J. M. BAXI GROUP TIDINGS

AUGUST 2020

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The people behind the WHEELS that KEEP INDIA MOVING

IN & CONVERSATION: With Mr Dibyendu Bose, VP Of TATA STEEL INFRASTRUCTURE: PICT: Steel Transport TECHNOLOGY: Refocus, Refresh, Restart

Table of Contents

J. M. BAXI GROUP TIDINGS	<u>05</u>	WHEELS THAT KEEP INDIA MOVING DURING COVID-19
EDITORIAL TEAM:	<u>10</u>	WITH MR SANJAY GULATI, MD OF ISGEC HITACHI
		ZOSEN LTD
Mr Nandan Yalgi	12	WORKING WHILE 'LOCKED DOWN!' RESILIENCE,
Mr K K Krishnadas	12	STRENGTH AND SOLUTIONS DURING THE
Capt. Tamal Roy		PANDEMIC
Mr Sushil Mulchandani		
Capt. Sunil Chopra	<u>14</u>	PROJECT SOLUTIONS FOR HMEL BHATINDA BOXCO:
Mr Siddhartha Roy		THE HERCULES
Cdr. Sunil Dhulekar	<u>20</u>	COVID TRAVAILS – A FIRST-HAND EXPERIENCE
Mr Shirishchandra Shah		
Mr Rajnish Khandelwal	<u>24</u>	INDIAN SUGAR AND TRADE OPPORTUNITIES
Mr Keki Master	25	INDIA PORT PERFORMANCE
Mr Samir Shah		
Mr Sunil Shetty	<u>28</u>	PORT STATISTICS
Ms Meera Kumar		
Mr Ajay Tolani		* All maps are for representation purpose only
Mr Ashish Sharma		
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From the Quarter Deck

ear Friends and Colleagues, Regrettably, one more "From the Quarter Deck" starts with a reference to the COVID-19 pandemic. India is haltingly and slowly trying to open up, with various cities, towns, states and regions seeing different rates of infection and recovery. Public transport remains affected and controlled; public spaces remain closed or strictly controlled.

The latest cargo-handling figures at the ports of India seem to suggest a decline of cargo volumes of up to 15 or 20%. However, this is changing, month by month, with each succeeding month showing an upward correction. Globally, too, various ports and container terminals have seen a decline in their volumes. The last three months have also seen blank sailings across all the shipping lines as well as the main consortia services.

However, most of the shipping companies have declared positive results in this period, as revenues have been much better than expected. Freight rates have remained firm or increased. Shippers have shown a strong preference for working with shipping companies with the least number of enforced rollovers and have reportedly paid premiums for no rollover guarantees.

With blank sailings and declining volumes, the off-hires of charteredin tonnage are reported to be high, which has resulted in a drop in charter rates for container ships. To further add to this volatility, there has been a steep fall in fuel prices, and an even sharper drop in the differential price between low (SOx) MARPOL-compliant fuel and conventional fuel. This has made ships fitted with scrubbers and using old fuel unviable compared to ships using low (SOx) MARPOLcompliant clean fuel. What is frightfully interesting is how, just in the last four months, so many of our previous assumptions have been turned on their head. With oil prices remaining depressed, oil and gas exploration activity remains muted, leading to depressed prices for offshore oil and gas shipping assets. The demand for dry bulk carriers also continues to remain stable but low. The only sector in shipping that seems to be more than healthy is the tanker market and that too is mainly because of the carriage of crude oil. Like dry bulk carriers, gas carriers are also witnessing a stable run.

Even during the pandemic, India continues to make efforts to get its fuel needs met by gas. The only way to do this is to create the necessary infrastructure, such as regasification terminals and pipelines, and by transporting gas by road (last-mile transport, gas fuelling stations etc.). It is also encouraging to notice that large infrastructure projects, such as the Mumbai coastal road and the trans-harbour link project, continue to make progress, as are the river multimodal terminal projects, such as at Haldia and Sahibganj. Along with these developments, the government of India and the Ministry of Railways have invited the private sector to participate in running passenger trains. Moreover, private developers are to be involved on a PPP basis in the development and redevelopment of trains and railway stations.



Various commentators have continued to debate about the recovery post-COVID-19. The latest report from the Asian Development Bank makes interesting reading, although it does predict a slower recovery than a V-shaped one. At the time of writing, the stock markets, especially in the US and India, have been rising and not in keeping with the expected economic pain post-COVID-19.

It is still difficult to predict what the new normal will be or when that will be. On the other hand, two aspects do clearly stand out:

- 1. Significant growth of trade and production is expected in India.
- 2. There will be a rapid and urgent growth of digitalization and the adoption of technology in almost all spheres of life in India.

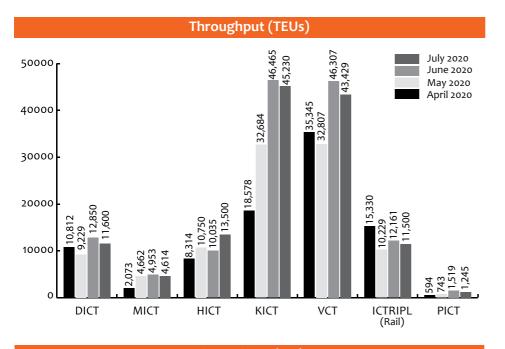
It has indeed been enthusing (especially in these COVID-19 constrained times) to witness our various authorities and regulatory bodies, like DG Shipping, several port authorities, customs authorities and the different ministries in the Indian government implementing and planning numerous policies and processes relating to digitalization and "e" based systems. It was also exciting to read that Cochin Shipyard has won an order to build

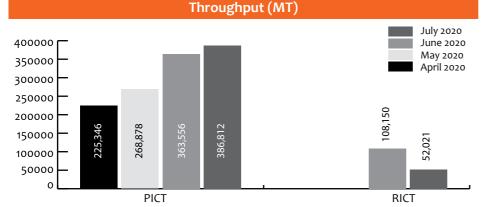
From the Quarter Deck

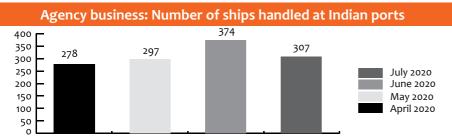
an autonomous electric ferry for Norwegian interests, including for the government of Norway. Whilst it is clear that the journey ahead will be difficult, it is equally clear that there seem to be great opportunities too.

In a period of uncertainty, there are bound to be many unknowns. Various

countries and geographies are seeing different levels of such uncertainty. If we were forced to make a prediction for India, we could not help but be more optimistic than pessimistic. Large infrastructure projects are being implemented, agricultural production is growing and basic industrial production, such as steel,







J M BAXI GROUP

cement, aluminium, refineries, petrochemicals etc., continues to grow.

Due to the geopolitics, India is positioned to attract more interest as well as investment. With the massive fiscal stimulus and liquidity easing schemes and measures implemented by the developed and rich nations, a fair amount of the resources will find their way to the emerging markets, including India. So, whilst the next 6 to 12 months may see heightened uncertainty, it is certainly fair to predict that India should see a rebound, and probably quicker than in a few other nations and regions. India should continue to see reforms and repairs, and also regeneration and reconstruction.

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When we look at the numbers and volumes across our various businesses for April to July 2020, we feel a deep sense of relief. We will let the numbers speak for themselves. However, we hope, and we are striving hard so that we continue to achieve such results in the months ahead.

Before I close this edition of the Quarter Deck, let me acknowledge each and every colleague of J M BAXI GROUP. You have really helped us in weathering and riding this storm. This has clearly enabled us to work closely with our customers and principals during the lockdown. I would also like to acknowledge our partners, associates and vendors who have stood shoulder to shoulder with us. It promises to be an exciting journey ahead

Be safe! Be healthy!

Krishna B. Kotak Chairman - J M BAXI GROUP

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Agency & Services

Wheels That Keep INDIA Moving During COVID-19

As you know, as much as we are demanding, we can be as grateful to partners that have served our ships and crew needs so well. It's been a very long and difficult path to the success we have achieved, by repatriating 5000+ Indian crew to their homes, in the comfort of their family environments and avoiding altogether unnecessary institutional quarantines before seeing their beloved ones.

"

It is important to recognize that the hard work of your teams in Mumbai and Goa, not only made this success possible, but have never give up one single moment; through difficult changes in the local and national policies, hiccups at port level with berths cancelled that were earlier confirmed, complicated approval processes to accept a berth, and many other difficulties along the way, I believe I can say it out loud: your teams have been tremendously heroic in their efforts and energy poured into this huge repatriation project. At no time, I was unable to reach your team to ask for updates, help on solving an issue or just get reassurances on the process we were all working on: days, nights, it didn't matter to the JMB team, the only important thing was the final result and goal of succeeding in this ambitious plan, through turbulent days and, let's not forget, in the middle of a pandemic that affected most of your teams also in a personal way, with red zones and lockdowns in place, that made all of the above, already complicated and everchanging environment, a professional and personal nightmare to be in.

Mr Alessandro Carollo Director Port Services – EMEA Marine Products were categorised in exempted categories. And B One Business House Pvt Ltd, being a seafood exporter managed to surmount the daunting problems and kept itself afloat albeit 35 % of workforce.

This irony was well complemented by the exemplary efforts of VCTPL, our main export gateway, where the operations were never disrupted by the team in spite of the harrowing circumstances. Vessels came of schedule and operations were close normal. As we operated our own trailers the task became simpler.

Nonetheless B One Group, would always remain indebted and express our gratitude to the entire team of VCTPL for rendering service and facilitating our exports through the most challenging times of the century. VCTPL stands as the most preferred export gateway for the majority of seafood exporters of Odisha.

Mr Rajen Padhi Commercial Director, B One Business House Pvt. Itd.,



Amidst all these challenges, Visakha Container Terminal, relentlessly rendered its uninterrupted services to the EXIM trade.

"

It was crucial that the terminal functioned 24x7 to ensure all containers were discharged and loaded for onwards deliveries without any delays. Even when the terminal was facing acute space constraints due to import pendency, our hazardous containers were handled with utmost care in shifting to their CFS arm whose safety norms and regulations were commendable.

We, SNF India appreciate the team VCTPL for their unstinted efforts in ensuring no disruption to the entire supply chain in the hinterland of Visakhapatnam & beyond during the global pandemic.

"

Mr M. M. Prasad SNF (India) Pvt. Ltd; Chairman cum MD



I thank J M BAXI for all the assistance and help rendered during my stay in Bhavnagar. Even though I still do not understand how I became COVID-19 positive and rest of the crew was found to be negative which is one concern which will always remain in my mind.

I thank you and J M BAXI for all the assistance and help given to me during my quarantine days at Bhavnagar, quickly shifting me from hospital to hostel to hotel in 8 days.

I thank God for He protected me from any COVID-19 symptoms or felt sick during this entire period of quarantine even though I was amongst the COVID-19 patients with breathing difficulties and on oxygen.

Capt. Elizeu Fernandes Master/Ex Cougar Ace

Agency & Services

On behalf of K Line would take opportunity to thank you and your team for rendering exemplary services during our vessels call at Jaigad port in month of March & April'20.

You have taken all necessary steps & have left no stone unturned while communicating with several parties.

Mr Sushant Khaire "K" Line India Pvt. Ltd.



While you play a valuable roles in loading / unloading operations as far as handling of feeder vessels is concern seamlessly and the situation is not conducive for normal work to continue with a lot of uncertainty prevailing and increased numbers of COVID-19 affected port staff is inducing fear amongst other people connected with the port operation.

During this tough times you people have shown a great deal of enthusiasm, ensuring continuity to deliver the cargo operation on feeder vessels at Haldia without disruption for which we are delighted and expect you will continue to do so in days to come.

Mr Sandip Mukherjee Transworld Global Logistics Solutions (India) Pvt. Ltd. Haldia



I wish to expreess my sincere gladness and appreciation for the excellent cooperation and remarkable services rendered by you as a dynamic member of J M BAXI, India.

It was great confort to know that i did not have to worry about the unforeseen as you could deal with any thing that occurred and always assisted me on time during my vessel stay at Visakhapatnam.

Capt. Ali Said Master Of M. V. Platamon

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My team and myself boarded the vessel safely at Sikka on 20 Jun 2020. We thank you for your service rendered for this crew change. We hoped to board immediately on vessels arrival but we understand due to Covid-19 pandemic it's a very ambiguios situtaion. In the end we got enough hand over time to do the needful. Kindly note the hotel and transport arrangements were really good. Thanking you and your team once again, hope to receive more services from your company in the near future. All the best and be safe.

Capt. Wesley Fernandes Master of MT Wawasan Ruby



Crew Change 16 On / 16 Off carried out safely at Cochin Anchorage from 1400LT-1425LT.

Awaiting Immigration Clearance NOC for sailing.

Apppreciate all the assistance and co-operation given to vessel for the smooth crew change and the hard work put in for the succesful crew change.

Capt. V. P. Fernandes Master / MOL Tradition



The crew members very happy that the hotel provided was very good, especially when they have to stay for few days. COVID-19 had made it difficult to carryout crew change. However with the proper arrangements made your team help to overcome this easily.

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Capt. Tojo Cyriac Master | BW Raven



We ZIM / GSL team, would like to place on record the excellent and smooth handling of the Subject PCC vessel in Mumbai port. Times were difficult, especially being lock down period.

But You & Your team's sheer dedication, Close co-ordination with all authorities & Customers ensured that the vessel could seamlessly carry 1129 units vehicles.

Mr Jijo Ouseph, Associate VP-Operations - ISC & Malaysia Zim Integrated Shipping Services (India) Pvt. Ltd.



Another seamless and silent crew change completed, amidst the mayhem of the chartered flights scenario.

Many Thanks once again for all your feedback, follow-up and arrangements to ensure this was without a glitch.

Our Thanks to all the joiners who consented to join amid these uncertain times and also to the off signers who waited patiently for their relief.

Mr Rohann Mark Martin General Manager Anglo-Eastern Ship Management India Pvt. Ltd.



Agency & Services

13

Thank you very much for your effort on last three vessels. We are going to inform most of our suppliers to nominate J. M. BAXI & Co. as their discharge port agent.

Thanking you once again for your sincere service.

Mr Arup Sinha Emami Agrotech Ltd.

"We are appreciating your efforts to connect our consignment in MV. ZANTE.

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Thank you for helping us. Vedanta Limited is always committed to their service partners, may be one of the strong reason, in difficult time our service partner supported us equally. We are proud for our association with RCL & VCTPL.

Mr Shirshendu, Vedanta Ltd.

Would like to thank all personnel involved, for their cooperation in the smooth port call of Torm Titan at JNPT, Mumbai inspite of the COVID challenge.

All formalities were completed and conducted in organised, swift & safe manner.

Capt. Ravish Ananthakrishnan, Master - Torm Titan



It is indeed a great moment to celebrate record performance at PICT on a SAIL vessel.

Congratulations to PICT team for such a wonderful performance. We wish all the success of this state of the art terminal in times to come.

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M. Bose SAIL Kolkata

17

I would like to express my sincere admiration of the excellent effort put by you and your team during last few months in spite of COVID threat.

Thanks to your leadership & dedication combined with your staff's teamwork and energy.

Mr Abhijet Debnath PIL India



Thank you for having pushed the port to keep the ship AS until the matter got resolved, much appreicated the extra mile here as this helped us a lot. Should we have been sent out to anchorage this would have caused an unwanted with our customer.

Mr Tanguy Bouvy Regional Operations Manager TT STJS Ship Operations Stolt Tanker Trading



Efforts/Shore Support/Co-ordination of the shore staff is much appreciated by all the ship staff on board for the crew change carried out at Krishnapatnam on 30.May.2020.

"

Capt. M. Balakrishna Master Deccan Pride

20

We highly appreciate everybody's support and co-operation for conducting crew change of Ibra LNG safely.

Mr Afzal Patel Superintendent – LNG Operations MOL Maritime (India) Pvt. Ltd.



Kudos to team PICT for completing the 1st Hindalco Breakbulk assignment successfully – congratulations!!

Mr Sukanta Das Chief Logistics Officer Hindalco Industries Limited



Thank you so much for two great seasons.

I do appreciate all support, safety and commitment that I received from all of you.

Mr Regina Augusto Crew Administrator Celebrity Cruises | Celebrity Constellation



Appreciate all the help and assistance you provided to ensure self had a smooth travel from Goa to Cochin while joining.

A job really well done.

Capt. Christopher Coutinho, Master, Pyxis Alfa.

In Conversation

With Mr DIBYENDU BOSE, VP Of TATA STEEL

Q: What is the impact of COVID-19 on the Global Steel Industry in general and Indian steel in particular? Ans: COVID-19 has definitely affected the Steel Industry in varying degrees depending on the country and depending on the segment. In India we expect the market to drop by about 15% by the end of this year. While the expectation of drop of the market was a bit higher a couple of months back, lot of segments are showing more promise than what it exhibited a few months back. Generally speaking, in India, Steel consumption related to the rural segments has shown much more resilience than other segments. The surprise market is of course China, which instead of showing any drop, is showing a healthy increase this year and given its absolute size, reversed the global fall to a large extent. This has helped keeping prices at an acceptable level.

Q: How has Tata Steel dealt with this downturn and its impact on your product and production cycles? Ans: Initially, in the month of March, we didn't cut down on our production and utilised that opportunity to stock up frequently sold items, so that our customer serviceability is strengthened for the future.

However, April onwards, with the intention of conserving cash, we adjusted our production southwards for a few weeks. In this period, we explored alternative overseas markets and although our domestic consumption was in the region of 50-60%, our marketing and supply chain efforts ensured that we were back to 100% production levels by June. We are still continuing at full production and as and when the domestic



Mr Dibyendu Bose is Vice President Supply Chain at Tata Steel. He has done B.Tech (Mining) from Indian School of Mines, Dhanbad and PGDM from Indian Institute of Management, Calcutta. Mr Bose represents Tata Steel interests through Board positions and Chairmanship in a few of its subsidiaries.

market is picking up, we are adjusting our export tonnages. In the future, we would like to keep a healthy level of exports in our basket and also serve our long-term consumers and this strategy is helping us in ensuring full capacity utilisation of all our equipments. A strong governance and review system is there to monitor the situation and take quick corrective actions on cash flows.

Q: What impact has COVID-19 had on your raw material supply chain and shipping partners?

Ans: As you are aware, we have a significant domestic supply chain also, in addition to imported raw material supply chains and during the COVID-19 period we ensured that full production at our raw material facilities continue and we have used this period to increase the proportion of domestic raw material usage and also to increase our strategic inventory of raw materials at both

the mines as well as the consumption centres. As far as imported raw material supply chain is concerned, while we adjusted our imports for a short period of time, we are all back to pre-COVID-19 levels on account of our full production performances. Our shipping partners of course had a trying time during this period, especially during the initial COVID-19 days where the quarantine period of two weeks in Indian ports for certain countries, led to the delay and ineffective usage of shipping capacities. Slower discharge and loading rates at ports due to restricted manpower availability also affected our shipping partners.

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However, technological changes like the use of e-documents, which gained currency during this period, I am sure will go a long way in helping our partners in making their businesses more efficient.

Q: We understand the present growth in export volumes of steel is due to lack of domestic offtake. Can you please elaborate?

Ans: As explained in the previous answer, while it is true that Exports was a significant volume in our total Steel production in May and June, gradually the same is reaching appropriate levels as and when the domestic offtake is picking up.

Q: Do you see any lasting impact of the COVID-19 pandemic in your products, domestic and export markets?

Ans: In the initial days of COVID-19, our attention was focused on the specific needs of the medical industry.

As an example, our distributors were catering to units producing hospital

Tube

In Conversation

beds and our services and solutions division has focused on modular transportable accommodation which can be used for buildingan offsite hospital very quickly. We would like to continue with these efforts primarily in the domestic market.

Q: Going forward, do you anticipate any innovations and changes in the supply chain management for both imported and domestic markets? Ans: Yes certainly – we would like to focus on scientific inventory management where disruptions do not affect services to our customers. Having said that, we have also realised that the transportation industry is one industry which restarts almost immediately after a fall and railways is one segment that continues even when nothing else moves. We would like to take these factors into account in designing our future supply chain. We would also like to see that in all our activities we adopt such measures that are immune to any pandemic like disruptions.

Q: Enough of COVID-19, in an ideal world what changes would you like to see in your raw material and finished goods supply chain systems, infrastructure, technology?

Ans: As I said, we will digitise and focus on scientific raw material and finished goods inventory so that our supply chain is far more insulated from any type of disruption. Lean and safe practises along the entire value chain will take prominence and the IT support is also being strengthened to ensure that the quality and speed of decision making within the organisation improves and we have a far higher connect with all our business partners in a secured environment.

Q: Safety has always been very critical for the Tata Group. Can you share a few thoughts on how safety will be perceived in the days ahead? Ans: For Tata Steel, health and safety of our employees is of utmost priority. Tata Steel in accordance with government notifications, guidelines circulated by MoHFW, WHO and local administration took various initiatives to contain the spread of COVID-19, for e.g.,

In general, to reduce disruptions and to keep the entire population safe in all our locations, working units have been divided into self-sustaining groups called Pods which ensures that while there is interaction within the members of a Pod, there is zero inter Pod contact. In short, the whole workforce has been divided into multiple modules and if any person is affected in a module, the system starts taking care of all the members of the module, leaving the balance population safe and productive.

* A special digital initiative which captures every employee's movement history and compliance

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Standard Operating Guidelines (SOG)

Standard Operating Guidelines (SOG) were prepared for carrying out operation during and after COVID-19.

Agility in HR practices

Agility in HR practices like work from home, special leave for employees were introduced.

Digital preparedness

Digital preparedness to empower employees for working from home.

Implementation of Safety Digital tracks

Implementation of Safety Digital tracks to monitor and ensure the deployment of social distancing norms, mask compliance at works areas including contact tracing, travel declaration & 'Suraksha card' compliance*.



Ensure compliance to the mandatory protocols

To ensure compliance to the mandatory protocols developed for preventing spread of COVID-19, a Consequence Management action was rolled out for employees and contractors. Appropriate actions are being taken to prevent the spread of COVID-19 across manufacturing sites, ports, supplier and vendor partner locations.

In Conversation

With Mr SANJAY GULATI, MD of ISGEC HITACHI ZOSEN Ltd.

Q. Could you tell us more about ISGEC Hitachi Zosen. Why did you establish this joint venture?

Ans: Our aim was to expand the footprint of the group so that we could move up the value chain for process equipment and to increase our customer base.

Q. What factors did you consider in selecting the coastal town of Dahej as a manufacturing location? Ans: Backed by a strong commitment by the state government, it was a rapidly developing industrial belt at that time. We have all witnessed the huge development since.

Q. How has the COVID-19 pandemic and the lockdown affected companies in the process equipment segment in India? How has ISGEC overcome the challenges? Ans: Like the rest of the economy, this segment



Mr Sanjay Gulati is the Managing Director of ISGEC Hitachi Zosen Ltd (IHZL), which is a joint venture between ISGEC Heavy Engineering Ltd. and Hitachi Zosen Corporation of Japan. The company is one of India's major manufacturers of process equipment for refineries, the fertiliser and petrochemical industries, and it has a global customer base.

Hitachi Zosen is part of the 135-year-old Hitachi Corporation based in Osaka, Japan. ISGEC has a history of 85 plus years. It is a diversified heavy engineering company with interests in process equipment, EPC for power plants, boilers, sugar plants and related machinery, air pollution control equipment, mechanical and hydraulic presses, castings, contract manufacturing and trading.

The joint venture brings together the state-of-the-art technical and engineering skills of Hitachi Zosen and the manufacturing expertise of ISGEC. It operates out of ISGEC's manufacturing facilities at the port town of Dahej in Gujarat, India, giving it easy access to the global market.

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The joint venture, with personnel from India and Japan, is actively supported by both ISGEC and Hitachi Zosen, in all its activities, including design and marketing.

Mr Gulati joined ISGEC as a bachelor trainee in 1989, having gained a Bachelor of Industrial Engineering from Devi Ahilya Vishwavidyalaya, Yamunanagar. He has since risen through the ranks and has held various important positions in the company, including as business head of ISGEC's process equipment division. He took over as the managing director of ISGEC Hitachi Zosen Ltd. in April 2012. Under Mr Gulati's leadership, the company has grown to be a market leader in the process equipment segment.

Mr Gulati was kind enough to share his thoughts with us on his company, the current market for the process equipment industry and how he sees the future.

Tube

In Conversation

has also taken a hit. ISGEC is a professionally run organisation with extensive safety protocols in our routine working. Due to the pandemic, we implemented strict additional COVID-19 related protocols and we regularly monitor the precautions as well as the health of all our employees. We have helped them as much as we can.

Q. How is your manufacturing output split between domestic and export sales?

Ans: The proportions oscillate with the market conditions in India and overseas. Having said that, we try to keep a decent composition of export and domestic revenues, as permitted by the market demand.

Q. Currently, in which countries are the project spaces that IHZL is focused on growing? What do you think about the domestic potential? Ans: Currently, there has been a reduction in demand from almost all regions owing to low crude prices as well as deflated demand, in general, for all products. The implementation of new projects will be contingent upon the duration and intensity of this pandemic.



Q. Do you think that, in this segment, there is a likelihood that the sizes of the equipment you manufacture will get bigger since companies may want to transport completely assembled units from your manufacturing facilities? Therefore, do you see an increased demand for specialised transportation equipment, such as modular trailers, and the need for multimodal transport in India? **Ans:** The government of India is already in the mood to push for multimodal transport to improve logistics while decreasing logistics costs, which at present are close to 14–16% of GDP, a very high

figure compared with other developed countries and China, where it is in single digits. I feel the logistics industry should address the challenges. If the impediments in transportation can be overcome, cargo volumes are likely to rise.

Q. Do you see an increased need for coastal transportation in India? If not now, when?

Ans: I feel there is already a latent need for this given the restrictions in road transportation. However, the demand is also a function of cost and the availability of coastal transport options.

Q. What are IHZL's growth plans?

Ans: As we all know, we are living in very uncertain times. We are proud to have earned a good name for ourselves in our journey thus far by providing cost-effective quality solutions and timely deliveries. We will continue to strive to do even better. What happens is contingent on the market conditions in the near future

Working While 'Locked Down!'

Resilience, Strength And Solutions During The Pandemic

OXCO discovered the strength, bonds and resilience of its functional teams, with their commitment to continue delivering its mandate to the industry in spite of the lockdown conditions. Every single exemption from the lockdown was utilized in full. All facilities were used to ensure that BOXCO kept moving, safely, steadily and in compliance with all guidelines, when most of the other players appeared to be paralyzed. The times were such that the operating guidelines during the initial stages of the pandemic were not clear and often in conflict with each other. It was here that the excellent communications between the disparate functional teams all over the country and the leadership at BOXCO helped keep everyone informed and provided clarity. Requests for permissions were drafted with documentary evidence. Approvals to operate, by whatever name they are called, were obtained from various government authorities throughout the country. BOXCO's clearance teams were among the first to approach customs offices and the jurisdictional police stations for essential duty passes.

Big cargo and bulk cargo, or for that matter, any cargo, cannot move on permissions alone. The lockdown demonstrated the deep commitment to service delivery throughout the organization. Personnel were there, wherever and whenever needed, from the almost vacant south Mumbai offices, where clearances were issued, to the port railway yards of Kandla, which were full of wagons and bulk cargo but short on labour. Assignments were executed without any delay. Valuable over-dimensional project cargoes were delivered safely and on time during the thick of the lockdown to project sites at Bhatinda, Punjab and elsewhere for our marquee clientele.

Because of our strengths, our solution-focused mindset and the foresight of our leadership, we remained proactive and continued delivering to our clients during the lockdown. All statutory permissions, compliances and measures to ensure the health, safety and well-being of our crews and executives on the job were taken, and nothing was left to chance.

It is well known that the lockdown caused:

- An acute shortage of labour due to reverse migration
- Widespread restrictions on the movement of workers and material
- A huge bunching up of trucks at warehouses
- Very sparse attendance at port and customs offices
- Lack of transport, travel and other facilities

However, the proof of the pudding is in its eating!

Here's a snapshot of our work at some locations during the lockdown.



From March 2020 to June 2020, BOXCO handled exports of 3.5 lakh MT of sugar over 18 vessels.



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Loading of Raw Sugar in Bulk at Kandla Port

We are proud to have won the appreciation of our customers in the sugar industry for having supported them in these difficult times with these commercially important movements.



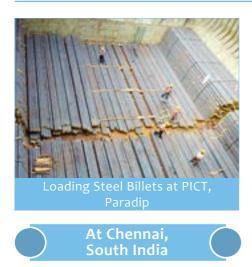
From April 2020 to June 2020, BOXCO handled exports of 2.3 lakh MT of steel. During May and June 2020, Boxco handled three ships of fertilizer imports with a cumulative volume of 1.25 lakh MT and dispatched around 80,000 MT, constituting no less than 30 railway rakes, to various consumption centres.



Loading Steel Plates at PICT, Paradip

Tube

Logistics



We handled four vessels with total import volume of 2.8 lakh MT and one vessel with 54,000 MT of dolomite import. We dispatched 1.84 lakh MT over 48 railway rakes of essential raw materials to our customers to keep their plants running during the lockdown.





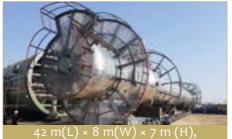
nloading Limestone at Chennai Port

The Chennai team, in fact, achieved its best with the dispatch of three full rakes in a single day during this period!



BOXCO played Hercules during the lockdown for approximately Rs. 20,000 crore prestigious greenfield petrochemical complex. BOXCO deployed 56 Goldhofer axles and two power packs from its fleet, and its trained and committed crews were in full action during the period. Its services were utilized by four of the top suppliers to the project.

Its accomplishments during the pandemic included the delivery of many ODC packages: reactors, columns, tanks and vessels. The movements were not only across national and state highways but also occasionally off-road and within tight factory confines and compounds. Moreover, everything needed the right permissions, the right equipment and the right skills, which BOXCO had ready and available during the lockdown.



190 MT, on 24 SPMTs



40 m (L) × 9.5 m (W) × 11 m (H), 621 MT, on 48 SPMTs



21 m (L) × 10 m (W)× 8 m (H), 233 MT

Due to the pandemic, our teams were forced to organize tasks using some simple online systems, which gave us some unexpected benefits, apart from ensuring continued operations during the lockdown. The increased efficiency of staff deployments, the reduction in the use of stationery and the forced cessation of unnecessary travel due to the lockdown significantly reduced our overheads while maintaining our high standards of service. Ensuring that information was transparent and easily accessible from a common place to all process owners within BOXCO and to all clients enabled better decisionmaking. When the lockdown was extended, the functionality that was invented on the go became more consistent and the new normal way of organizing our work.

Information technology is set to usher in the Fourth Industrial Revolution. For logistics companies, the contours of this revolution have appeared on the horizon. The advantages of digitalizing all processes and tasks are readily apparent. Only the most competent and aware organizations will ride the Tsunami of changes and exploit the opportunities of digitalization. At least in this context, the more things change, the more they stay the same! Successful digitalization increases our core competence and vice versa, creating a positive feedback cycle. BOXCO, once again, is at the forefront of learning, evaluating and doing digitalization effectively, in a way that brings value to all.

The pandemic continues to be a challenge. However, it is a matter of pride and satisfaction that at BOXCO, we played our small role in the fight by keeping the wheels of the economy moving. We must continually learn and grow, so that we can leapfrog into the increasingly digital world of work. We need to raise our game and our value proposition for our lifeblood: our customers and all our other stakeholders!

13

Project Solutions For HMEL BHATINDA BOXCO: The HERCULES

MEL is a joint venture between the state-owned Hindustan Petroleum Corporation (HPCL) and Mittal Energy Investment. HMEL is setting up the Guru Gobind Singh Polymer Addition Plant at Bhatinda Refinery, its petrochemical complex in Punjab.

The work on the project is underway and HMEL is planning to build the petrochemical plant before its scheduled completion date in 2021. Land for the unit was acquired in 2017 and in the same year, CB&I bagged the contract to provide the basic engineering for the ethylene plant, which will produce 1,200 Ktpa per annum. In 2017, the Ministry of Environment and Forest (MoEF) granted environmental clearance for the project. Engineers India Limited (EIL) are the consultants for the environmental impact assessment and invited bids for the mounded bullet works for Guru Gobind Singh Polymer Addition Project in 2018.

The new dual-feed ethylene plant will include a steam cracker, refinery off-gas treatment unit, C4 hydrogenation unit, pyrolysis gasoline hydrogenation unit, benzene extraction unit, and a high-density polyethylene unit producing 450 Ktpa per annum. The petrochemical complex is being built at a cost of Rs. 19,635 crore and is expected to provide direct employment to 600 people.

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The project involved transporting some of the biggest and heaviest refinery equipment that India, and probably the world, has seen. As one would expect, Boxco Logistics easily handled the lion's share of this movement.

Boxco's Business Strategy

Due to the sizes and weights of the equipment required to be moved, most of the major equipment



GR Engg Bathinda

manufacturers and the engineering, procurement and construction companies built their own assembly yards in the vicinity of HMEL Bhatinda works. Companies such as GR Engineering, ISGEC Hitachi Zosen Ltd., L&T Hydrocarbon Engineering, Tecnimont India Pvt. Ltd. and Vijay Tanks and Vessels all had facilities there. The modus operandi for most of these companies was to bring in parts in humongous packages and assemble them in Bhatinda. The team from HMEL Bhatinda and their engineering consultants EIL were aware of Boxco's prowess as super heavy-lift transporters, and so they recommended us to all the manufacturers involved. Boxco decided to make Bhatinda its base for its self-propelled modular trailers

(SPMTs) and its highly skilled heavylift team for the duration of the contract.

Our first contract in HMEL was awarded by GR Engineering. Boxco transported nine super-ODC packages for the company. The heaviest package was 1400 MT, making it easily the heaviest package made in India so far. The longest package was 94.55 metres long, 14.25 metres wide and 16.11 metres high. This was followed by packages from Tecnimont, L&T Hydrocarbon Engineering, ISGEC Hitachi Zosen and Vijay Tanks and Vessels.

A picture they say, is worth a thousand words and we leave these beautiful pictures to do the talking.

For ISGEC, we carried two packages. The first was $40.1 \text{ m}(\text{L}) \times 9.5 \text{ m}(\text{W}) \times$ 11 m (H) and weighed 621 MT. It was dispatched on 19th May 2020 on 24 + 24 axles (side by side). The other was 32.4 m (L) × 7.8 m (W) × 7.7 m (H) and weighed 278 MT. That one was dispatched on 13th June 2020 on 18 + 18 axles (side by side).











GR Engg Bathinda







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Vijay Tanks & Vessels

For Tecnimont, we carried a package of 43.35 m (L) × 10.30 m (W) × 10.44 m (H) weighing 88 MT. The axle combination was 24 + 24 (side by side).

For Vijay Tanks & Vessels, we carried packages of dimensions 38.5 m (L) × 5.52 m (W) × 5.39 m (H), weighing 129 MT.

For L&T, we carried cargo of dimensions 30.70 m (L) × 4.95 m (W)× 4.50 m (H), with weight 72 MT.

 The first project was awarded to Boxco in December 2018 by GR Engineering. You

Tube

- Boxco immediately started working on its strategy and showcasing its expertise to other suppliers. Gradually, L&T Hydrocarbon, Tecnimont, ISGEC and Vijay Tanks and Vessels hired our logistics super speciality services.
- Boxco's 56-axle SPMTs and two power packs were then busy carrying all the huge items needed for the project.

Boxco has successfully delivered all packages impeccably without a single untoward incident, zero accidents and no damage. Most of the major packages were moved during the COVID-19 lockdown, and that posed a huge challenge for us. However, we ensured that all safety procedures were followed to the letter.

We thank our clients for giving us this opportunity in Bhatinda. This has been one of the most challenging assignments for Boxco and our team looks back at this project with a lot of pride as we prepare to leave the stage in Bhatinda to take on another challenging assignment at Paradip

Tube

Infrastructure

PICT: Steel Transport

disha with its rich natural resources has aspired to be a manufacturing hub for steel. It has a target to produce 100 million tonnes of the metal by 2030. About 47 steel plants with a total installed capacity of 39.56 million metric tonnes per annum (MMTPA) have been set up in Odisha so far and many more companies are in the process of setting up a manufacturing base here. Of the 47 steel plants, only two are in the public sector, Steel Authority of India Ltd and Neelachal Ispat Nigam Ltd, and the remaining steel units were established by private companies. With the increase in capacity, output has also increased. Crude steel output in the state has almost tripled from 8.8 MMTPA to 23 MMTPA from 2014 to 2018.

Company And Location	Installed Capacity/ Annum (MMT)	Planned Expansion Annum (MMT)
Steel Authority of India Ltd. Rourkela	4.5	10
Neelachal Ispat Nigam Ltd. Kalinganagar	1.1	
Jindal Steel & Power Ltd. Angul	6	20
Tata Steel BSL Ltd. Dhenkanal	5.63	
Tata Steel Ltd. Kalinganagar	3	8
Bhushan Power & Steel Ltd. Lapanga	2.8	
Jindal Stainless Ltd. Kalinganagar	1.6	
Visa Steel Ltd. Kalinganagar	1	
Arcelor Mittal Nippon Steel Paradip	6	12
Total	31.63	50

Apart from these big companies, there are many small companies either steel manufacturers or intermediaries.

In addition, JSW Steel is building a 12-MMTPA steel plant and Arcelor Mittal is building a 3-MMTPA steel plant at Paradip, which will boost steel production in the state in the near future.

Cashing in on this growth, Paradip has converted the increasing steel output in the state into business opportunities for the port. Since it has all the infrastructure required for handling steel products, PICT has been able to persuade both the private and public sector steel manufacturers to use Paradip as their gateway for exports.

At the clean-cargo terminal at Paradip Port, there are two fulllength rail sidings, with one line dedicated for steel movements. A significant percentage of steel cargo comes in by rail and 100 per cent of the fertilizer goes out by rail. Thus, efficient rake management is very important. The table summarizes the modes of transport used for cargo coming in and leaving out of the terminal.

		Road vs Rail	movem	ent of carg	o at PICT		
Month	No. of Rakes	Tonnage by Rake	No. of Trailer	Tonnage by Road	Total (MT)	% share of Rail	% share of Road
April 2020	86	236,664.10	517	14,672.40	251,336.50	94%	6%
May 2020	96	296,723.24	2709	76,785.11	373,481.35	79%	21%
June 2020	68	202,933.03	1936	59,139.17	262,072.20	77%	23%
July 2020	94	287,070.08	1323	44,656.31	331,726.39	87%	13%

Railways played a key role during the COVID-19 lockdown, since road movements were restricted. Further more, with the recent lowering of freight tariffs and other benefits offered, moving cargo by rail is cheaper compared to road haulage.

Recer	nt achievements ii	n PICT despite t	he adverse impact of COVID-19
Date	Vessel Name	Cargo	Remarks
5 th June, 2020	M. V. POLA PACIFIC	Aluminium Ingots (Export)	Achieved a load rate of 3,654 MT in loading of Aluminium Ingots in 24 hours with only 2 hooks.
6 th June, 2020	M. V. AGRIA	Hot Rolled Coils (Export)	Record loading of HR Coils with 25,710 MT in 24 hours.
22 nd June, 2020	NA	Steel and Fertilizer	Record number of rakes handled in a single day of 24 hours. Total rakes handled were 6 in numbers out of which 5 are steel rakes and 1 was fertilizer rake.
2 nd July, 2020	M. V. BLUE BALESTIER	Steel Billets (Export)	Record by loading of steel billets in a day 12,931.64 MT (6,040 pcs).
11 th July, 2020	NA	Steel Slabs	Record performance in unloading Slab rake in 25 minutes.
July 2020	NA	NA	Highest number of vessels and rakes handled in a single calendar month since inception of PICT, 19 vessels and 119 rakes.

Infrastructure

An overview of the new Angul– Sukinda and Haridaspur–Paradip railway lines

The Ministry of Railways (MoR) incorporated Rail Vikas Nigam Limited (RVNL), a special purpose vehicle (SPV) on 24 January, 2003. A wholly state-owned company under the provisions of Section 617 of the Companies Act, 1956. Moreover, RVNL is a railway administrator under the Railways Act, 1989.

Two projects are being executed as SPVs by Rail Vikas Nigam Limited (RVNL) in the state of Odisha:

- Angul–Sukinda railway line Expected completion by March 2021
- Haridaspur–Paradip railway line

 Expected commissioning in
 August 2020

Angul-Sukinda Railway Line

Angul Sukinda Railway Limited (ASRL) has been incorporated to construct and maintain an 104.24 km broad-gauge single railway line between Budhapank Station (Angul) and Baghuapal Station (Sukinda) in Odisha. The proposed rail line will improve connectivity and facilitate the faster movement of goods. This line will be connected to the Banspani–Dubri line, which is currently being used by steel plants in the Sukinda region for inbound iron ore movements from the Banspani and Barbil region. The major beneficiaries of this proposed line will be steel plants in the Angul region (by transporting iron ore from Banspani and chromate from Sukinda), a coal-based thermal power plant in Sukinda (by transporting thermal coal from the Talcher coalfields, as presently most of the power plants are captive) and steel and power plants in the Lapanga and Rengali area of Sambalpur District (by transporting iron ore from Banspani and coal from Talcher).

The proposed alignment will also establish a direct link between coalproducing areas, i.e. the Talcher Coalfields, and the coal-consuming area of the Daitari Industrial Complex near Sukinda Road Railway Station. This will avoid the existing congested and circuitous road from Talcher through Rajatgarh and Kapilas to Jakhapur and will provide an alternative and shorter route for



coal traffic. The dispatch of finished products from the steel plants in the Daitari Industrial Complex to destinations in the Mumbai and Delhi area via Talcher, Sambalpur and Jharsuguda will also be cheaper with the proposed alignment, in comparison with the route via Kharagpur.

This rail line may also facilitate the transportation of iron ore, coal and bauxite from nearby quarries to the upcoming industries in the Jharsuguda Industrial Cluster and to the nearby thermal power plants. The line starts at Budhapank Station near Angul and terminates at Baghuapal Station near Sukinda.

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Haridaspur-Paradip Railway Line

The much awaited Haridaspur– Paradip Rail link, which is envisaged will primarily facilitate the growth of the steel industry in the Kalinganagar belt, is expected to be commissioned in August 2020.

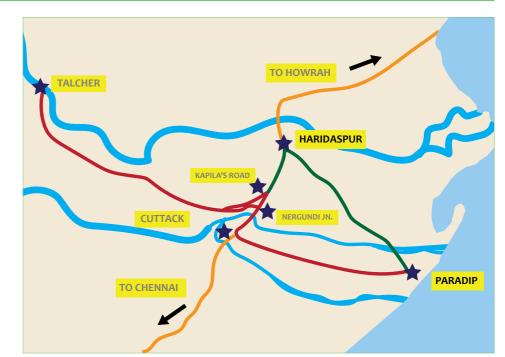
The line will connect Paradip with Odisha's heartland and will be a monumental pathway for the development of the state. It will reduce the distance between Daitari and the Banspani iron ore belt and Paradip Port by half. It will also serve the important mining belts of Jajpur and Keonjhar. The Haridaspur-Paradip line will give a strategic advantage to India's prime steel hub at Kalinganagar and its many associated downstream industries, comprehensively unlocking the massive potential for development in Eastern India, as envisioned by the prime minister under the Purvodaya project.

The new route will reduce the distance between industries in

Tube

Infrastructure

Kalinganagar, namely Tata Steel, Jindal Stainless, Visa Steel and Neelachal Ispat Nigam Ltd., by 40 km compared to the existing route via Cuttack junction. Thus, the cost of rail freight will reduce. It will also enable the faster turnaround of rakes and reduce the congestion on the existing Cuttack-Paradip rail route and in turn it will increase the availability of rakes. It is foreseen that the rail link will improve the connectivity to the Inland Container Depots (ICDs) at Kalinganagar (JSL/Apeejay and Concor, which is planned), speeding up the movement of containers by rake to and from PICT











In Focus

COVID Travails – A First-Hand Experience

he hardships faced by seafarers during the COVID-19 pandemic all over the world have been highlighted in various print and digital media. However, one can sympathise with the stories of fellow seafarers but a first-hand experience is a different ball game. Thus, I thought I would write down my experiences, as I had plenty of time available while completing my quarantine in this nice hotel in Kakinada before I had to leave to join an offshore vessel in the next couple of days.

My travel aka travails started from Brazil with the ultimate destination being Kakinada, a lovely Britishtype town on the east coast of India. The flight from Brazil to Doha, Qatar, went almost without disruption. Doha Airport is a hub for flights from Asia to Europe and the Americas and vice versa, so its lounge was crowded with waiting passengers. Fortunately, the COVID-19 protocols were being strictly enforced and well monitored by the security staff.

After a wait of six hours, we boarded the flight to New Delhi. It was Friday and we had pre-booked tickets for the onward journey to Rajahmundry via Hyderabad. We were a group of 13 crew members setting off to relieve the onboard crew. We landed late evening at the Indira Gandhi International Airport, New Delhi. The immigration procedures were a bit slow because of the additional checks due to COVID-19 but went smoothly. However, we got our first rude shock when we were diverted to the COVID-19 area for 7 days of quarantine instead of the planned exit so that we could continue the next leg of our journey. Despite producing all the relevant papers and documents, including COVID-19 test reports, the authorities were helpless as they were following their SOPs. They directed us to the waiting area from where buses would take us to COVID-19 approved hotels in the vicinity of the terminal.

As these events were unfolding, our operations director got in touch with our agent Arya Offshore, who was annoyed as the quarantine would disrupt the entire crew change cycle. Notwithstanding, because of the good rapport with the J M BAXI GROUP, we were quarantined in a very decent hotel for the next 7 days. Mr Rahool from Arya Offshore was in constant touch and ensured that our check-in was smooth.

The next day, Rahool briefed us. During the night, he had contacted the Airports Authority, the COVID-19 cell and the domestic airlines to see what documentation was required to ensure that we could seamlessly move to our destination. I was aghast at the number of documents he asked us to fill in, but then I realised that something like COVID-19 only happens once a century. Though the documents were in line with WHO and administration directives, the on-ground interpretation and implementation seemed to be a weak link in the overall jigsaw puzzle. Rahool spent hours trying to obtain clearances. In his chats with me, he told me about two issues.

First, he had to get an approval from the health authorities to permit a private laboratory to undertake COVID-19 tests in the hotel, which was the preferred option due to its convenience and expediency. The second was hilarious. As per the GOI norms, every passenger is required to install the Aarogya Setu app on their smartphone to confirm that they are uninfected. They are required to show the app before they are allowed to enter the airport. However, the crunch was that all of us have international SIM cards but we could register with the app only with a national SIM card. Rahool contacted a telecom service provider, despite the total lockdown in the city, who agreed to provide SIM cards but needed to see each of us in person with our passports. We were not allowed to leave the hotel as we were being quarantined but on the other hand, the vendor was not permitted to enter the hotel. It was truly a catch-22 situation. I am not too sure how finally Rahool managed to convince the Airports Authority, but they helped us to enter the airport without the app installed.

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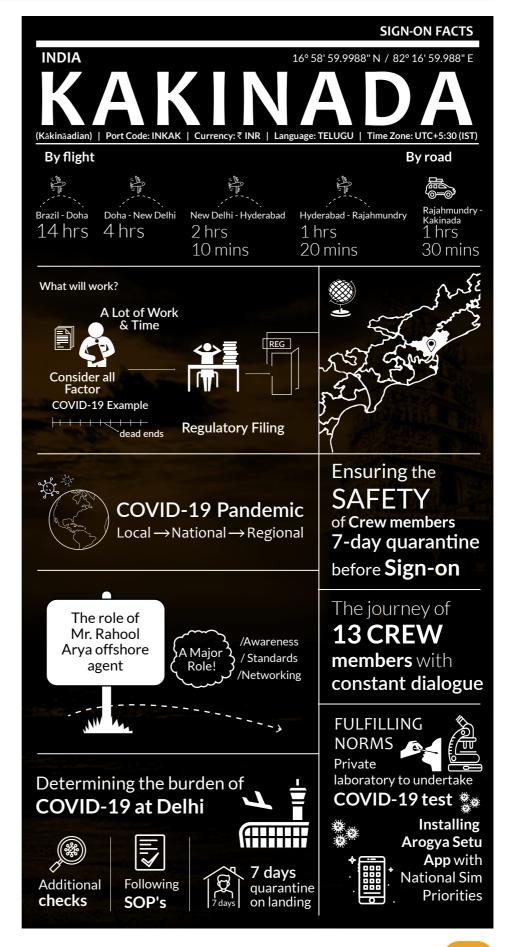
To cut the story short, all of us took COVID-19 tests on the 5th day of quarantine and we were relieved when none of us tested positive. The hotel staff were more than cooperative and helpful, as was our guide Rahool, who had 13 sets of documents ready, one for each of us, early in the morning of the departure day with a request that we report at the airport 3 hours in advance of the departure to go

In Focus

through another set of medical checks by the airline's doctors. I felt like a NASA astronaut being led to the spacecraft for a lift-off.

The flight to Hyderabad was uneventful and we had to spend another 8 hours in the terminal before boarding the last leg of our air journey to Rajahmundry, all the while maintaining complete physical distancing norms. The last leg was only 50 minutes long. Upon landing, we had to go through security, where all our papers, including the COVID-19 clearance, were rechecked. Our agent's representative at the airport was well prepared, and most of the district administration's formalities had been completed by him prior to our arrival. The authorities needed to recheck only our personal documents. An "all clear" message was flashed to Kakinada with our personal and vehicle details. We had to guarantee that all the vehicles moved as a convoy to Kakinada. I never realised we were VIPs! I was told that if the authorities at Kakinada had not been informed properly and things were not done by the book, our vehicles would have been redirected to the COVID-19 centre at Kakinada to start the saga all over again. However, because of the detailed arrangements at Rajahmundry and Kakinada, we were safely accommodated in our hotel for the 7-day guarantine required by the district administration as well as the by client prior to us joining the vessel.

My experience was one of a kind, but I have been told that my fellow seafarers have encountered worse experiences in other parts and ports of the world. Since 70 per cent of world trade moves by sea, we seafarers are a critical link in keeping the global economy moving



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Technology

Refocus, Refresh, Restart

hat seemed to exist in the realm of fiction has now become a part of our day to day life. No one could have imagined a microscopic organism would have the power to imprison us in our homes. A global pandemic that has disrupted "the normal," which we have been used to.

As the country began feeling the impact of COVID-19 and the possibility of a lockdown began looming, at DIABOS, we began enforcing our Business Continuity Plan (BCP), which was not adequately defined for such a disruption. And like everyone else, we too were unprepared. We soon realized there was no playbook, plan, or rehearsal for what was happening; we had to watch and act. At Diabos, we are a perseverant and resilient bunch; rather than play helpless victims, we decided to assess the situation and reset and restart.

We realized that business flexibility and agility were required to help us respond effectively to this global pandemic and keep operations at Diabos up and running 24x7 despite the impediments faced. The table (on the right) helped us identify the next steps.

Our Initial Response

- Avoiding panic by communicating clearly with each employee the action plan and expectations.
- Ensuring safety of the employees by enforcing work from home before the official lockdown was declared.



	Traditional	COVID -19 on-ground situation			
Operational Considerations	Traditional Scenario	Impact on Productivity	Immediate Responses to be undertaken		
Localized workforce	Working together in the same location, or via email/phone	High	Move to a distributed workforce model.		
Processes	Human-centric not optimized for automation	Medium	Accelerated standardization of the platform services.		
Employees	Social & emotional well being	High	Regular touch base meetings on collaboration tools		
	Working in close proximity at a single location with all the requisite infrastructure to perform the task	High	High levels of remote working under virtual supervision		
Technology	Fragmented systems using desktops, printers, scanners	High	Upgrade the home internet of all employees. Deploy collaboration tools like WebEx, Google Meet, Zoom, Skype, and Microsoft Teams Deployment of secure end points to access technology remotely		

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Technology

- Creating a support group where users could raise their issues and get a solution from the IT support team.
- Allocate operating systems from the office and installing them at the employee residence.
- Sending our clear communications to all external stakeholders and service partners to set the context and expectations.
- Making logistical arrangements in terms of hardware and connectivity (internet and phone).
- Ensuring data privacy with all members working from home and outside the office network.
- We also conducted an online survey during the lockdown to find out and address the challenges of working from home.

Challenges we faced

- Inability to interact in person with team members.
- IT issues due to hardware or network as we were deploying solutions in non-traditional physical workplace (home).
- Striking work-life balance.
- Maintaining the morale of the team.
- Ensuring we meet the level of service provided to customer prelockdown.
- Initial concerns around the security of data and potential impact on productivity, either due to infrastructure quality or due to the lack of supervision, primarily for new hires.

How we overcame the challenges

We assessed the systems and procedures that could continue as usual and the ones that would need tweaking to align with the new situation.

The key areas identified were:

HR policies

- Each team had a daily meeting with all the members using one of the collaboration platforms to discuss the plan of action for the day as well any personal issues the members were facing.
- 2. Ensuring teams were motivated and continued to deliver a high level of service expected by the customer.
- 3. Allowing members to travel back to their native places where they could be with their close family thus ensuring they felt safe.
- Regular training of the new and junior members of the teams to ensure continued learning and upskilling.

System based innovations

- 1. We developed and launched 27 new features on to the DIABOS platform which has led to process improvements, productivity gain, enhanced customer satisfaction and a more excellent user experience.
- 2. We have embarked on a modernization drive for our technology infrastructure and will be rolling out new products, upgrades, and feature releases at regular intervals.

Lessons we learned

1. Remote working is possible without affecting productivity.

- 2. We can perform our tasks digitally and do not need physical printing and storing of paper.
- 3. We need to look deeper into our employee welfare.
- We need to invest in infrastructure and resources for a smoother and effective WFH environment.
- 5. Remote training and onboarding though have inherent challenges, are still very much effective.
- 6. Supporting our customers during these arduous times further strengthened the professional bond.
- 7. Remote working is the new reality in this 'new normal' which may last for an extended period in time. Being cognizant of the fact we are continually evaluating more modern technology solutions and carrying out R&D to improve our offering.
- 8. We will need to develop business continuity solutions for scenarios such as global shutdowns, prolonged disruption, sudden volume spikes/reductions, and non-traditional physical workplaces (e.g., homes).
- One of the thing that seems inevitable at this stage is a shift in focus from "Work-Life balance" to "Work-Life Integration" for employees.

As the pandemic unfolds, we will continue to find pragmatic and innovative solutions to support all our stakeholders in their hour of need. Staying true to our values of trust, honesty, humility, innovation & perseverance, we will continue to reshape and recalibrate the way we live, work, and communicate. No matter how the cookie crumbles, we have to refocus, refresh, restart, be resilient and imbibe empathy in our actions. After all, social distancing has taught us the value of being a unified community

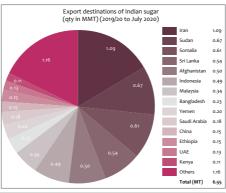
Weights & Measure

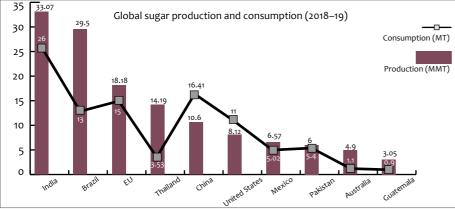
INDIAN Sugar And Trade Opportunities

Global Sugar Scenario

In the 2018–19 crop year, global sugar production was 179 million metric tonnes, with 181 million metric tonnes expected for 2019-20. Approximately 80% of the world's sugar is produced from sugarcane in tropical and subtropical climates, with the remaining 20% derived from sugar beet, which is grown mostly in the temperate zones of the northern hemisphere. A total of 124 countries produce sugar.

Exports contract signed by India





The major producers of sugar in the world are also the leading exporters and are highly dependent on the world trade. Australia exports around 72 percent of its production, while Brazil exports 56 percent of its production. India is however unique, as it has the world's largest consumption market. India's dependence on the world trade is marginal and therefore, it is largely insulated from the global price variations.

India's Sugar Exports

India is close to major sugar-deficient markets. The Indian ocean countries Indonesia, Bangladesh, Sri Lanka, Pakistan, Saudi Arabia, UAE and some East African countries are sugar deficient and regularly import sugar, primarily from Brazil, Thailand, the EU and Australia.

As per market reports, contracts for exports under the Maximum Admissible Export Quantity (MAEQ) have been signed for over 3.5 MMT, of which about 1.6 MMT has already been shipped out of the country.

J M BAXI GROUP through its bulk cargo division, Boxco Logistics, is currently engaged with various exporters to handle 1 MMT of sugar in the current season. The company has already handled more than 5.4 lakh of sugar at Kandla till date.

Exports From The Top Producing **Countries Decline**

Thailand, one of the top global producers of sugar, has had a 30 percent drop in production. Brazil was the largest producer of sugar in (Continued from issue XXIX)

the world until two years ago, but after the fall in sugar prices, it started producing more ethanol than sugar. Ethanol prices are very attractive, and the Brazilian government gives incentives to produce ethanol. In Brazil, the revenue earned for producing ethanol is 19 per cent higher than that for sugar for a tonne of cane. Brazil also substituted 48 per cent of petrol with ethanol and this is expected to increase in the coming season.

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Opportunities For India

Due to the drought in Thailand, sugar production there is likely to drop by around 30 per cent to 9.5 MMT. This gives India an opportunity to export sugar to Indonesia, South Korea and China. Indonesia recently changed the colour-grading standard known as the International Commission for Uniform Methods of Sugar Analysis (ICUMSA) from 1200 to 600 to allow raw sugar shipments from India. Previously, Thailand was normally the main supplier of raw sugar to Indonesia.

Recently, at an international conference in Maharashtra, Indian Sugar Mills Association (ISMA) president, Mr Vivek M. Pittie, stated that:

categorised as a structural surplus

Thus, it is clear that India is now all set to become one of the largest producers and exporters and will be a prominent player in the global sugar industry

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Port Statistics

INDIA Port Performance

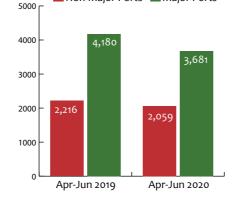
he following is an analysis of data for the period of April to June 2020 compared to the period of April to June 2019.

Ship Calls

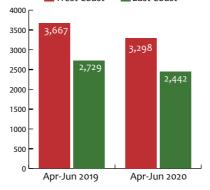
During the period of April-June 2020, a total of 5,740 ships called on Indian ports, a decrease of 10% over the same period last year. 64% of the ships called on Major Ports with the balance 36% calling on Non-Major Ports. Major and Non-Major Ports saw a decrease of 12% and 7% in ship calls, respectively. The west coast saw a 10% decrease and the east coast saw a 10.5% decrease in ship calls.

Chennai Port saw the most decline in ship calls at 36% followed by Mormugao (-30%), Haldia (-27%) and JNPT (-26%). Cochin Port saw the highest increase in ship calls at 53% followed by Tuticorin 41% during the period of April-June 2020, when compared to the same period last year.





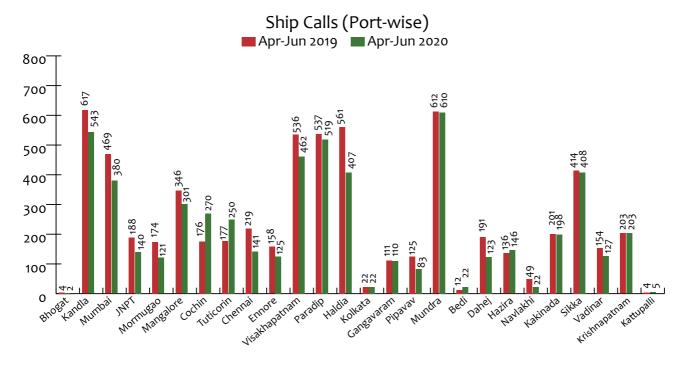
Ship Calls (West and East Coast of India) West Coast East Coast



Liquid Cargo Trends

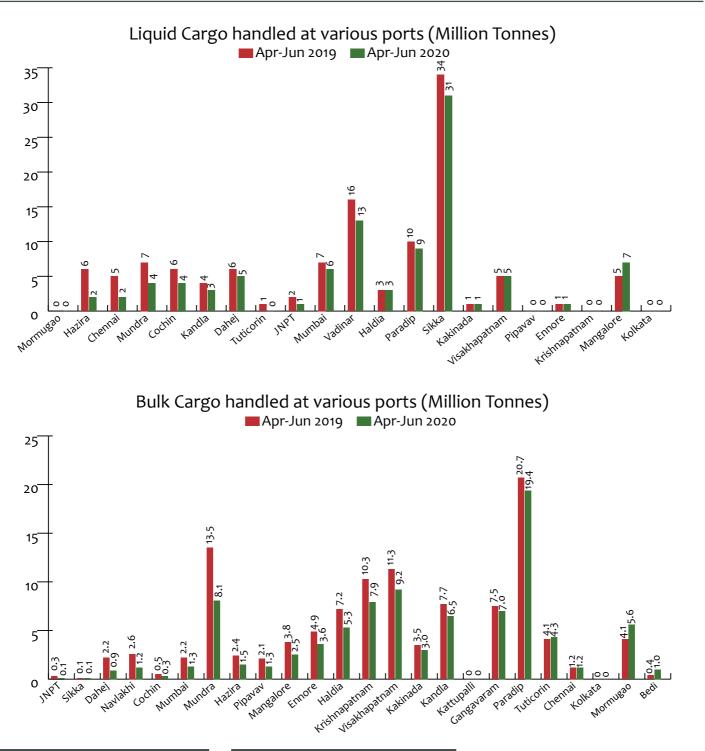
A total of 99.29 million tonnes of liquid cargo was handled during the period of Apr-Jun 2020, a 16% decrease from the same period last year.

Hazira (-61%) saw significant decline in liquid cargo handled followed by Chennai (-50%) and Mundra (-38%). Cochin (-30%), Kandla (-26%) and Dahej (-24%) also saw significant dip in liquid cargo volumes handled. Key liquid terminals JNPT (-22%), Mumbai Port (-18%), Vadinar (-17%), Haldia (-11%) and Paradip (-11%) also saw a decline in liquid volumes handled. Mangalore saw an increase of 31% during the period.



The port data considered for analysis is for the period of Apr-Jun 2020 and compared with data for the same period last year.

Port Statistics



Bulk Cargo Trends

In the bulk cargo segment, Mundra saw a decline of 40% in volumes handled. Krishnapatnam (-23%), Visakhapatnam (-19%), Kandla (-15%) also saw significant decline in volumes handled. During the period Paradip saw a decline of 6% in the bulk cargo volumes handled.

Container Cargo Trends

A total of 3.2 million TEUs were handled in Apr-Jun 2020, a decline of 24% when compared to the container volumes handled in the same period last year. Amongst key container terminals, JNPT and Mundra saw a decrease in container volumes 34% and 18% respectively, while Krishnapatnam saw a decline of 29%. Chennai (-42%), Kattupalli (-39%) and Kolkata (-37%) experienced steep decline in container volumes handled. You

Tube

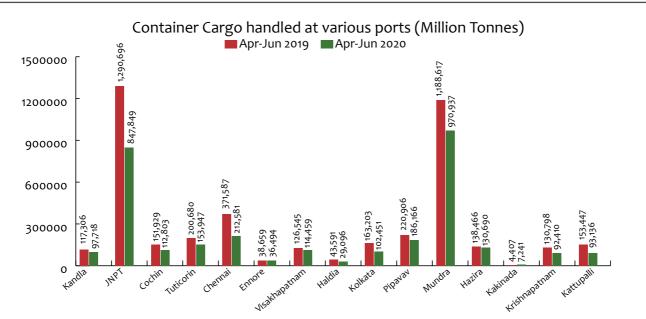
Key Cargo Performance

Liquids and Gases

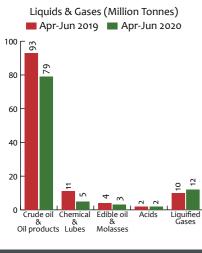
Volume of liquids and gases decreased by 16% with total volumes handled at 101 million tonnes in

Tube

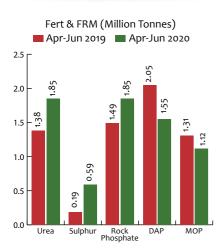
Port Statistics



comparison to 120 million tonnes during the same period last year. **Chemicals and lubes saw the most decline at (-52%) while liquified gases** grew at 15%.



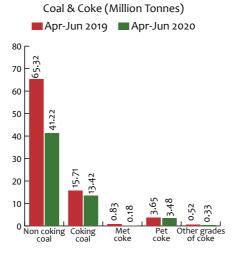
Finished Fertilizers and FRM



A total of 7 million tonnes of fertilizers and FRM was handled in Apr-Jun 2020, **an increase of 8**% compared to the same period last year.

Coal and Coke

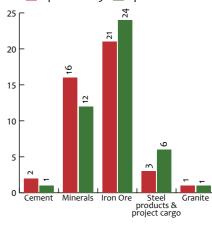
A total of **59 million tonnes of coal and coke was handled in Apr-Jun 2020.** Non-coking coal (-37%) and coking coal (-15%) saw decline in the volumes handled compared to the same period last year.



Other Bulk and Breakbulk

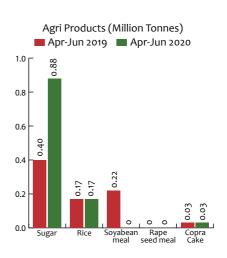
Steel products and project cargo saw a steep increase of 77% in volumes handled, while cement (-42%) and minerals (-26%) saw a declining trend.

Other Bulk & Break Bulk (Million Tonnes) Apr-Jun 2019 Apr-Jun 2020



Agri Products

Volume of agriproducts increased by 32% primarily driven by increase in sugar volumes handled



Port Statistics

	QUAF PRIL - JUNE :	RTERLY UPI								IN MT)	
A	PHIL - JUNE	2020 (1- Q0	ANTEN) 20	20 - 2021 /			UCTS & EXT		2020 (QTT	TIN IVEE)	
		SUG	۸D	RIC		SOYA BE		RAPE SE		COPRA EXPE	
		I st Qtr'20	I st Qtr'19	lst Qtr'20	J≤	I st Qtr'20	I st Qtr'19	Ist Qtr'20	I st Qtr'19		I st Qtr
No	of Ships called	37	14	1ª Qtr20	12	1ª: Qtr 20	1º: Qtr 19	1ª Qtr 20	I [®] Qtr 19	l st Qtr'20 4	lª Qtr
	Cargo Handled	0.880	0.400	0.170	0.170	0.000	0.220	0.000	0.000	0.030	0.0
Total	Import	0.170	0.000	0.000	0.000	0.000	0.060	0.000	0.000	0.030	0.0
	Export	0.710	0.400	0.170	0.170	0.000	0.160	0.000	0.000	0.000	0.0
				FINIS	HED FERTI	LIZERS & F	ERTILIZER	RAW MATER	IALS		
		URE	A	SULP	HUR	ROCK PH	OSPHATE	DA	AP	MC	OP
		I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	l st Qtr'19	I st Qtr'20	l st Qt
No.	of Ships called	42	36	16	6	47	40	38	45	31	
Total	Cargo Handled	1.847	1.380	0.590	0.190	1.850	1.490	1.550	2.050	1.120	1.0
	Import	1.822	1.380	0.220	0.040	1.850	1.490	1.550	2.040	1.120	1.0
	Export	0.025	0.000	0.370	0.150	0.000	0.000	0.000	0.010	0.000	0.0
							DAL				
		NON COKI		COKING		MET C		PET (OTR GRADE	
		I st Qtr'20	l st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qt
	of Ships called	601	971	257	335	7	35	87	150	21	~ ~
Iotal	Cargo Handled Import	41.220 35.680	65.320 57.090	13.420 13.350	15.710 15.510	0.180 0.160	0.830 0.800	3.480 2.970	3.650 3.440	0.330 0.270	0.5 0.4
	Export	6.540	8.240	0.070	0.200	0.020	0.030	0.510	0.210	0.270	0.0
							EAK BULK				
		CEMI	-NT	MINE		IRON		STEEL PRO		GRAI	
								PROJEC			
		I st Qtr'20	I st Qtr'19	Ist Qtr'20	I st Qtr'19	I st Qtr'20	l st Qtr'19	Ist Qtr'20	lst Qtr'19	I st Qtr'20	l st Qt
	of Ships called	86	128	309	473	460	398	410	399	36	
Iotai	Cargo Handled Import	1.420 0.770	2.450 1.490	12.190 8.370	16.390 10.950	24.020 4.710	21.260 6.390	6.030 1.110	3.400 2.050	0.750 0.010	1.0 0.0
	Export	0.650	0.960	3.820	5.440	19.310	14.870	4.920	1.350	0.010	1.0
	Export		0.000	01020					1000		
		CRUDE OIL	& OIL PRD	CHEM			& MOLASSES	AC	DS	LIQUIFIE	D GASES
		I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Q1
	of Ships called	1260	1474	517	655	274	361	126	173	388	40.4
Iotal	Cargo Handled Import	79.050 58.370	93.210 71.040	5.100 2.620	10.690 8.760	3.168 3.003	4.030 3.830	1.641 1.602	2.000 2.000	11.878 11.655	10.3 10.1
	Export	20.630	22.170	2.480	1.930	0.165	0.200	0.038	0.000	0.224	0.1
INDIAN	PORT PEF	RFORMA	NCE - Q	1 & FY 2	020 - 2	1 THRO	UGHPUT	(QTY IN		N TONN	ES)
	PRIL - JUNE :										,
Ports	Types of Ports	NO. OF		LIQUID		BULK (CONTAIN		TOTAL C	ARGO *
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I st Qtr'20	I st Qtr'19	I ^{sth} Qtr'20	I st Qtr'19	I st Qtr'20	I ^{sth} Qt
		1 Qui 20	617	3.015	4.071		7.737	97,718	117,306		11.8
Kandla		5/12				6 6/IU		01.110	117,000	4 hhh 1	11.0
Kandla Mumbai		543 380				6.549 1.285			· _	9.565 7.004	
Mumbai		380	469	5.719	6.993	1.285	2.166	-	-	7.004	9.
Mumbai Nhava Sheva		380 140	469 188	5.719 1.427	6.993 1.841	1.285 0.078	2.166 0.270	847,849	1,290,696	7.004 1.505	9. 2.
Mumbai Nhava Sheva Mormugao		380 140 121	469 188 174	5.719 1.427 0.068	6.993 1.841 0.251	1.285 0.078 5.605	2.166 0.270 4.055	-	-	7.004 1.505 5.673	9. 2. 4.3
Mumbai Nhava Sheva Mormugao Mangalore		380 140 121 301	469 188 174 346	5.719 1.427 0.068 6.754	6.993 1.841 0.251 5.135	1.285 0.078 5.605 2.528	2.166 0.270 4.055 3.841	- 847,849 - -	- 1,290,696 - -	7.004 1.505 5.673 9.282	9. 2. 4.3 8.9
Mumbai Nhava Sheva Mormugao		380 140 121 301 270	469 188 174 346 176	5.719 1.427 0.068 6.754 4.098	6.993 1.841 0.251 5.135 5.894	1.285 0.078 5.605 2.528 0.276	2.166 0.270 4.055 3.841 0.504	- 847,849 - - 112,803	- 1,290,696 - - 151,929	7.004 1.505 5.673 9.282 4.374	9. 2. 4.3 8.9 6.3
Mumbai Nhava Sheva Mormugao Mangalore Cochin		380 140 121 301 270 250	469 188 174 346 176 177	5.719 1.427 0.068 6.754 4.098 0.398	6.993 1.841 0.251 5.135 5.894 0.522	1.285 0.078 5.605 2.528 0.276 4.254	2.166 0.270 4.055 3.841 0.504 4.148	- 847,849 - - 112,803 153,947	- 1,290,696 - - 151,929 200,680	7.004 1.505 5.673 9.282 4.374 4.652	9. 2. 4.3 6.3 4.4
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai		380 140 121 301 270 250 141	469 188 174 346 176 177 219	5.719 1.427 0.068 6.754 4.098 0.398 2.403	6.993 1.841 0.251 5.135 5.894 0.522 4.709	1.285 0.078 5.605 2.528 0.276 4.254 1.220	2.166 0.270 4.055 3.841 0.504 4.148 1.190	- 847,849 - 112,803 153,947 212,581	- 1,290,696 - - 151,929 200,680 371,587	7.004 1.505 5.673 9.282 4.374 4.652 3.624	9. 2. 4. 8.9 6. 4.1 5.8
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore		380 140 121 301 270 250	469 188 174 346 176 177	5.719 1.427 0.068 6.754 4.098 0.398	6.993 1.841 0.251 5.135 5.894 0.522	1.285 0.078 5.605 2.528 0.276 4.254	2.166 0.270 4.055 3.841 0.504 4.148	- 847,849 - - 112,803 153,947	- 1,290,696 - - 151,929 200,680	7.004 1.505 5.673 9.282 4.374 4.652	9. 2. 4.3 6.3 6.3 4.1 5.8
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore		380 140 121 301 270 250 141 125	469 188 174 346 176 177 219 158	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916	- 847,849 - 112,803 153,947 212,581 36,494	- 1,290,696 - - 151,929 200,680 371,587 38,659	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699	9. 2. 4.3 6.3 4.0 5.8 5.9 16.3
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore rishakhapatnam		380 140 121 301 270 250 141 125 462	469 188 174 346 176 177 219 158 536	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336	- 847,849 - 112,803 153,947 212,581 36,494	- 1,290,696 - - 151,929 200,680 371,587 38,659	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298	9. 2. 4.3 8.3 6.3 4.1 5.8 5.9 16.3 30.3
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore rishakhapatnam Paradip		380 140 121 301 270 250 141 125 462 519	469 188 174 346 176 177 219 158 536 537	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678	847,849 - 112,803 153,947 212,581 36,494 114,459	1,290,696 - 151,929 200,680 371,587 38,659 126,545 -	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053	9. 2. 4.3 8.9 6.3 4.1 5.8 5.9 16.3 30.0
Mumbai Nhava Sheva Mormugao Cochin Tuticorin Chennai Ennore rishakhapatnam Paradip Haldia		380 140 121 301 270 250 141 125 462 519 407	469 188 174 346 176 177 219 158 536 537 561	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235	- 847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340	9. 2. 4.(8.9 6.(4.) 5.8 5.9 16.(30.) 10.6 0.0
Mumbai Nhava Sheva Mormugao Cochin Tuticorin Chennai Ennore fishakhapatnam Paradip Haldia Kolkata		380 140 121 301 270 250 141 125 462 519 407 22	469 188 174 346 176 177 219 158 536 537 561 22	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026	- 847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137	9. 2. 4.3 6.3 6.3 5.8 5.5 5.5 16.3 30.3 10.6 0.1 7.
Mumbai Nhava Sheva Mormugao Cochin Tuticorin Chennai Ennore fishakhapatnam Paradip Haldia Kolkata Gangavaram		380 140 121 301 270 250 141 125 462 519 407 22 110	469 188 174 346 176 177 219 158 536 537 561 22 111	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514	847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451	1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962	9. 2. 4.3 6.3 6.3 16.3 10.4 10.6 0.0 7. 2.2
Mumbai Nhava Sheva Mormugao Cochin Tuticorin Chennai Ennore fishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav		380 140 121 301 270 250 141 125 462 519 407 22 110 83	469 188 174 346 176 177 219 158 536 537 561 22 111 125	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055	847,849 - - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555	9. 22 4.5 8.8 6.5 5.5 5.5 16.5 30.1 10.6 0.1 7. 2.1 20.1
Mumbai Nhava Sheva Mormugao Cochin Tuticorin Chennai Ennore /ishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav Mundra		380 140 121 301 270 250 141 125 462 519 407 22 110 83 610	469 188 174 346 176 177 219 158 536 537 561 22 111 125 612	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210 4.352	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200 6.965	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345 8.101	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055 13.508	847,849 - - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555 12.454	9. 2. 4.3 8.9 6.3 5.8 5.9 16.3 30.3 10.6 0.0 7.1 2.2 20.4 8.8
Mumbai Nhava Sheva Mormugao Cochin Tuticorin Chennai Ennore /ishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav Mundra Dahej		380 140 121 301 270 250 141 125 462 519 407 22 110 83 610 123	469 188 174 346 176 177 219 158 536 537 561 22 111 125 612 191	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210 4.352 4.864	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200 6.965 6.416	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345 8.101 0.931	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055 13.508 2.166	847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166 970,937	1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906 1,188,617 -	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555 12.454 5.795	9. 2. 4.5 8.9 6.5 5. 5. 5. 5. 5. 16.3 30.3 10.6 0. 7. 2.1 20. 8.5 20. 8.5 20.
Mumbai Nhava Sheva Mormugao Cochin Tuticorin Chennai Ennore /ishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav Mundra Dahej Hazira		380 140 121 301 270 250 141 125 462 519 407 22 110 83 610 123 146	469 188 174 346 176 177 219 158 536 537 561 22 111 125 612 191 136	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210 4.352 4.864 2.214	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200 6.965 6.416 5.616	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345 8.101 0.931 1.518	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055 13.508 2.166 2.370	847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166 970,937	1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906 1,188,617 -	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555 12.454 5.795 3.733	9. 2. 4.5 8.9 6.5 5. 5. 5. 5. 5. 5. 16.3 30.3 10.6 0. 7. 2.1 20. 8.9 7.5 2.6
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore /ishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav Mundra Dahej Hazira Navlakhi		380 140 121 301 270 250 141 125 462 519 407 22 110 83 610 123 146 22	469 188 174 346 176 177 219 158 536 537 561 22 111 125 612 191 136 49	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210 4.352 4.864 2.214 0.000	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200 6.965 6.416 5.616 0.000	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345 8.101 0.931 1.518 1.224	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055 13.508 2.166 2.370 2.639	847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166 970,937 - 130,690	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906 1,188,617 - 138,466	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555 12.454 5.795 3.733 1.224	9. 22 4.5 8.9 6.5 5. 5. 5. 5. 5. 5. 5. 16.3 30. 10.6 0. 7. 2.2 20. 8.9 7.5 2.6 4.2
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore /ishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav Mundra Dahej Hazira Navlakhi Kakinada		380 140 121 301 270 250 141 125 462 519 407 22 110 83 610 123 146 22 198	469 188 174 346 176 177 219 158 536 537 561 22 111 125 612 191 136 49 201	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210 4.352 4.864 2.214 0.000 0.748	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200 6.965 6.416 5.616 0.000 0.738	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345 8.101 0.931 1.518 1.224 3.002	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055 13.508 2.166 2.370 2.639 3.547	847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166 970,937 - 130,690	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906 1,188,617 - 138,466	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555 12.454 5.795 3.733 1.224 3.750	9. 2. 4.3 8.9 6.3 5.8 5.9 16.3 30.3 10.6 0. 7.2 20.4 8.9 7.9 2.0 20.4 8.9 7.9 2.0 2.0 2.0 34.0
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore Jishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav Mundra Dahej Hazira Navlakhi Kakinada Sikka Vadinar		380 140 121 301 270 250 141 125 462 519 407 22 110 83 610 123 146 22 198 408	469 188 174 346 176 177 219 158 536 537 561 22 111 125 612 191 136 49 201 414	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210 4.352 4.864 2.214 0.000 0.748 31.436	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200 6.965 6.416 5.616 0.000 0.738 33.962	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345 8.101 0.931 1.518 1.224 3.002 0.053	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055 13.508 2.166 2.370 2.639 3.547 0.125	847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166 970,937 - 130,690	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906 1,188,617 - 138,466 - 138,466 - - 4,407	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555 12.454 5.795 3.733 1.224 3.750 31.489	9. 2. 4.3 8.9 6.3 5.8 5.9 16.3 30.3 10.6 0.0 7.3 2.2 20.4 8.9 7.9 2.0 2.0 2.0 2.0 34.0 15.7
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore /ishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav Mundra Dahej Hazira Navlakhi Kakinada Sikka		380 140 121 301 270 250 141 125 462 519 407 22 110 83 610 123 146 22 198 408 127	469 188 174 346 176 177 219 158 536 537 561 22 111 125 612 191 136 49 201 414 154	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210 4.352 4.864 2.214 0.000 0.748 31.436 13.051	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200 6.965 6.416 5.616 0.000 0.738 33.962 15.756	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345 8.101 0.931 1.518 1.224 3.002 0.053 0.000	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055 13.508 2.166 2.370 2.639 3.547 0.125 0.000	- 847,849 - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166 970,937 - 130,690 - 7,241	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906 1,188,617 - 138,466 - - 138,466 - - - 4,407	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555 12.454 5.795 3.733 1.224 3.750 31.489 13.051	9. 2. 4.3 8.9 6.3 5.8 5.8 16.3 30.3 10.6 0. 0. 7.9 20.4 8.8 7.9 2.0 2.0 2.0 2.0 34.0 15.7 10.0
Mumbai Nhava Sheva Mormugao Mangalore Cochin Tuticorin Chennai Ennore Jishakhapatnam Paradip Haldia Kolkata Gangavaram Pipavav Mundra Dahej Hazira Navlakhi Kakinada Sikka Vadinar Krishnapatnam		380 140 121 301 270 250 141 125 462 519 407 22 110 83 610 123 146 22 198 408 127 203	469 188 174 346 176 177 219 158 536 537 561 22 111 125 612 191 136 49 201 414 154 203	5.719 1.427 0.068 6.754 4.098 0.398 2.403 1.135 5.096 8.628 3.024 0.105 0.000 0.210 4.352 4.864 2.214 0.000 0.748 31.436 13.051 0.386	6.993 1.841 0.251 5.135 5.894 0.522 4.709 1.081 4.986 9.693 3.404 0.024 0.000 0.200 6.965 6.416 5.616 0.000 0.738 33.962 15.756 0.344	1.285 0.078 5.605 2.528 0.276 4.254 1.220 3.564 9.203 19.425 5.316 0.033 6.962 1.345 8.101 0.931 1.518 1.224 3.002 0.053 0.000 7.938	2.166 0.270 4.055 3.841 0.504 4.148 1.190 4.916 11.336 20.678 7.235 0.026 7.514 2.055 13.508 2.166 2.370 2.639 3.547 0.125 0.000 10.272	- 847,849 - - 112,803 153,947 212,581 36,494 114,459 - 29,096 102,451 - 186,166 970,937 - 130,690 - 7,241	- 1,290,696 - 151,929 200,680 371,587 38,659 126,545 - 43,591 163,203 - 220,906 1,188,617 - 138,466 - - 138,466 - - 138,467 - - 138,467	7.004 1.505 5.673 9.282 4.374 4.652 3.624 4.699 14.298 28.053 8.340 0.137 6.962 1.555 12.454 5.795 3.733 1.224 3.750 31.489 13.051 8.324	9. 2. 4.3 8.9 6.3 4.6 5.8 5.9 16.3 30.3 10.6 0.0 7.9 2.2 20.4 8.5 7.5 2.6 4.2 34.0 15.7 10.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0

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