage is the availability of rich feedstock and natural resources in the area, which has ensured a high concentration of petroleum, petrochemicals and chemical industries in the Dahej industrial belt, along with the chemical estates in Ankleshwar, Panoli, Jhagadia and Hazira. The nearest domestic airports are at Surat (120 km) and Vadodara (110 km), with daily flights to Mumbai and Delhi.

In terms of port connectivity, Dahej is located in the Gulf of Cambay and has the country's first specialised chemical port, with dedicated liquefied natural gas (LNG) terminals and dynamic storage terminals for handling solid cargo and storing liquid and gaseous chemicals, petrochemicals and petroleum products. In addition, the container terminal at Hazira (operated by Shell) and the port operated by Gujarat Chemical Port Terminal Company Limited can be used to transport chemical cargo. An additional solid cargo terminal, currently under construction in Dahej, is expected to be operational by 2010. A network of gas pipeline corridors is also being laid within the SEZ to ensure easy supply of gas.

For connectivity to the hinterland, the SEZ is connected by a four-lane state highway to National Highway-8, which is part of the Golden Quadrilateral project under the National Highways Development Programme. Moreover, the SEZ is in close proximity to the upcoming Delhi-Mumbai Industrial Corridor and the dedicated freight corridor. The railway network near the SEZ includes the Dahej meter gauge and Bharuch broad gauge (40 km) network. Bharuch Dahej Railway Company Limited was formed on a PPP basis to specifically cater to traffic from the Dahej area, including

the SEZ, by enabling broad gauge conversion of the Dahej-Bharuch line, which will be completed by March 2010. The railway track will be extended to the dock to facilitate seamless transfer of freight from ships. Two local passenger trains will also be introduced for the SEZ's workforce.

Project development

The SEZ project requires an investment of Rs 12 billion. Approximately 35 per cent of this has been secured from banks and financial institutions. Financial closure has been achieved. Among the equity investors, 50 per cent stake in the project is held by GIDC and the remaining by ONGC Petro-additions Limited (OPaL), a JV amongst ONGC (with 26 per cent stake), Gujarat State Petroleum Corporation (5 per cent) and GAIL (India) (19 per cent).

In 2005, the project developers decided to locate strategic partners for undertaking infrastructure development in the zone, since neither ONGC nor GIDC had the relevant development experience for such a large-scale multi-product SEZ. The partners that were finalised as co-developers for specific infrastructure components included Torrent Energy Limited for power generation and distribution; Gujarat State Petronet Limited (GSPL) for gas distribution; and Dahej Hospitality Private Limited and Sapthagiri Hospitality Private Limited for hospitality. ONGC is now looking for foreign investors.

Infrastructure

Of the notified area, 1,698 hectares has been earmarked as processing area. The SEZ is divided into two parts - east (1,150 hectares) and west (550 hectares) - joined by a 6 km long corridor. Plots are available at an allotment price of Rs 850 per square metre.

In November 2008, Mumbai-based Atlanta Limited was awarded a Rs 1.46 billion contract to develop the internal infrastructure, including 22 km of concrete roads with widths varying from 7 to 10 metres, arterial roads of 20-30 metres width, a 44 km long drainage network, a water supply network of 27 km, and electrical street lighting. Besides Atlanta an order worth Rs 600 million was

Dahej SEZ - Employment and investment

Employment proposed	57,713
Direct	50,000
Indirect	7,713
Employment till date (no.)	1,357
Direct	470
Indirect	887
Investment till date (Rs billion)	28.53

Source: Department of Commerce, Ministry of Commerce and Industry, Government of India



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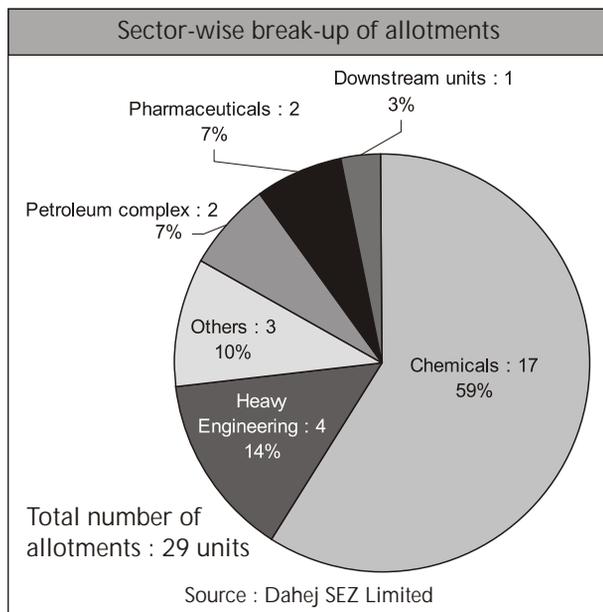
awarded to Ahmedabad-based Backbone Enterprises Limited for similar infrastructure works.

Moreover provisions for effluent collection, treatment and disposal are being made. A telecommunications and data transmission network fire-fighting station and bank offices are also being set up. Other facilities include an administration building training centres management training and industrial technical institute extension centres parking zone, etc. A gas distribution network is being set up by GSPL. Work on these infrastructure projects is expected to be complete by October 2009. The social infrastructure at the site includes hotel and recreation facilities, a convention centre and food courts. A residential township has also been planned by GIDC at a distance of 10 km from Dahej.

Given the projects scale, the developers are making independent provisions for power supply an SPV called Torrent Energy Limited has been established for developing a dedicated power supply project in the SEZ. A 1,500 MW gas-based power supply plant will be constructed in two phases. The first phase, involving the installation of a 400 MW combined cycle power plant, is being implemented at an investment of Rs 14 billion. The project has received environmental clearance and will be commissioned in 2011-12. On the distribution side, Torrent Energy applied for a distribution licence to the Gujarat Electricity Regulatory Commission in May 2008. The power distribution network and two substations have been set up and power supply is already available.

Units

A lot of interest has been expressed for setting up units at the SEZ, as is evident from the large number of allotments and enquiries. According to R.J. Shah, chief executive officer, Dahej SEZ Limited, "We have already allotted plots to 27 units, occupying almost 70 per cent of the



processing area. Further, land allocation is in process for five additional units. Of the allotments made, the development plans of 12 units have been approved and are under implementation." The key exportable products from the SEZ include petroleum-based products and petrochemicals such as ethylene and propylene, as well as pesticides and fertilisers and rubber-based products, etc. While one unit has already commenced production and exported goods worth Rs 30 million as of August 2009, production in four more units is expected to commence by December 2009.

Of the total investment committed by the units, a major share (Rs 130 billion) has been committed by the SEZ anchor unit itself, which is a petrochemical complex being set up by OPaL. An initial public offering will be



Of the total investment committed by the units, a major share (Rs 130 billion) has been committed by the SEZ anchor unit itself, which is a petrochemical complex being set up by OPaL. An initial public offering will be made by 2011 to raise additional funds for the project. The project will cover an area of 500 hectares, and have a capacity of 1.1 million tonnes per annum (mtpa) of ethylene and 0.34 mtpa of propylene.

made by 2011 to raise additional funds for the project. The project will cover an area of 500 hectares, and have a capacity of 1.1 million tonnes per annum (mtpa) of ethylene and 0.34 mtpa of propylene. The complex will include a dual-feed cracker of hydrocarbon components (C2, C3, C4) and naphtha feedstock. OPaL has awarded a \$1.4 billion contract to a consortium of Germany-based Linde AG and Seoul-based Samsung Engineering Limited for constructing the complex, which is expected to be commissioned by December 2012. Construction has also started on a 5 mtpa LNG processing plant, covering an area of 50 hectares. LNG for the plant will be imported from Qatar and will be supplied by the nearby unit of Petronet LNG Limited. Meanwhile, feedstock for the dual feed cracker will be sourced from ONGC, which is implementing its C2-C3 (methane-propane) extraction project in the SEZ at an investment of Rs 10 billion.

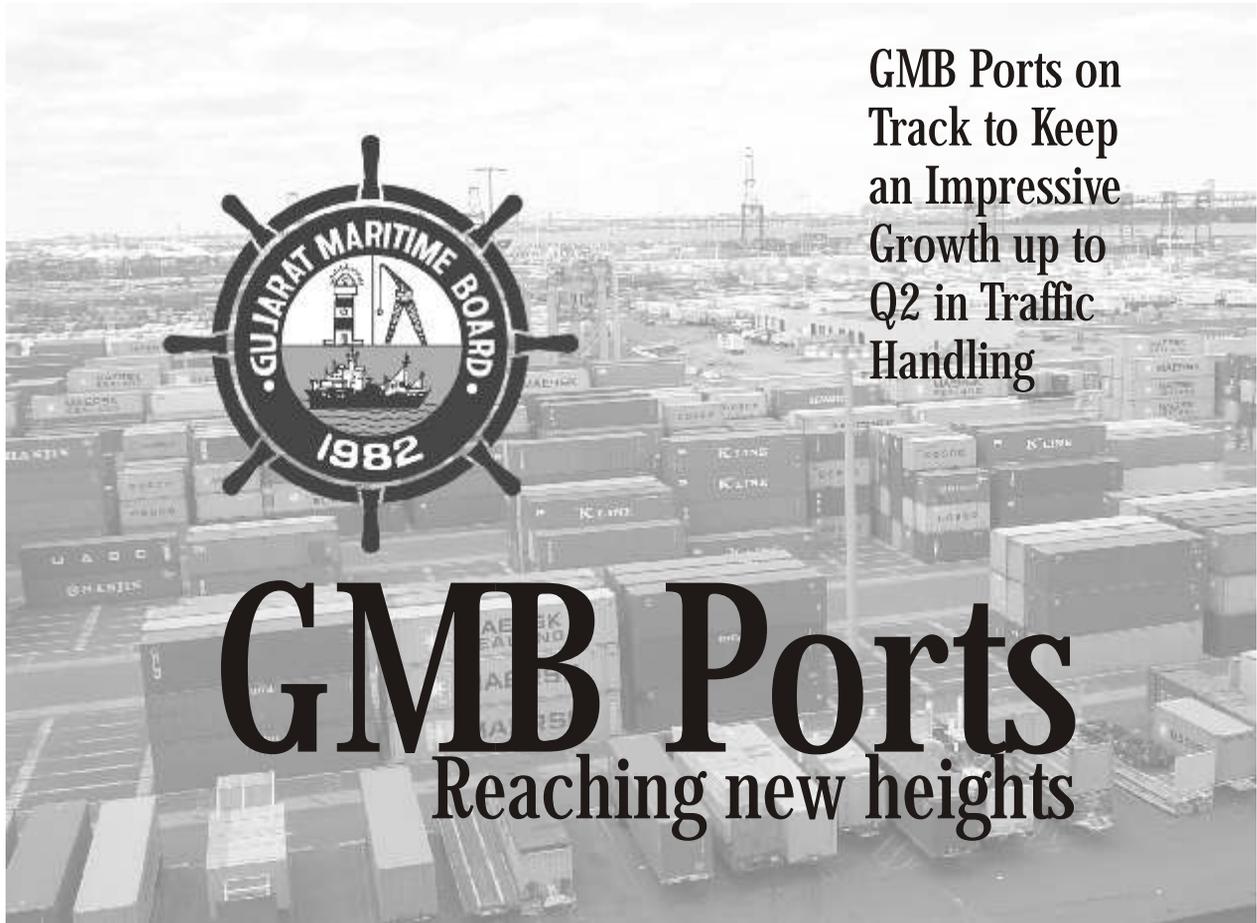
Other units under implementation belong to the chemical, pharmaceutical and heavy engineering sectors (see graph). Pidilite Industries Limited is setting up a Rs 4.5 billion unit on a 20 hectare plot to manufacture polychloro rubber (0.03 mtpa) and its derivatives. Another upcoming unit is the Dahej SEZ Ink Project for printing machinery, being set up by DIC India Limited at an investment of Rs 1.4 billion. Further, Indofil Organic Industries Limited is setting up a unit at an investment of Rs 1.3 billion, to produce various chemicals including herbicides, insecticides, bactericides and specialty and performance chemicals for allied industries.

Future outlook

The SEZ project is progressing at a reasonable pace and has seen considerable investor interest at the Vibrant Gujarat Global Investors Summit, 2009. According to Shah, "the Dahej SEZ is the fastest growing multi-product SEZ in Gujarat. It is providing tough competition to other SEZs, given its locational advantages, as part of the petroleum, petrochemicals and chemical industrial region that improves market linkages and raw material access for prospective units, and provision of state-of-the-art infrastructure through co-developers with remarkable expertise in their respective fields." The fate of the project is expected to determine the success of multi-product SEZs. The overall success of the SEZ will be known by 2012, which is when large-scale exports from the SEZ will commence with the commissioning of the petrochemicals complex.

However, concerns have been raised about the continued availability of feedstock to meet the needs of the entire regions industry. The state government has also raised concerns about the availability of skilled manpower for the project and is planning to initiate specific training programmes in association with private sector players.

By Ishani Mehta
(Source : Gujarat Infrastructure, July-September 2009)



GMB Ports on Track to Keep an Impressive Growth up to Q2 in Traffic Handling

GMB Ports Reaching new heights

Gujarat Maritime Board has shown a distinct growth model of business, by policy reforms and harnessing the 1600 km coastline with a sea of opportunities. In spite of deepening recession worldwide and adverse environment; the non-major ports in Gujarat have achieved a creditable 4% growth in 2008-09 whereas the average traffic at major ports and non-major ports in India grew by 2%. To add to this optimism is the fact that despite economic meltdown, GMB ports that had the capacity to handle 198 MT in 2007-08, had expanded it to 235 MT during the fiscal year 2008-09, a growth of 20 per cent over the previous year. Gujarat Ports currently accounts for 21 % of national cargo.

Over the end of 2nd Quarter (April-09' to September-09'), traffic at Gujarat's non-major ports grew at a remarkable rate of 28.75%. GMB Ports maintained upward trend in handling 94.28 million tonnes against 73.22 million tonnes handles in the corresponding period of the previous year up to Q2 by achieving growth of 28.75%. The traffic has increased tremendously in ports like Jafrabad, Navlakhi and Sikka etc. The traffic at Navlakhi port has increased from 1.73 million tonnes in April-08 to September-08 to 2.86 million tonnes in April-09 to September-09. Due to various developments, the traffic at Sikka Port has increased from 30.8 million tonnes in April-08 to

September-08 to 45.5 million tonnes in April-09 to September-09. The total numbers of ships in Alang Recycling Yard have increased from 136 nos in 2007-08 to 264 nos of ships in 2008-09.

GMB - Gujarat Non major Ports have variety of cargo handling which is unique in the country. The area of traffic include container terminals, LNG terminals, dry bulk and liquid bulk cargo terminals, SPM - fast liquid cargo handling terminals, car terminals, Ro Ro type terminals – terminals for handling of Over Dimensional Cargo (ODC), deep water berths/jetties, shipbuilding yard etc.

GMB had already started the process for setting up cluster based Marine Shipbuilding Parks. Recently Government has approves three projects. As a part of strengthening the road network in and around the Port, concreting works of ports are taken up phased wise. Bharuch-Dahej Rail Company established under SPV. Project of 64 km long Bharuch-Dahej BG rail connectivity is under implementation. The process of development and progress is continuing and hence, GMB ports will continue an upward trend in handling traffic.

GMB emerged as a winner withstanding the crucial recession period, and is strongly on-route to accomplish few more milestones.

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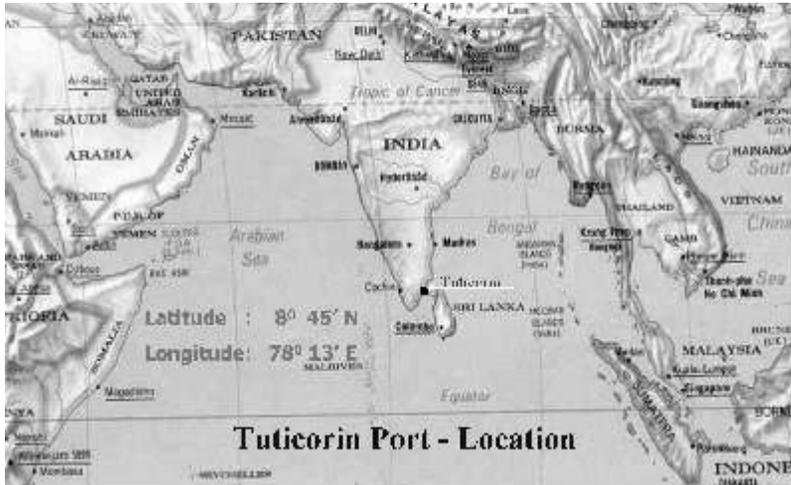
**INDIAN PORTS &
INFRASTRUCTURE REVIEW**

Tuticorin

A forward looking port



Tuticorin Port is one of the 12 major ports in India. It was declared to be a major port on 11 July 1974. It is second-largest port in Tamil Nadu and third-largest container terminal in India after Jawaharlal Nehru Port (Mumbai) and Chennai Port. Tuticorin Port is an artificial port. This is the third international port in Tamil Nadu and its second all-weather port. All Tuticorin Port's traffic handling has crossed 10 million tons from April 1 to September 13, 2008, registering a growth rate of 12.08 per cent, surpassing the corresponding previous year handling of 8.96 million tons. It has services to USA, China, Europe, Sri Lanka and Mediterranean countries.



Tuticorin Port - Location

LOCATION

Tuticorin Port is located strategically close to the East-West International sea routes on the South Eastern coast of India at latitude 8° 45'N and longitude 78° 13'E. Located in the Gulf of Mannar, with Sri Lanka on the South East and the large land mass of India on the West, Tuticorin port is well sheltered from the fury of storms and cyclonic winds. The port is operational round the clock all through the year.

HISTORY OF TUTICORIN PORT

Tuticorin has been a centre for maritime trade and pearl fishery for more than a century. The natural harbour with a rich hinterland, activated the development of the Port, initially with wooden piers and iron screw pile pier and connections to the railways. Tuticorin was declared as a minor anchorage port in 1868. Since then there have been various developments over the years.

Tuticorin became the citadel of the freedom struggle in the early 20th century. In 1906, one of the greatest freedom fighters of India, Mr. V.O. Chidambaram Pillai, launched the first swadeshi ship "S.S. Gaelia" in British India.

After Independence, the minor Port of Tuticorin witnessed a flourishing trade and handled a variety of cargo meant for the neighbouring countries of Sri Lanka, Maldives etc. and the coastal regions of India.

To cope with the increasing trade through Tuticorin, the Government of India sanctioned the construction of an all-weather Port at Tuticorin. On July 11, 1974, the newly constructed Tuticorin Port was declared as the 10th major port 1st April 1979, the erstwhile Tuticorin minor Port and the newly constructed Tuticorin major Port were merged and the Tuticorin Port Trust was constituted under the Major Port Trusts Act, 1963.

CONSTRUCTION DETAILS

Tuticorin Port is an artificial deep-sea harbour formed with rubble mound type parallel breakwaters projecting into the sea for about 4 km. (Length of North breakwater

is 4098.66 m, length of South breakwater is 3873.37 m and the distance between the breakwaters is 1275m). The Port was designed and executed entirely through indigenous efforts. The harbour basin extends to about 400 hectares of protected water area and is served by an approach channel of 2400 metres length and 183 metres width.

ADVANTAGES

- Tuticorin is the only Port in Southern India to offer a direct weekly container service to U.S.A. Window berthing is provided on every Friday and the transit time to US is 22 days. Further, regular weekly direct services to Europe on every Tuesday (transit time 17 days), China on every Wednesday (transit time 10 days), Red Sea Ports on every Thursday (transit time 8 days) are also available. Besides, 26 services per month to Colombo are also available.
- For the import container from Bangalore, Salem & Dharmapuri region, concessional storage charges at Port area are offered on experimental basis.
- Port has good road / rail connectivity. Presently two ICD rakes viz. One ICD train leaving Bangalore on every Sunday and another ICD train leaving on Wednesday are available for connection vessel to Europe and USA separately.
- Based on volume, Port could facilitate sharing of infrastructure facilities available at Oil Jetty to handle POL products.
- Port has vast open space within and outside security wall for storage of cargo. Requisition for allotment of land on short term basis for 11 months could be considered within one month time.
- Strategically located very close to the East- West International sea-route.
- Commissioning of Berth No. 7 by the Port of Singapore Authority as a Container Terminal with modern equipment and State of Art Technology by the end of 1999.
- 35 feet draught.
- Round the clock operations
- Night Navigations
- Open lands in the Port area suited for locating Port based industries.



OPEN AREA FOR CARGO STACKING FACILITIES

Open space for stacking bulk cargo and containers is available inside the security wall to the extent of 5,53,000 sq. m. The open areas can accommodate around 30,000 tonnes of bulk cargo either for import or export and 2500 containers. In addition to containers, the open area inside the wharf are used for temporary stacking of bulk cargo such as coal and sulphur.

Tuticorin Port is having a vast open land of about 2,158 acres outside the main gate. Cargo godowns with a capacity of stacking 36,000 tonnes have been put up in this area by Tamil Nadu Warehousing Corporation. The Port has also permitted a number of other agencies to put up godowns and warehouses in order to augment the import and export trade through the Port. Open lands are also used for stacking of timber imported through the port as well as granite for export.

CONTAINER TERMINAL OPERATED BY PSA - SICAL

- Two Quay cranes with 44m outreach to handle container vessels
- Four RTG cranes to stack 5-containers high
- Reefer plug points - 84
- Trained man power to operate the modern equipment
- Berthing on arrival for container vessels.

- Night Navigational facility.
- Round the Clock Port operations.
- Uninterrupted power supply to reefer plug points.
- High quality, fast, flexible and reliable services.

STORAGE FACILITIES

- 30,000 Sqm. asphalted area in the berth for the stacking of containers.
- 60,000 Sqm. fenced area with security guard for the stacking of stuffed containers.
- 70,000 Sqm. open space for the stacking of empty containers.
- 15,550 Sqm. covered warehouse area for the stacking of destuffed cargoes.

OTHER FACILITIES

- Bunkering
- Supply of fresh water to ships
- Round the clock
- Vessels and cargo surveys

MARINE SERVICES

(a) Salvage / Diving:
Salvage / Diving operations are carried by private agencies.



(b) Fire Service:

Fire Service at South Break Water, North Break Water and Extension Port is functioning round the clock .

One Fixed Fire Fighting System installed at the Coal-Oil-Coal Jetty complex is being operated by a private agency - M/s. Delta Corporation Chennai on contract basis round the clock

(c) Meteorological Observatory:

Meteorological Observatory receive forecast for Rainfall, Cyclone and Wind warnings from Regional Meteorological Centre(RMC) Chennai.

Meteorological Observatory provides data on Pressure, Temperature, Humidity, Rainfall, Wind speed & Direction and Tide level.

(d) Crew Transportation:

Launch service for crew transportation is provided giving priority to shipping movements.

Service charges are levied as per the scale of rates of Tuticorin Port Trust.

Additional fees of 50% of the charges are recovered for service provided on Sundays, Port non-operating days and hours between 18.00 to 06.00.

(e) Water Transportation:

Port does not provide water of its own. Outside Agents transport water through water Barges which is then taken to vessels at anchorage.

Service charges are levied as per the scale of rates of Tuticorin Port Trust.

Additional fees of 50% of the charges are recovered for service provided on Sundays, Port non-operating days and hours between 18.00 to 06.00.

(f) MMD and Private Survey firms:

Ships calling Tuticorin Port can carryout Survey through Mercantile Marine Department and private Survey firms.

BUNKERING & WATER SUPPLY

The vessels calling at Tuticorin Port



can replenish their supplies of bunkers through the services provided by the Indian Oil Corporation, the largest State opened petroleum company.

Water is provided to the ships at the Port through private agencies.

SURVEY

The Mercantile Marine Department of the Govt. of India under the Director General of Shipping has its office at Tuticorin under the charge of the Surveyor in-charge to regulate the ships' operations and survey as per the Indian Merchant Shipping Act, 1958. This office is also responsible for welfare of the seamen visiting Tuticorin. A number of Private Survey agencies are functioning at Tuticorin for undertaking cargo, container and other surveys.

SECURITY

The Central Industrial Security Force of the Govt. of India with adequate security personnel headed by a Deputy Commandant is deployed to man the vulnerable points in the Port area. In addition, watchmen of private agencies are deployed for watch keeping duties.

SAFETY

The Port's Fire Service wing is well equipped to handle all fire emergencies on the shore and on board the vessels. The Office of the Dock Safety Inspectorate, which is the regulatory authority to enforce safety, health and welfare of the dock workers is functioning at this Port.

TUTICORIN PORT TRUST

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 Website : www.tuticorinport.gov.in



4th Intermodal Asia 2010
28 - 29 January 2010
Hilton Hotel Sydney, Australia



Intermodal Asia is one of the largest Container Ports, Shipping and Transport Logistics

Exhibition and Conference business to business trade events throughout the Asia Pacific region.

The 4th Intermodal Asia 2010 will comprise a world-class Exhibition and Conference. The conference will feature 30 world class speakers in global logistics and transport and will be attended by more than 300 senior executive decision makers from the world's leading ports, shippers, cargo owners, shipping lines, freight forwarders, logistics companies, terminal operators, railway operators and port-rail equipment services suppliers.

There will be a concurrent two days Trade Exhibition of 40 international exhibition booths providing a valuable opportunity for companies to market products and services at this prestigious transport event taking place next year in Australia.

This Container Ports, Shipping and Transport Logistics Exhibition and Conference is designed to promote transportation in Australia and the Asia Pacific region.

For more details, contact -
Transport Events Management Limited
Level 1, Lot 7, Block F, Saguking Commercial Building,
Jalan Patau-Patau, 87000 Labuan F. T., Malaysia
Phone : +60 87 426 022
Fax : +60 87 426 223
Email : enquiries@transportevents.com
Web : www.transportevents.com

Port Centric Logistics
2 - 3 March 2010
Hilton Hotel, Deansgate, Manchester, UK

The concept and application of port centric logistics is gathering pace throughout Europe and has the potential to benefit all participants in the supply chain including primary retailers, manufacturers and distributors, deepsea and shortsea ship operators, port owners, logistics providers and other related service operators.



For the first time, this brand-new conference brings together the relevant supply chain partners to examine, debate and learn how effective port centric logistics solutions are changing current distribution systems, improving effectiveness and generating competitive advantage. In a carbon constrained society, the port centric model can make a significant contribution to supply chain improvements.

Expert speakers from retail, logistics, ports, carriers and consulting will share their knowledge and experiences, and examine trends in maritime trade flows, economic impact, barriers and opportunities, development and planning challenges, productivity benefits, improved customer service, equipment, technology and systems requirements. And, most importantly, port centric case studies and first-hand sector experience will be shared from, amongst others, the fast-moving food & non-food industries, manufacturing and specialised/bulk cargoes.

For more details, contact -
Navigate Events Ltd
The Baltic Exchange, 38 St Mary Axe
London EC3A 8BH, United Kingdom
Phone : +44(0)20 7369 1650/3/6
Fax : + 44(0)20 7369 1684
Email : enquiries@navigateevents.com
Web : http://www.navigateconferences.com

Shipping Marine and Ports World Expo 2010
3 - 6 March 2010
Bombay Exhibition Centre, Mumbai

CHEMTECH is pleased to announce Shipping, Marine & Port World Expo 2010. Towards Global Competitiveness, from March 3-6, 2010 at Mumbai.



The International Exhibition & Conference is being organized to provide insights with the expectations, challenges and opportunities for Indian Marine, Shipping, Ports and logistics service providers and manufacturers, to become globally competitive by showcasing latest innovation and bringing the gap between technology provider and users.

Shipping & Marine will also provide ideal platform to the members of the Shipping, Maritime, Ports and trade fraternity for interacting with a cross section of users and service providers across the Globe.

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4th Indian Ocean Ports and Logistics 2010
 25 - 26 March 2010
 Hilton Mauritius Resort and Spa, Mauritius



Indian Ocean Ports and Logistics is the largest biennial Container Ports, Shipping and Transport Logistics Exhibition and Conference business to business trade event serving Africa and the Indian Ocean islands region.

The 4th Indian Ocean Ports and Logistics 2010 Exhibition and Conference will take place at the luxurious 5 star Hilton Mauritius Resort and Spa on Thursday 25 and Friday 26 March 2010.

A two days Conference will feature 30 world-class conference speakers in global transport and logistics attended by a prestigious gathering of 250 senior executive delegates from the world's leading shippers, cargo owners, shipping lines, freight forwarders, logistics companies, importers/exporters, ports, terminal operating companies, railway operators, airports, port equipment and services suppliers from the USA, Europe, Africa, the Middle East and Asia. There will be the opportunity for 35 exhibitors and sponsors to showcase latest products and services to altogether more than 350 international participants at this prestigious international biennial transportation and logistics Exhibition and Conference taking place next year on the beautiful island of Mauritius.

For more details, contact -
 Transport Events Management Limited
 Level 1, Lot 7, Block F, Saguking Commercial Building,
 Jalan Patau-Patau, 87000 Labuan F. T., Malaysia
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 Email: enquiries@transportevents.com

8th ASEAN Ports and Shipping 2010
 20 - 21 May 2010
 Windsor Plaza Hotel, Ho Chi Minh City, Vietnam

ASEAN Ports and Shipping is the largest annual Ports, Shipping, and Logistics Exhibition and Conference trade event in the ASEAN region and one of the largest in the Asia Pacific region.



It is an honour that the Ministry of Transport Vietnam has endorsed the 8th ASEAN Ports and Shipping 2010 Vietnam Exhibition and Conference taking place at the luxurious 5 star Windsor Plaza Hotel, Ho Chi Minh City on Thursday 20 and Friday 21 May 2010.

The 8th ASEAN Ports and Shipping 2010 will provide companies an ideal platform to showcase products and services to this dynamic emerging market. This event also presents opportunities for companies and industry professionals to raise brand awareness, launch new products, network and establish business contacts. On Wednesday 19 May 2010, there will be a Technical Site Visit to Saigon Port and other container terminal operations. On

Thursday 20 May 2010, there will be an evening Networking Welcome Reception that promises to be one of the social highlights of the event for all participants and spouses.

There will be a two days Exhibition of 100 international companies and sponsors showcasing containerised transport products and services. On Thursday 20 and Friday 21 May 2010, there will be a concurrent two days Conference featuring 35 world-class business leading conference speakers analysing latest global transport and logistics issues attended by more than 600 senior executive delegates from 25 countries comprising some of the world's leading shipping lines, shippers, cargo owners, importers / exporters, freight forwarders, logistics companies, ports, terminal operators, port equipment and services suppliers.

Key reasons why should participate:

- The emerging economy of Vietnam plays host to a potentially multi-billion dollar maritime industry
- The Vietnamese economy is forecast to grow by 25% per annum
- The building and refurbishment of Vietnamese ports
- Enormous potential as Vietnam moves to develop its maritime industry a key economic catalyst in the Vietnamese economy
- Plans to develop the maritime industry to serve the vast utilisation of port facilities by interlocked countries - Cambodia, Laos and Myanmar as well as Southern China and the West-East
- 700kms of canals and infrastructure to deep water locations

For more details, contact -
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 Email : enquiries@transportevents.com
 Web : www.transportevents.com

The 3rd European Shortsea Congress
 29 - 30 June 2010
 Dublin Castle, Dublin



Following two hugely successful European Shortsea Conferences (Dublin 2008 and Liverpool 2009) that were attended by over 150 shortsea professionals,

Navigate Events and the IMDO have announced dates for the 2010 event. Next year, the conference will re-visit Dublin on 29 and 30 June. Our third event promises to be even bigger and will bring together Europe's unitised and bulk shortsea shipping interests to address the main concerns of the shortsea sector as it faces the second decade of the new millennium.

The 2010 Congress will include : Pre-conference networking reception • Two-day conference agenda • Bulk and unitised cargo streams • The shortsea debate • Gala dinner • Tour of a local facility

For more details, contact -
 Navigate Events Ltd

MISC'S Halal Express Service calls At Pipavav

MISC Berhad, Malaysia's national shipping line, extended its Halal Express Service to Port Pipavav. The inclusion of Pipavav in the Halal Express Service is expected to provide the shippers in the Gujarat region a direct service to China and South East Asian ports. The service will also facilitate exports from Northern inland container depots (ICDs), like Delhi, Ludhiana and Jaipur, a direct and fast connectivity to South East Asia.

This is an independent service of MISC. Six 4,250 TEU capacity vessels have been deployed providing the trade a weekly service in the following route: Shanghai, Ningbo, shekou, Jakarta, Singapore, Tanjung Pelepas, Port Klang, Karachi, Jebel ali, Bandar Abbas, Pipavav, Nhava Sheva, Colombo, Port Klang, Singapore, Shanghai.

The Halal Express Service was first launched in November 2006 and following the tremendous response from the trade, the service was upgraded with bigger vessels in April this year.

To commemorate the maiden call of the Halal Express Service at Pipavav, a small function was held on board the vessel, Bunga Raya Tiga Uoy.104 E, which was attended by senior personnel from Gujarat Pipavav port Ltd (GPPL), and Crescent Shipping Agency (India) Ltd. Besides the Master and senior officers of the vessel. The



Mr. Prakash Tulsiani lighting the lamp on board the vessel traditional lamp was lit, in keeping with the Indian custom, and plaques were exchanged in keeping with the age-old tradition of the sea. The vessel arrived at night on September 30 and sailed off in the early hours of October 1.

Mr. Prakash Tulsiani, Managing Director of GPPL, in his speech, thanked MISC for its commitment to Port Pipavav. They, in turn, will extend all possible assistance and make this venture a success.

MISC is represented in India by Crescent Shipping agency (India) Ltd which is a part of the Transworld group of companies.

Source: Exim India 8th October 2009 Thursday

Bharati Shipyard raises open offer price

Bharati shipyard has hiked the open offer price to acquire stake in offshore service provider, Great Offshore, to Rs.560 per share. With the increase in offer price, the size of the offer price now stands at Rs 438.3 crore.

Bharati, which already holds 22.48 per cent share in Great Offshore, had initially offered to acquire 20 per cent stake in Great Offshore for Rs. 405 per share.

ABG Shipyard also made an open offer to buy over 32.12 per cent stake in Great Offshore at 520 a share.

The hike in the open offer price followed acquisition of 3.01 per cent stake in Great Offshore by Dhanshree Properties (a sister concern of Bharati) from the open market on September 16.

Earlier too, Bharati and ABG had fought for a controlling stake in Great Offshore. In August, ABG Shipyard had revised its open offer price to Rs. 520 a share for the offshore drilling firm from Rs. 450 earlier.

share for the 14.89 per cent pledged shares of Great offshore in May, also revised its price to Rs. 403 and Rs. 405 on ABG's counter offer.

Great Offshore's promoter, Mr. Vijay Kantilal Sheth, lost the company after he failed to redeem pledged shares from Bharati Shipyard earlier this year.

In May, Bharati made an open offer to purchase another 20 per cent stake in Great Offshore at Rs. 344 a share.

Consequently, ABG made its counter offer for 32.12 per cent stake, or 1.25 crore shares, at Rs. 375 a share.

The long-drawn battle between the two companies to acquire Great Offshore is said to be reaching the final stage, with the Securities and Exchange Board of India's (Sebi) approval for the open offer expected soon.

While Bharati has received the shareholders' approval to raise fresh funds, ABG has sought its shareholders' permission to raise its borrowing limit to Rs.12,000 crore, it is learnt.

Source: Exim India 8th October 2009 Thursday

However, Bharati, which originally offered Rs. 315 per

Non-availability of dredgers prolonging Haldia Dock's ordeal

The non availability of dredgers is continuing to disrupt the normal functioning of the Haldia Dock Complex, under Kolkata Port Trust (KoPT).

Dock operations have been significantly affected because of the receding draught in the channels, including Auckland Bar and Jellingham, forcing many large vessels to wait at the Sandheads, the mouth of the Hooghly.



"The Dredging Corporation of India (DCI) will have to give us more dredgers. We have asked for dredgers 12 and 15 to be brought to Haldia. We need both of them immediately.

"Without these, the situation will continue and no short-term solution will be possible," emphasized the KoPT

Deputy Chairman, Mr. A. Majumdar.

Some 30-35 ships are waiting to enter the Dock complex which, an official explained was not an unusual number.

KoPT sources said that as an immediate fallout of the falling draught, the vessel load of ships had to be lightened to allow them to navigate the channels.

"If a 27,000 tonne ship could enter the Dock a few months ago, the weight now has to be reduced to 20,000 tonnes," an official explained.

If ships have to wait outside the Port and can't load or unload quickly, the cost to importers/exporters may well treble because the shipping companies need to be paid waiting charges.

The DCI Deputy General Manager (Marketing), Mr. M.S. Rao, said, "All our dredgers are either at Haldia or are undergoing repairs. We chartered a dredger, but it has some mechanical problems. As a contractor, we have to remove a fixed quantity of silt, which we have been doing. If, despite this, the situation is not improving, the problem lies elsewhere", he pointed out.

Nevertheless, a DCI official stated that KoPT's request for allocation of dredgers 12 and 15 was being considered, but these would not be ready to sail for Haldia for some time at least.

Source : EXIM INDIA 8th October 2009 Thursday

Panel formed to study financing plans for port projects

The Union government has set up a committee to look into the financing plans for port projects in the current Five Year Plan. The committee will be headed by the Planning Commission member, Mr. Chaturvedi.

The committee will suggest capacity addition targets for the current Plan, along with financing models for the port sector in next Plan.

The government was concerned over the tardy progress in the sector. The Shipping Ministry had been given a target of adding 500 million tonnes of capacity at Major Ports during the 11th Plan but has added just 70 million tonnes so far.

"We have set up a committee to look for alternate modes of financing for the port sector and see whether the budgetary allocations are adequate. We want the Ministry to do far more projects than they are awarding currently to quicken the pace of development in this sector." Mr. Montek Singh Ahluwalia, Deputy Chairman of Planning Commission, said.

The Ministry had set a target for awarding 17 port projects

in this fiscal but has not awarded a single one so far. It has, however, managed to push five projects carried over from last year's unrealised target. Four more from last year are yet to be settled. An official said. The projects include development of iron ore berths, among others at Paradip, Visakhapatnam and Ennore Ports.

Source: Exim India 26th October 2009 Monday



Port Pipavav placing prime emphasis on safety measures

In keeping with the tradition of APM Terminals, its parent company, Port Pipavav observed Global Safety day recently. Several training and education events were conducted at the port for staff and contract labourers from October 13 to 15.

Safety Day was observed across all APM Terminals locations simultaneously, in 48 terminals in 34 countries in five continents involving 19,000 employees.



At Port Pipavav, several training programmes for safe driving, lashing, awareness of hazards at different locations within the port, while handling hazardous cargo, etc., were conducted. These were followed by live demonstrations and sessions to drive home the unconditional need for following safety rules. The port follows the principle 'If you see it, you own it', urging everyone to pay immediate heed to any potential danger observed at any time by anyone.

"The safety of our people is extremely important in the APM Terminals group. Our goal is to eliminate workplace accidents and institute best practices to assure safety at all times," asserted Mr. Prakash Tulsiani, Managing Director of Port Pipavav.

APM Terminals has adopted a 'Safety for Life' programme to aggressively and continuously improve safety practices throughout its global network. Safety education, training, drills and rigorous measurement are designed to bring focus, awareness and positive results to this effort. The company's measures place it in the top quartile in safety performance in the ports and terminal industry. More importantly, the company shares and benchmarks its progress with other companies and works together with other port operators to extend its best practices and protect more people in the workplace.

The high light of the celebrations was the screening of the film 'Vir', it was directed, acted, produced and screened by Pipavav employees and used real-life incidents and experiences to demonstrate the human cost and impact of ignoring safety rules at the port. The film was very well received and the families, especially the children of staff, participated enthusiastically in all the events.

"It is important to catch them young," said Mr. Sanjay Singh, Head of Safety at Port Pipavav. "We need to remind ourselves again and again about the urgency of following safety rules. Whether it is ground staff or labourers or senior management or children or families, all of us have to own the responsibility of making Port Pipavav a safe port."

Source: Exim India Monday October 26th

Renewed calls for 'dugout' box terminal at Durban airport



South Africa's Transnet has resurrected the idea of converting Durban's existing airport into a dugout container terminal to relieve congestion, according to comments made by Transnet Port Terminals (TPT) chief executive Tau Morwe at the recent annual Transnet breakfast conference. The idea of developing a second dugout port was first mooted in the 1950s and gained support when the suggestion of a new airport at La Nercy, north of Durban, was raised in the 1970s. It gained further popularity in the 1990s but was later shelved as it was considered too expensive.

The option of digging out the previous wetland at the end of Bay head Road was then raised as an alternative. This would be much cheaper, but would require relocating the railway marshalling yards, possibly to Cato Ridge, to the west of Durban, and the ship repair basins to the Port of Richards Bay. Over 67 per cent of the country's container traffic flows through the Port of Durban, and future expansion is essential if Durban is to remain the country's premier port. Its status has been questioned by Transnet's selection of the Port of Ngqura, on the Coega river mouth, 20 kilometres from Port Elizabeth, as the country's main shipping hub, said the report.

Mr. Morwe said digging out the airport site would require more Transnet spending, which has already invested from ZAR131 million (US\$17.6 million) in 2001/2 to ZAR3 billion in 2008/9 in ports, and mostly on Durban. What is clear, said is that action is needed if Durban is to retain its current status as Africa's busiest port. Container volumes at the Port of Durban have grown from 300,000 TEU in the 1970s and 1980s to two to three million TEU, but the global downturn has caused container volumes to fall 15 per cent.

Source: MARITIME INDIA Friday 23rd October 2009

Berlin appears to okay loan guarantees to Hapag-Lloyd



Robin Zimmermann of international leisure travel group TUI, which holds a 43 pc of the Hamburg carrier, said it had not yet been officially notified of any decision from Berlin concerning the loan guarantees.

The German government has said but not officially that it will provide EUR1.2 billion (US\$1.8 billion) in loan guarantees to cover bank loans needed by Hapag-Lloyd to stay afloat in the economic downturn.

A spokesman for the German Federal Ministry of Economics and Technology said the "deal was as good as done", but he could not officially confirm it until the guarantees had been signed," it said attributing the delay to the budget committee's request for extra information. "Technically it's all done, but we cannot confirm it officially," the unnamed spokesman said.

"The only thing we know is that there are rumours the guarantees have been approved, but so far no one is either willing or able to confirm this from within the government," he said. "There have been some issues with the budget committee in the federal parliament, but as far as I know, they have now been solved," he added.

The report added that the budget committee is believed to have requested additional information on how Hapag-Lloyd and TUI plan to use the state aid, and "whether there would be a salary cap for company executives."

Source: Maritime India Friday October 23rd 2009

Export fall steeper this fiscal

With the government revising exports figures upward by \$ 14 billion for 2008-09, the data would show that the decline in the current fiscal was steeper than what was released by the commerce ministry so far. The directorate General of Commercial Intelligence and Statistics (DGCI &S) has revised the exports figures for the previous fiscal to \$ 182 billion against around \$ 168 billion released earlier. With the change in the base, the drop in exports for the April-August period 2009-10 would be steeper than 31 per cent as shown in the data released so far.

While no official reason has been given for the revision in the export data, sources said, the difference has

arisen because of the export turnover of the special economic zones which was earlier not counted in the external trade figures. Despite persisting problems in the major global markets, the Prime Minister Economic Advisory has projected the exports to reach \$ 186 billion, pinning its hopes on recovery in the remaining months of the current fiscal. However, on this score Finance Minister Pranab Mukherjee did not sound optimistic and said there could be no substantial growth in India's export till there is recovery in Europe and North America. About 62 per cent of India's exports are destined to European and North American markets.

Source: Maritime India 23rd October 2009 Friday

OOIL'S third quarter container shipping revenue falls 42 pc

Orient Overseas (International) Ltd (OOIL) has announced revenues from its container arm (OOCL) fell 42.3 per cent in the third quarter, reflecting the global downturn's impact on ocean shipping. OOCL announced an over all revenue of \$ 948.9 million for July-September quarter in a statement to the Hong Kong stock exchange.

The statement also took into account total revenue for the first nine months of \$2.77 billion, down 39 pc, it said in a statement. Average revenue per TEU dropped 30.7 per cent in the third quarter year on year. Despite an 11.5 per cent reduction in capacity, OOCL's load factor was down 4.8 per cent in the nine month period, said the statement.



Source: Maritime India Friday October 23rd 2009

NEWS

Port of Aden plans container expansion

The Port of Aden's container terminal is looking to expand its quay area aiming to attract greater transshipment business through the facility, Reuters reported. The Aden Container Terminal (ACT) has the greatest container handling capacity in Yemen. The Ma'alla Terminal is also situated within Aden and has two of its four main berths dedicated to container handling.

Both terminals are controlled by the Dubai and Aden Port Development Company (DAPDC), a joint venture between the state Yemen Gulf of Aden Ports Corporation and Dubai Ports world and its partners. Roy Facey, Port development adviser to the port of Aden, said the design work on the planned quay extension was due to start in 2010.



"DAPDC would then go through the process of tendering and are likely to start the construction in around 2011." He said. "But at this stage there is no set timescale. We certainly expect construction to be completed within 4 years from October 2009."

Facey said plans to expand around 400 metres of quay at the ACT were part of a move to free up non container activity at the Ma'alla Terminal. "It would help the port to be able to provide more quay space

for non container cargoes and business if container operations could be moved to the ACT," he said. "This is precisely what DAPDC plans to do as soon as the capacity of the ACT has been increased sufficiently."

Source: Maritime India Friday 23rd 2009

Port Klang Authority plans new formula on feeder incentives

Port Klang Authority (PKA) has decided to withdraw its scheme to provide incentives to feeder operators linking Port Klang to regional Ports, with effect from this year. It will, however, still pay out the monetary incentives due to operators for the year 2007. For the year 2008, though, feeder incentives will be based on a new formula for

qualified operators. The new formula was not specified. The feeder incentive scheme was developed and introduced by the PKA in 2000 as parts of an overall strategy to further strengthen Port Klang as a national load centre and a regional hub port.



Selected local and regional feeder operators and landbridge operators get a rebate of US\$ 5.76 for a 20 ft container and US\$ 10.08 for 40 ft container sent through Port Klang as well as a 10 percent discount on marine charges such as pilotage and tugboat services by the respective terminals, Northport and Westports, under the old feeder incentive scheme. While the idea had been mooted that the costs of incentivising feeder operators be transferred to terminal operators, Northport and Westports, a PKA official said that feeder and terminal operators have instead been left to negotiate their respective terms. The feeder incentive scheme has been suspended since 2008.

Source: Maritime India 23rd October 2009 Friday

Port of Arkhangelsk turnover down 34.5 pc first 9 months

Port of Arkhangelsk turnover decreased by 34.5 pc (o 2 million 536.4 thousand tons) within the first 9 months as compared to the figures of the corresponding period in 2008. As per the port administration information, volume of import cargo transshipment increased by 21.5 pc. In particular, turnover of loaded containers for import fell by 59.5 pc (to 13.4 thousand tons), that of other general cargoes grew by 33.7 pc (up to 292.9 thousand tons). Export cargo turnover decreased by 31.4 pc (1 million 11.8



thousand tons). Volume of paper and pulp transshipment fell by 46.2 pc) to 59.1 thousand tons), of timber cargo-by 10 pc (to 352.1 thousand tons), of loaded containers by 71.7 pc (to 7.3 thousand tons), of coal by 80.8 pc (to 76.4 thousand tons), of other general cargoes by 31.8 pc (to 59.5 thousand tons), of oil products by 1.4 pc (to 457.4 thousand tons). Coastwise cargo turnover decreased by 43.1 pc (to 1 million 218.3 thousand tons).

Source: Maritime India October 23rd 2009

Port of Sohar inks \$200-m deal

Maqbool Ali Sultan, Minister of Commerce and Industry and Chairman of the port of Sohar signed three contracts together with the CEO of Sohar Industrial port company (SIPC) Jan Meijer, for the financing, dredging and constructing the 1380 metre long and 25 metre deep jetty at the Port of Sohar. Signed in Muscat, Oman, the project is worth over \$200 m equivalent to OR95m.

Sohar in Oman, came into place. The Port of Sohar will be one of few ports in the world with the possibility to receive these large vessels as the jetty will have a draft of 25 meters. The finance contract was signed with a consortium of banks; Bank, Muscat, Oman Arab Bank, national Bank of Oman, Ahli Bank, Bank Sohar, Bank Dhofar and the State Bank of India.

In May 2008 a contract was signed in Rotterdam, Holland between the Government of Oman, the Port of Rotterdam and Vale, the largest iron ore company in the world. This Brazilian mining giant is investing \$1,4bn and started the construction of a palletizing plant in the beginning of 2009 that will supply the region with steel pellets. In addition, Sohar will also function as the distribution centre for iron ore to be exported to the Middle East, India and Africa. Since then Oman shipping Company, owned by Government of Oman, signed a deal with a Chinese shipbuilder to build four of the world's largest iron ore carriers for transporting iron ore from Brazil to the Port of Sohar.

The reason for such a consortium is the scale of the project. In spite of the recession in the world, the Port of Sohar shows. Constant progress and the trust of both shareholders, the government of Oman and the Port of Rotterdam, in one of the larger port development projects in the world is continuous and strong. The contract for dredging the 25 meters for the new deep water jetty was signed with Van oord from the Netherlands. Van Oord has been working in the Port of Sohar before and has also very long experience from big dredging projects in almost all parts of the world. Van Oord will increase the depth of the existing approach channel from 18, 5 meters to a depth of 23 meters and a new harbour basin with a berthing pocket of 25 meters in front of the jetty.

The final piece of the project; to construct a large deep water jetty capable of receiving the next generation of Very Large Ore Carriers of 400.000 dwt to the Port of

The last of the three contracts signed was for the construction of the 780 meter long platform. The jetty platform consists of an import location of 400 meters and two export locations of 600 meters.



This contract is shared in a 50/50 joint venture between the Italian company Saipem and Afcons from India. Saipem will focus on the design and to manage the project. SAIPEM is a global contractor and their offshore activity has built a global reputation as one of the true innovators in its field.

Afcons are pioneers in infrastructure and development and will focus on the actual execution and implementation of the project. The new deep water jetty in the Port of Sohar is set to be ready in the first quarter of 2011.

Source: Maritime India Friday October 23rd

Port of Nanjing's box volume down 10.8 pc

Eastern China's port of Nanjing recorded 10.8 pc's year on year decrease in its container throughput to 730,000 TEU in August, despite a 2.7 pc's increase in its throughput tonnage over July. From January to August, the port's throughput came to 77.98 million tonnes, up 1.1 pc year on year. Nanjing is an important port on the Yangtze River port for sea river and water land transshipments. Rise of its through put sends out a signal of recovery for the economy in the Yangtze River region and eastern China, said.



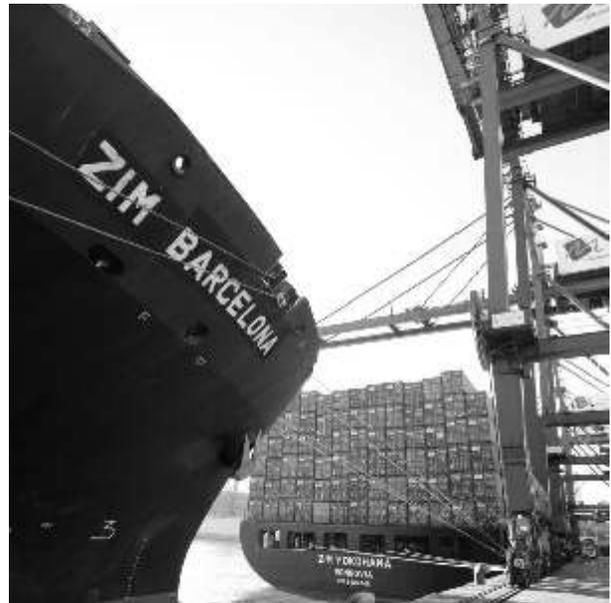
Nanjing recorded the lowest steel throughput figure this year compared to prior years. About one million tonnes every month, less than half the volume last year, according to deputy manager of Nanjing Port Group Yang Lianhong. The port's steel throughput this year is estimated to be about 20 million tonnes, only one third of last year's figure. Steel is the largest category in Nanjing port's export cargo. The shrinking volume of its steel throughput is a reflection that the world's manufacturing industry is still dim.

Source: Maritime India 23rd October 2009 Friday

ZIM postpones container newbuilds

ZIM Integrated Shipping, Israel, has reported that the company reached a financial understanding to postpone four pending new build deliveries. Originally due to be delivered in 2010, the matter involves four ships of 10,000 TEU that will now be delivered in 2014-15. This follows a recent similar recent postponement of nine 12,600TEU ships until the same timeframe. The move bolsters company cash flow by deferring investment of up to US\$2 billion and is a significant step in ZIM's extensive economic recovery plan. "This understanding reflects the shipyard's clear expression of confidence in ZIM's recovery plan and the company's long term commercial success," ZIM CEO Rafi Danieli said. "As with the rest of the shipping industry, ZIM has recently been faced with very challenging market conditions in the depths of a major downturn," Mr. Danieli said, though he predicted that the world shipping industry would recover before 2014, providing a stronger market for the new buildings.

Source: Maritime India Friday 23rd October 2009



Shipping proposals await nod

It has been a couple of months since the committee under the chairmanship of a senior official in the Ministry of shipping submitted its report to the Government with a host of recommendations for increasing the efficiency of Government owned ports and encouraging private participation in the port sector. The recommendations cover land use, policies for berthing, equipment, dredging, stevedoring and use of IT. They also touch upon critical issues such as delegation of powers, environment and security, appointment of consultants,

model documents, corporatisation, training and HRD and organization restructuring. Some of the recommendations relate to drastic policy level reforms. As competition is becoming intense in the sector, it is felt that the public private partnership policy should exclude "Limited exclusivity" clause. Also, a policy may be formulated to not allow a competitor private port to bid terminals in a major port if the private port exists within a radius of 100 km of the proposed terminal.

Source: Maritime India 27th October 2009

Dubai should set up open shipping registry

Dubai should set up an open shipping registry and an international shipping line, said the president of National Association of Freight Logistics (NAFL). Mansoor Y A Ghafoor said the formation of both these entities although under active discussion of the government has been delayed in the wake of the crisis and the resulting dip in shipping volumes.

refers to a system of registration where the nationality of the ship owner is different from the country where his ship is registered. The country of registration determines the laws under which the ship is required to operate is applied in relevant admiralty cases.

"I call for an international shipping registry in Dubai. It would register only the best of vessels from around the world. This was under discussion earlier," said Ghafoor. "With Dubai being in the centre of a global shipping route and high number of shipping companies having located their offices in Dubai too should have a shipping line. If it can have a global air carrier like the Emirates, it can also have a global shipping line." Ghafoor, a member of the 18 member advisory council formed to supervise over the setting up of Dubai Logistics City, said these entities will compliment the establishment of DCL. "The construction of logistics city may have been delayed but it's very much happening. I cannot however give a finite timeline for its completion," he said. An open registry

About half of the world's merchant ships today are registered with such own registries. Traditional reasons for choosing an open register include protection from income taxes, wage scales and regulations A specific example of the type of advantage flying a flag of convenience offers is bypassing the 50 pc duty the US Government charges on repairs performed on American flagged ships in foreign ports.

A rising interest among shipping companies in the UAE and the region to register their vessels with International Registries, a Marshall Islands (a country located between Hawaii and the Philippines) based maritime registry company forced the company to open its office in Dubai senior officials from the company recently said.

Source: Maritime India 27th October 2009 Tuesday

Mr Pankaj Kumar takes over as GMB's Vice Chairman & Chief Executive Officer

Gujarat Maritime Board (GMB) has a new CEO on board. Mr. Pankaj Kumar, an IAS officer of the 1986 batch, has taken over as the Chief Executive Officer and Vice Chairman Gujarat Maritime Board. Before assuming charge at GMB, Mr. Pankaj Kumar was serving his tenure as the Jt. Managing Director of Sardar Sarovar Nigam Ltd, a premier PSU of the Gujarat Government.



A graduate in civil engineering and a post graduate in management, Mr. Pankaj Kumar bring to the position dynamism and leadership honed by over 20 years of

working in various State Government Departments. Beginning his civil services career as Assistant Collector (Revenue Department), Mr. Pankaj Kumar has gone from strength to strength and held top-brass positions like Additional Principle Secretary to Hon'ble Chief Minister of Gujarat, Municipal Commissioner, Collector of Various Districts, Add. CEO of Gujarat State Disaster Management Authority and many more.

Known be a very effective communicator and efficient administrator, Pankaj Kumar comes to helm GMB at an important time, when the state government port authority is set to play an even more critical role in Gujarat's and the nation's development through initiatives in shipbuilding, privatization, modernization, creation if maritime institutions and infrastructure.

Rotterdam's volume slips 11.9 pc from Jan-September

The Port of Rotterdam handled 283 million tonnes of cargo in the first nine months of the year, representing a decline of 11.9 pc compared to the same period last year. Within this total, container throughput during the period under review fell by 12 pc year on year to 73 million tonnes; or by 13 pc to 7.2 million TEU. "Like all ports, Rotterdam is feeling the effects of the overall decrease in container transport. The rationalisation of the Asia services in particular has affected the port much less, and 'feeder' is experiencing a healthy growth," a statement from port authorities said.

Almost every type of cargo displayed negative growth: iron and scrap metal was down 56 pc, agribulk was down 18 pc, coal down 17 pc, other dry bulk fell 19 pc, crude oil decreased by seven pc, other liquid bulk was down 19 pc, roll on/roll off slid by 13 pc to 12 million tonnes, and other general cargo fell by 23 pc to 4.4 million tonnes compared to the same period a year earlier. "When an improvement will be seen depends on when the British economy recovers. The negative effect of the weak pound, meaning fewer imports, will continue for now," the port authorities said. Only the petroleum products showed

growth, increasing by 21 pc to 22 million tonnes. As a result, the total throughput of liquid bulk remained virtually constant at 147 million tonnes. Dry bulk throughput decreased sharply, shedding a third to 46 million tonnes. General cargo came somewhere in between, with a decrease of 12 pc to 89 million tonnes. Said Port of Rotterdam Authority CEO Hans Smits: "There is still a hefty decrease in terms of percentages, but the trend curve has started turning slightly upwards again since July. On balance, this means a stabilisation in throughput. This corresponds to expectations from halfway through the year, according to which the prognosis for the whole year is a decrease in throughput of approximately 10 pc."

Source: Maritime India, 27th October, 2009 Tuesday



Opening TSA salvo sets tone for next year's contract talks



Transpacific container lines have fired the opening salvo ahead of next year's contracting season with shippers, bluntly telling them rates are going up way up to levels achieved in halcyon days of 2008. In a bold public statement, the 13 carrier alliance spoke of "serious financial losses and major service consolidations" and that member carriers in the Transpacific Stabilisation Agreement (TSA) have had to adopt tough guidelines on rates.

There will be a general rate increase US\$800 per FEU for local west coast and group 4 western coastal states cargo, said the TSA communiqué, and \$1,000 per FEU for intermodal and US east and Gulf coasts all water cargo, with per formula increases for other equipment sizes." A \$400 peak season surcharge will take effect from August 1, 2010, to address higher cargo handling, equipment positioning and contingency planning costs during periods of peak cargo volume," said the statement.

There will also be a full collection of fuel and other accessorial charges, the TSA said. "The guidelines represent an effort not only to reverse an effort not only to reverse a sharp decline in rates during early 2009, but also to fully recover volatile equipment and fuel related costs," the statement said.

"The dire situation the industry finds itself in as a result of the unprecedented events that have played out in 2009 must be reversed," said TSA chairman Ron Widdows, also CEO of Neptune Orient Lines, parent of APL.

"Carriers must deliver on the contractual commitments they have undertaken, however, a dialogue between carriers and shippers needs to begin straight away so all can plan for the changes needed in 2010-11 contracting," he said. Said Hong Kong's OOCL chief executive Philip Chow: "No question, the increases are significant, and we recognise our customers have suffered from the global crisis. However, these increases must be viewed in the context of volume and rate declines. The race to the bottom on pricing must stop."

Said NYK liner trade director Kenji Mizushima: "Vessel sharing alliances have consolidated services and have laid up hundreds ships, however, those actions were unable to keep pace with the collapse of rates and dramatic reduction in demand. The revenue to address those challenges simply isn't in the current rate structure." While expressing cautious optimism about an improving Asia US freight market in 2010-11, TSA members felt "it will remain a year of significant uncertainty" and carriers must concentrate on conserving cash, building stronger balance sheets, and establishing a sustainable rates. Said Mr. Widdows: Our immediate need is to find a path forward that will allow our industry to achieve improved economic results and deploy sufficient assets that will support customers' supply chain needs. "TSA members are APL, Hyundai Merchant Marine, CSCL, "K" Line, CMA-CGM, MSC, Cosco, NYK, Evergreen, OOCL, Hanjin, Yangming, Hapag-Lloyd and Zim.

Source: Maritime India, 27th October 2009, Tuesday

Danish owners want EU to broke member state shipping bailouts

European national government bailouts of their own troubled shipping lines has become a source of concern for the Danish Shipowners association, membership, includes the world's biggest container carrier, Maersk Line, are struggling in the downturn without state rescue funds. Danish industry association has complained to the

EU that national government support for their own container shipping lines is unfair and should only come in exchange for agreements to reduce fleet size. Hapag-Lloyd has already received Euro1.2 billion (US\$1.7 billion) in German federal loan guarantees.

Source: Maritime India, 27th October 2009, Tuesday

Fredriksen to copy budget air with low-cost container line

Norwegian shipping tycoon John Fredriksen plans to invest in a budget container shipping line modelled on low cost airlines. "We are working on it with some people," Tor Olav Troim, Mr. Fredriksen's top aide said. "We could start out with 10-20 ships," Mr. Troim said, adding, "the investment depends on what kind of tonnage we get." The report said the plan is to offer less extensive services than the major carriers,



and to start by chartering some of the idled ships. "Direct transportation also brings down costs," Mr. Troim said.

He added that the new venture, The Container ship Company, will have a price advantage of 'much more' than 10-20 pc. The preferred routes have been discussed, but it is too early to comment on that, said Jakob Tholstrup Moller of Oslo shipbroker Boxton Marine, who established the venture along with former Maersk Line executive Franck Kayser.

Source: Maritime India 27th October 2009 Tuesday

Investing in Tankers: Ship, Ship, Hooray?

It is easy to forget in this day of digital commerce, fiber optics, and the Internet, much of the world's commerce is still moved from one place to the other by planes, trains, trucks and auto mobiles. Perhaps the most critical link in an era of international commerce is the sea. Cargo ships and tankers transport massive quantities of manufactured products, like cars and toys, as well as the "hard assets" that our factories depend upon, like copper, aluminum, steel and other natural resources.

Lots of products get shipped by boat, but the reason shipping companies have gained greater visibility as an investment is because of their role in transporting one of the world's most valuable commodities: petroleum. Supertankers ship more than one fifth of the world's oil. Given oil's critical role in the global economy, shipping companies that specialise in transporting oil will continue to experience steady demand for their services.

However, there are risks to investing in petroleum shipping companies, namely a sustained decline in global consumption of oil, the very commodity that fuels their growth. Other risks to the earnings of shipping companies are over expansion of fleets, a decline in cargoes, and a global economic slowdown that reduces oil consumption all of which drive tanker rates down.

Tanker rates are largely dependent on the supply of ships available to carry crude oil and the demand for their services. An economic slowdown could weaken demand, while a deluge of ships expected to flood the market over the next few years could also push rates lower. Based on information from industry research group Basso, daily charter rates for very large crude carriers [VLCC] were \$ 79,672 in the fourth quarter of 2007, up sharply from \$ 25,486 in the 2007 third quarter. By the end of 2008, VLCC rates declined more than 40 per cent from the highs seen in late 2007.

With the macro scenario in mind, let's take a closer look at the major players in the petroleum shipping business. There are four major publicly traded petroleum shipping companies with market caps north of \$1 billion :

- Nordic American Tanker (NAT) • Teekay Tankers (TNK)
- Frontline (FRO) • Overseas Shipholding Group (OSG)

Frontline Ltd. (NYSE: FRO) operates about 75 tankers, under primarily short-term contracts, with a total capacity of more than 18.5 million tons. Frontline's tankers are designed to transport oil, and do so all over the world, from the Persian Gulf to the Far East, Northern Europe, the Caribbean, and offshore Louisiana. The company also transports coal and iron ore. One of the major benefits to owning the shares of shipping companies are their very generous dividends, and Frontline is no exception, paying \$ 2.75 a share, for a whopping 16.6 per cent yield. Nordic American Tanker Shipping (NYSE:NAT) is another specialist in shipping crude oil, which it does for companies such as Petrobras (PBR), Marathon Oil (MRO) and Valero (VLO) Nordic American had a tremendous first half of 2008, logging tanker rates more than 7 per cent above the average. It has also managed to keep its voyage expenses lower than the industry. The fact that NAT exclusively owns double hulled tankers (which are more secure and will be required by international law by 2010) gives the firm a leg up on the competition.

Finally, there's the delightful onomatopoeia that is Teekay Tankers (NYSE: TNK), owner of nine double-hull oil tankers, which it charters for customers such as Shell (RDS.A) and Valero. Teekay's fleet as an overall capacity of about 2 million tons. Like the other oil transport shippers, Teekay is a good play on the volatility of the oil trade. Teekay Tankers has Aframax class tankers, which are used for spot charters and short medium term fixed rate, time charter contracts. The ships are smaller than the oil supertankers that cannot make it into some harbors and canals, and are worth about \$275 million.

Investors might be extremely tempted by the sizable dividends that the petroleum shippers pay, and ignore the fact that this will be a volatile industry over the coming times. To be sure, OPEC is pumping more oil than ever before, because of Asia's rising demand, and that's good for the tankers. But vessel over supply, lower tanker rates, and a global economic slowdown brought on by record oil prices are going to curb growth. It's wickedly ironic that petroleum, the fuel that drives profits in the tanker business, has risen so high in price that it is also the industry's most fundamental threat.

Source: Exim India Diwali Special 2009 Volume 1

Positive Outlook for Singapore Marine Industry

As the financial maelstrom spilled over from Wall Street to the real economy, it has affected everyone in its wake. In the midst of this financial mayhem, the Singapore marine industry has remained relatively resilient, with a healthy order book for new rigs and ships. Oil prices, which underpin the industry's growth, may have taken a hit as consumers scale back on their requirements, but the International Energy Agency (IEA) is in no doubt that the era of cheap oil is over. In its latest 'World energy outlook,' the IEA expects that oil prices will jump back to more than US\$100 a barrel as soon as the world economy improves, and possibly hit US\$200 a barrel by 2030 because of diminishing supplies from existing fields.

Sound Fundamentals

The credit crunch is a double-edged sword. It has limited customers' ability to place orders, and it has resulted in contracts being deferred or cancelled. But it has also



taken a lot of the froth out of the market, stemming the slew of speculative orders. In this uncertain climate, companies with a track record for delivery would be in a more favourable position to secure available contracts. This augurs well for Singapore companies with their longstanding reputation in the international maritime and oil and gas communities, with their strong 70 per cent market share for jack-up rig building and 50 per cent for semi submersible rig construction. Singapore also leads the field for floating production storage and offloading unit (FPSO) conversion with a market share in excess of 70 per cent.

"Although the pipeline of projects has slowed down, the fundamentals of the industry remain intact in both the offshore and marine sectors. The order book is heavy and unprecedented in the industry's history. We have the location, infrastructure, skills and technology. We have a cluster here in Singapore, not just of shipyards, but also major engineering companies, vendors and suppliers and together we make Singapore strong as one of the world's leading rig construction, FPSO conversion and shiprepair hubs," said Michael Chia, President, Association of Singapore Marine Industries (ASMI).

As at end 2008, the industry's order book was in excess of S\$20 billion, with project deliveries extending into 2012.

Innovation as a Competitive Advantage

Companies are enhancing their capabilities to meet more exacting industry requirements. With heightened concern over the environment, there will be increasing demand for more fuel efficient ships. As energy companies venture further a field to explore fresh fields, new-generation rigs and FPSOs will be needed, such as those which can in deeper, harsher as well as more remote environments.

With its large untapped reserves, the Arctic is one of the last frontiers to drill for oil. According to the United States Geological Survey, the Arctic may hold as much as 90 billion barrels of undiscovered oil reserves and 1,670 trillion cubic feet of natural gas, equivalent to as much as 13 per cent and 30 per cent of the world's total undiscovered oil and natural gas respectively.

Russia has begun to tap its section of the Arctic, which is estimated to have in the region of 70 billion barrels of oil, of which 10 billion barrels are located in the Barents and Pechora Seas region. Given the harsh environment prevailing in the Arctic, ice bound for half the year, special equipment will be required, just like the two ice breakers which Keppel O&M delivered to Russian oil giant Lukoil in 2008.

Industry majors are rising to the challenge by committing resources into research and development (R&D). Their effort is supported by the government, which has introduced various schemes. Companies can draw on the S\$100 million Maritime Innovation and Technology, or MINT, fund established by the Maritime and Port Authority of Singapore (MPA) to fund their R&D projects.

They can also access the capability residing in tertiary institutes, like the Centre for Offshore Research and Engineering (CORE), which has an Offshore Technology Research Programme to undertake R&D in the latest offshore technology; the institute of High Performance Computing, which is renowned for its cutting-edge computing and engineering capabilities; and the Centre of Innovation for Marine and Offshore Technology, a dedicated centre to help smaller companies develop new and innovative products, services and processes.

Through its sustained investment in R&D, in good times and bad, Singapore is well placed to consolidate its commanding position in the marine and offshore industry.

Source: Singapore Ship repairing, Shipbuilding & Offshore Industries Directory 2009

Govt looks for ways to improve efficiency at 12 major ports

Fearing loss of traffic and business to minor ports run by state governments, the Centre has come out with a detailed report suggesting efficiency parameters and policy changes for improving efficiency of the country's 12 major ports.

A committee, headed by the financial advisor of the shipping ministry, has asked the government to shorten the time taken for bidding out projects — which currently runs into 6-10 months. Even as the Indian economy has entered the third quarter of the current financial year, the shipping ministry has not awarded even one of the 15-odd projects slated for bidding this year, blocking investments of up to Rs 20,000 crore.

"Minor ports are getting the lion's share of both traffic and investments as procedures there are much faster and the state governments expedite all ground clearances," a senior government official told, *The Indian Express*. For instance, Kandla port has lost out on additional traffic growth over the past two years due to massive development of the state-run minor port at Mundra, according to the committee's findings on increasing efficiency in Indian major ports.

The committee has also flagged major loop-holes in the public private partnership (PPP) policy developed by the ministry. "There are a number of clauses that take away the competitive edge that major ports can have," the official said.

For instance, there is no captive policy for allowing major companies such as mining firms or power sector firms to have captive facilities (such as captive berths) for their raw material at the port. This not only denies the port valuable

revenue from a stable player but also creates backward and forward linkage problems for industries dependent on raw material being shipped to them. Thus, the committee has suggested a revenue sharing model to allow for this and yet benefit the port.

Another glitch in the PPP policy is that developers are not allowed to bid for two adjacent terminals even though they can put in bids for the alternate ones. "This does not control monopoly, as the number of terminals handled by a single player on the port remain same, even though not in concomitant row. We want this to be changed in the request for qualification (RFQ) for ports," the official added. RFQ is the standard bidding document used for inviting PPP bids in the ports sector at the centre.

In a bid to plug unwarranted and unhealthy players from entering the port, the committee has also said that the RFQ be changed so as to prevent competitor private ports to bid for terminals at a major port. "To prevent squatting, such a clause must be included for all ports within a radius of 100 km of the major port," according to the official.

Another major recommendation from the committee is that major ports be corporatised to increase their efficiency. "Performance linked incentives will help the port trusts not only garner profits but will also make them competitive," the official added. Even as the ministry took steps towards this in November 2006, the proposal to corporatise Ennore, Jawaharlal Nehru Port Trust (JNPT) and Haldia dock complex could not see the light of the day due to opposition from the left parties, who were allies of the UPA in its previous term.

Source: www.indianexpress.com



Paradip port signs coal berth deal with Essar unit

Paradip Port Trust in eastern India signed a concession agreement with Essar Paradip Terminals Ltd, an Essar Group firm, for construction of a deep draught coal berth.

Essar Paradip Terminals is a special purpose vehicle formed by Essar Shipping Ports & Logistics Limited and Essar Shipping & Logistics Limited. The coal berth will be developed by the Essar Paradip at an estimated cost of 4.08 billion rupees under build, operate and transfer (BOT) basis, the port said in a statement.

Paradip Port will provide all supporting facilities like dredging of channel and the berth, railway connectivity and back-up area at an estimated cost of 702 million rupees.



Essar Paradip have to execute the project within 36 months from the date of award of the concession.

Source: <http://in.reuters.com>

Funding woes hit key ports' capacity addition project

The government has trimmed the size of its ambitious National Maritime Port Development Programme (NMDP), owing to a dampening of investor enthusiasm and, in some cases, lack of availability of land. Also, some state governments haven't shown enough interest when it comes to implementing the projects.

The ministry of shipping has dropped 22 key projects out of the 276 originally identified to increase the capacity of 12 major ports in the country.

The biggest project that has been dropped by the ministry is creation of outer harbour for development of additional port facilities at New Mangalore Port in Karnataka. The harbour, that was to be developed at an investment of Rs 1,325 crore, was to be used by oil firms Mangalore Refinery & Petrochemicals Ltd and ONGC for their captive use. Other important projects include deepening of channel and lagoon area to create draft of 14 metre, which would have generated business opportunity of Rs 390 crore for the developer, at New Mangalore Port, and building of international ship repair complex at Cochin Port, investing Rs 315 crore.

The dropped projects pertain to Paradip Port in Orissa, Visakhapatnam Port in Andhra Pradesh, Chennai Port in

Tamil Nadu, Cochin Port in Kerala, New Mangalore Port in Karnataka, Murmugao Port in Goa and Kandla Port in Gujarat. Karnataka's New Mangalore Port has lost four projects, the maximum among all states, that would have required investments of Rs 1,783 crore.

"The projects have been dropped because of problems in land availability and unsatisfactory response from firms," a senior official in the shipping ministry told FE on the condition of anonymity.

NMDP was launched in year 2005 to award 276 projects by March 2012 for expanding the capacity of major ports from around 400 million tonne in 2004-05 with a total investment of Rs 62,231 crore. As per the ministry's estimates, major ports need a capacity to handle 918 mt by 2013-14. At present, the 12 major ports handle just over 500 mt of cargo. To avert the possibility of not meeting the targeted goals, the government is trying hard to identify more projects to replace the dropped projects. "We are currently in the process of identifying projects that could replace the dropped ones so that the overall capacity addition target and the investments remain the same as envisaged in the original programme," the official said.

Source: www.financialexpress.com

Ship-breaking industry may soon follow Minimum Wages Act

Twenty-five years after its enactment, the labour laws for the ship-breaking industry in the state will finally get specific on the Minimum Wages Act rules for the industry specific unorganised workers. The state government has decided to issue a notification regarding this within two weeks.

A M Kadri, Deputy Secretary, Labour Department, Gujarat government, said: "We have sent the notification for including the ship-breaking industry in the Minimum

Wages Act to the Labour minister for his approval. Once he approves, it will be published in the official gazette after obtaining the consent of Legislative and Parliamentary Affairs Department in about two weeks."

The move will come as a major relief for the unorganised labour force that mainly consists of migrants from Uttar Pradesh, Orissa, Bihar and Jharkhand, making it difficult to carry out a head count.

But even the most conservative estimates put the figure close to 15,000, all of whom continue to live in hutments, with no provisions of clean drinking water and electricity.

Also, not being included in the Act up till now meant that the wages received by the workers of such a hazardous industry are totally market dependent, touching Rs 280 in the boom time and remaining as low as Rs 60 during the normal course. Other benefits included in the Act like regulation of working hours, overtime, weekly holidays, and overtime wages are also not mandatory to be extended to these workers.

Notably, the workers of the ship-breaking industry at Alang, for the first time ever, had organised a mass strike in March this year against reduction in their daily wages and scrapping of overtime duties.

Source: www.expressindia.com

