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Tariff Authority for Major Ports

G No. 145

New Delhi, 23 July 2011

NOTIFICATION

In exercise of the powers conferred by Section 48 of the Major Port Trusts Act, 1963 (38 of 1963), the Tariff Authority for Major Ports hereby disposes of the proposal received from the Kandla Port Trust for fixation of hire charges for 60 Tonne Mobile Harbour Crane owned and operated by it, as in the Order appended hereto.

(Rani Jadhav)
Chairperson

Tariff Authority for Major Ports
Case No. TAMP/23/2011-KPT

Kandla Port Trust

Applicant

ORDER

(Passed on this 29th day of June 2011)

This case relates to a proposal dated 2 April 2011 received from the Kandla Port Trust for fixation of the hire charges for two Mobile Harbour Cranes (MHC) of 60 Tonne to be deployed for cargo handling operations by the port.

2. The Kandla Port Trust (KPT) has submitted that in order to increase productivity and to reduce the turnaround time it has decided to provide three cranes on each of its berth. Accordingly, two MHC of 60 tonnes each are proposed to be procured from the internal sources of the port and four 60 tonnes MHC through PPP mode. The KPT has filed a separate proposal for fixation of upfront tariff for mechanisation of berth by deployment of MHC through PPP mode, which has been processed separately.

3. The highlights of the proposal is given below:

- (i). The proposed MHC will handle all types of dry bulk cargo, steel & bagged cargo and other break bulk cargo including timber logs.
- (ii). The Board note of the KPT dated 15 September 2009 for fixation of hire charges of two MHC states that the KPT has issued Letter of Acceptance dated 5 August 2010 to M/s.Italgru for procurement of 2 MHC. The capital cost of one 60 Tonne MHC is considered at ₹ 1387.69 lakhs in arriving at the hire charge.
- (iii).
 - (a). The optimal capacity of a MHC is estimated for each type of cargo proposed to be handled by taking into account the different handling rates for the each cargo type and adopting 4000 working hours as per the working hours norms prescribed for estimating the power/ fuel cost of crane for a multipurpose cargo terminal in the upfront tariff guidelines of 2008.
 - (b). The handling rate for Steel and Bagged cargo and other break bulk cargo is considered at 53.33% and 33.33% respectively of the handling rate of 540 tonnes per hour/ crane considered for handling dry bulk cargo. The detailed capacity calculation as given by the KPT in its proposal is given below:

➤ For Dry Bulk Cargo:

Sl. No.	Particulars	Dry bulk cargo
1.	Moves per hour	30
2.	Cargo handled in one move	60 * 0.3= 18 tons
3.	Cargo handled in one hour by one crane	30 * 18=540 tons
4.	Cargo handled in one hour by one crane	540 tons
5.	Annual handling capacity per MHC for 4000 hours (in tonnes)	540 * 4000 = 21,60,000

➤ For Steel/ Bagged Cargo and other break bulk cargo:

Sl. No.	Particulars	Steel & Bagged cargo	Other break bulk cargo
1.	Cargo handled in one hour by one crane	53.33% * 540 = 287.982 tons	33.33% * 540 = 179.98 tons
2.	Annual handling capacity per MHC for 4000 hours (in tonnes)	287.98 * 4000 = 11,51,928	179.982 * 4000 = 7,19,928

- (iv). The capital cost and operating cost estimated by KPT for a 60 Tonne MHC is given below:

				(₹ in lakhs)
Sl. No.	Particulars	Workings furnished for the subject proposal		Estimates
1.	Capital cost			1387.69
2.	Operating cost			
	(i). Repairs and maintenance cost	3,77,95,845 for 3 years for 2 cranes (comprehensive AMC per crane)		62.99
	(ii). Fuel (a*b)	(a). Fuel consumed	33.33 ltrs. per hours*20 hrs per day * 200 days per year = 133320 ltrs. per crane * ₹ 42.39 per liter as on 15 January 2011.	56.51
	(iii). Insurance cost	1% of the capital cost		13.88
	(iv). Depreciation	10.34% of the capital cost		143.49
	(v). License fee (rentals for space provided at wharf)	₹ 210/10 sq. mtr. per month for 200 sq. mtr.		0.50
	(vi). Others (including direct labour)	5% of capital cost		69.38
	Total operating cost			346.76
3.	ROCE	@ 16%		222.03
4.	Total Revenue Requirement estimated by KPT			568.79

- (v). The KPT has assumed 90% of the cargo capacity will be foreign cargo and 10% will be coastal cargo for each cargo category. The hire charge proposed by the KPT in subject proposal is given below:

Particulars	Current proposal	
	Foreign cargo	Coastal cargo
Dry Bulk Cargo	27.43	16.46
Steel and Bagged Cargo	51.43	30.86
Other Bulk Cargo	82.30	49.38

- (vi). The KPT has also proposed performance linked tariff as follows:

- (a). For Dry Bulk Cargo:

Average daily performance for 1 crane (in Metric Tonne)	Ceiling rate per tonne (in ₹)	
	Foreign	Coastal
6072-7077	23.32	13.99
7078-8071	24.69	14.81
8072-9071	26.06	15.64
9072	27.43	16.46
9073-10072	28.80	17.28
10073-11072	30.17	18.10
10073-12072	31.54	18.93

Note: To calculate the incremental ceiling rates as shown above, the base rate was enhanced to 105% for first thousand tonnes and for the 2nd thousand tonnes the rate was enhanced to 110% of the base rate. The rate for third thousand tonnes was arrived by enhancing the base rate by 115%. The same methodology shall also be adopted to calculate the rate beyond 12072 tonnes. Likewise, ceiling rates for performance below 6072 tonnes shall be calculated by reducing the base rate accordingly.

(b). For Steel and Bagged Cargo:

Average daily performance for 1 crane (in Metric Tonne)	Ceiling rate per tonne (in ₹)	
	Foreign	Coastal
2805-3804	46.29	27.77
3805-4804	48.86	29.32
4805	51.43	30.86
4806-5805	54.00	32.40
5806-6805	56.57	33.94

Note: To calculate the incremental ceiling rates as shown above, the base rate was enhanced to 105% for first thousand tonnes and for the 2nd thousand tonnes the rate was enhanced to 110% of the base rate. The same methodology shall also be adopted to calculate the rate beyond 6805 tonnes. Likewise, ceiling rates for performance below 2805 tonnes shall be calculated by reducing the base rate accordingly.

(c). For other break bulk cargo including timber logs:

Average daily performance for 1 crane (in Metric Tonne)	Ceiling rate per tonne (in ₹)	
	Foreign	Coastal
1024-2023	74.07	44.44
2024-3023	78.19	46.91
3024	82.30	49.38
3025-4024	86.42	51.85
4025-5024	90.53	54.32

Note: To calculate the incremental ceiling rates as shown above, the base rate was enhanced to 105% for first thousand tonnes and for the 2nd thousand tonnes the rate was enhanced to 110% of the base rate. The same methodology shall also be adopted to calculate the rate beyond 5024 tonnes. Likewise, ceiling rates for performance below 1024 tonnes shall be calculated by reducing the base rate accordingly.

The KPT has further submitted that the subject proposal was placed before its Board in the meeting held on 18 March 2011 and the minutes of the meeting will be forwarded shortly.

4. In accordance with the consultation process prescribed, the proposal received from the KPT was circulated to the users / user organisations for seeking their comments. We have not received any comments from any users / user organisations.

5. Based on the preliminary scrutiny of the proposal, the KPT was requested to furnish additional information/clarifications on a few points vide our letter dated 21 April 2011. The KPT has furnished their reply on the queries raised by us subsequent to the joint hearing.

6. A joint hearing in this case was held on 5 May 2011 at the Kandla Port Trust (KPT) premises. The KPT made a power point presentation of its proposal. At the joint hearing, KPT and the concerned users/ organisation bodies have made their submissions.

7.1. At the joint hearing, the KPT was advised to furnish its reply to the queries issued by us on 21 April 2011 by 19 May 2011. While doing so, the port was also requested to furnish necessary clarifications/ additional information on the following points:

- (i). Re-look into its proposal alongwith its other proposal for fixing upfront tariff for Mobile Harbour Crane and furnish a revised proposal by 19 May 2011 and circulate its revised proposal to the concerned users advising them to furnish their comments within 7 days.
- (ii). Furnish its comments on the comments to be furnished by Kandla Port Stevedores Association (KPSA).

7.2. At the joint hearing, the Kandla Port Stevedores Association (KPSA) agreed to furnish its comments within 7 days from the date of joint hearing. The KPSA vide email dated 16 May 2011 has informed that they have no comments to offer.

8.1. As agreed at the joint hearing, the KPT has furnished their response vide its letter dated 3 June 2011 to the queries raised by us vide letter dated 21 April 2011. A summary of the queries raised by us and the corresponding replies furnished by the KPT is tabulated below:

Sl. No.	Queries raised by us	Reply furnished by KPT
(i).	<p>The KPT has already filed its proposal for fixation of upfront tariff for mechanization of berth nos.7 and 8 (i.e. for deployment and operation of 60 tonnes capacity Harbour Mobile Crane on Public Private Participation basis) for handling dry bulk cargo, steel and bagged cargo and other cargo. It is observed that in the instant proposal also, the port proposes to deploy two numbers of 60 Tonnes Harbour Mobile Crane for handling the same cargo groups and with the same optimal capacity assessed for the cranes.</p> <p>Users of MHC will be concerned with the productivity and reliability of service offered by the crane and it is immaterial whether the MHC service is operated by the port or by a BOT operator. In the above context, please justify the reasons for having different rates for the same capacity of MHC proposed to be operated by the port and by the BOT operator at its port.</p>	<p>The reason for justifying the rates for the same optimal capacity of Harbour Mobile Cranes proposed to be operated by the port and by the BOT operator at this port does not arise, as the tariff proposed for the port owned cranes is on the basis of the order placed to M/s.Italgru, s.r.l., Italy for 2 nos. of MHCs. As far as capital cost estimated in upfront tariff proposal is concerned, it has been arrived based on the rates given by various suppliers of MHCs like Gottwald, Libherr, etc.</p>
(ii).	<p>The capital cost of MHC is estimated at ₹ 20.15 crores in the upfront proposal whereas in the subject proposal the capital cost of MHC is estimated at ₹ 13.87 crores. Explain the reasons for difference in capital cost for identical capacity MHC(s).</p>	<p>As clarified at Sl. No.(i).</p>
(iii).	<p>Optimal Capacity:</p>	
	<p>(a). Explain the basis of considering moves of a 60T Harbour Mobile Crane (HMC) at 30 per hour.</p>	<p>Number of moves depends on various factors like densities of cargo, type of vessel, crane drivers' expertise, angle at which loading and discharging taking place, size of hatch and evacuation rates, length of berth etc.</p>
	<p>(b). Explain the basis of arriving at the load capacity of MHC at 18 tonnes for each move applying 30% on the capacity of MHC i.e. 60T x 0.30.</p>	<p>As far as 0.3 factor is concerned, the Port is procuring 2 Nos. of MHCs with 18 m³ capacity grab, if we consider average density 1(one), it comes 18T per move. If the crane is 60T, then factor for 18 T comes to 0.3. Generally, it has been seen that theoretical moves for the cranes of 63 T / 64 T crane ranges is less than 35 moves for bulk cargo including containers per hour. Hence 30 moves per hour was taken as assumption looking to various factors mentioned above.</p>
	<p>(c). The upfront tariff guidelines for a multipurpose cargo handling terminal prescribe output norms for three numbers of 20 tonne capacity luffing crane at 10000</p>	<p>As per handling norms prescribed in the guidelines of 2008, the ratio of handling rates for Dry Bulk, Steel and Bagged Cargo and Break bulk Cargo is 1:0.53:0.33.</p>

	<p>tonnes per day for handling dry bulk cargo viz. coal, limestone, etc. Even if the same level of output is assumed as the aggregate of three luffing crane capacity comes to 60T, the per hour output will be 595 tonnes [i.e. 10000T/ day / 16.8 hours (24*0.7)] as against output of 540 tonnes / hour considered by KPT for dry bulk cargo. For steel and bagged cargo and other cargo, the port has assumed the output at 53.33% and 33.33% of the output obtained by the port for arriving at the optimal capacity for dry bulk cargo.</p> <p>The parameters assumed by the KPT for assessing the optimal capacity are not found to be in line with the output norms prescribed in the guidelines for determining the optimal capacity.</p> <p>In this regard it may be noted that based on performance of 100T MHC reportedly achieved at Paradip Port Trust (PPT), output of a 100 Tonnes MHC was considered at 12500 tonnes/ day. With reference to break bulk cargo and other cargo, handling rate was considered at 50% above the norms prescribed in the guidelines.</p>	<p>The optimal cargo handling capacity of the 60T Mobile Harbour cranes is estimated as follows:-</p> <table border="1" data-bbox="885 313 1412 840"> <tr> <td>Cranes Capacity</td> <td>60 T Mobile Harbour Cranes</td> </tr> <tr> <td>Handling rate / day for bulk cargo =</td> <td>$(60 * 0.3 \text{ Tons/ move}) * (30 \text{ moves/ hour}) * (24 \text{ hours a day}) * 0.7 = 9072 \text{ Tons/ day}$</td> </tr> <tr> <td>Handling rate / day for steel and Bagged cargo</td> <td>$= 0.53 * 9072 = 4838.16 \text{ Tons/ day}$</td> </tr> <tr> <td>Handling rate / day for timber logs</td> <td>$= 0.3 * 9072 = 3024 \text{ Tons/ day}$</td> </tr> <tr> <td>Percentage of cargo to handled</td> <td></td> </tr> <tr> <td>All kinds of Bulk Cargo</td> <td>= 60%</td> </tr> <tr> <td>Steel and bagged Cargo</td> <td>= 30%</td> </tr> <tr> <td>Timber logs</td> <td>= 10%</td> </tr> <tr> <td>Optimal Capacity of the cranes</td> <td>$= 365 * 0.7 * (0.6 * 9072 + 0.3 * 4838 + 0.1 * 3024) = 1.84 \text{ Million MTs}$</td> </tr> </table> <p>Note: Percentage of cargo to be handled by the cranes has been based on the profile of dry cargo handled at Kandla Port in the past. As could be seen from the above table, the optimal capacity of the one cranes is obtained at 1.84 Million Metric Tons.</p> <p>We have tried to formulate a scientific way of calculating the optimal capacity of the Mobile Harbor cranes since the guidelines for calculations of Mobile Harbour Cranes capacity are not available. However, if TAMP provides any observations/ modifications on the methodology adopted, suitable changes shall be made to the proposal.</p>	Cranes Capacity	60 T Mobile Harbour Cranes	Handling rate / day for bulk cargo =	$(60 * 0.3 \text{ Tons/ move}) * (30 \text{ moves/ hour}) * (24 \text{ hours a day}) * 0.7 = 9072 \text{ Tons/ day}$	Handling rate / day for steel and Bagged cargo	$= 0.53 * 9072 = 4838.16 \text{ Tons/ day}$	Handling rate / day for timber logs	$= 0.3 * 9072 = 3024 \text{ Tons/ day}$	Percentage of cargo to handled		All kinds of Bulk Cargo	= 60%	Steel and bagged Cargo	= 30%	Timber logs	= 10%	Optimal Capacity of the cranes	$= 365 * 0.7 * (0.6 * 9072 + 0.3 * 4838 + 0.1 * 3024) = 1.84 \text{ Million MTs}$
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	(d). Average output in terms of tonnes/ day achieved by the MHCs, if any, presently deployed by the port may please be furnished cargo-wise (dry bulk cargo, steel and bagged cargo and other cargo) for the last three years 2008-09 to 2010-11.	Reply to this point not furnished.																		
(iv).	The KPT has considered fuel consumption of 33.33 liters per hour in the subject proposal and 32 liters per hour in its upfront tariff proposal. The reasons for difference in fuel consumption for same capacity of the MHC in the two proposals may be explained. The fuel consumption assumed may be justified with reference to the actual consumption of fuel for similar capacity MHC operating in the port or with reference to equipment manufacturer's specifications.	As far as fuel oil consumption, the clarification is the same at point no.(i) above. The fuel consumption is based on the data given by the various manufacturers of MHCs like Gottwald, Libherr, Italgru, etc. It will depend on the make of crane, which the BOT operator will bring and it can be seen the average fuel consumption of different equipment specification.																		
(v).	Since deployment of the MHC is by the port itself the question of license fee payment may not arise. Hence the relevance of considering the license fee as an item of cost in the computation of hire charge of MHC may be explained.	License fee has been included considering opportunity loss.																		

8.2. While furnishing clarifications to the queries raised, the KPT vide letter dated 3 June 2011 has also furnished revised calculation of hire charge wherein the fuel rate is considered at ₹ 42.11 per litre (as of 15.05.2011) at par with the fuel rate assumed in its upfront tariff proposal for Mobile Harbour Cranes as against ₹ 42.39/ litre considered earlier.

- (i). Consequent to modification in the fuel rate, the operating cost and the estimated revenue requirement stands modified as follows:

(₹ in lakhs)				
Sl. No.	Particulars	Workings furnished for the subject proposal		Revised estimates
1.	Operating cost			
	(i). Repairs and maintenance cost	3,77,95,845 for 3 years for 2 cranes		62.99
	(ii). Fuel (a*b)	(a). Fuel consumed	33.33 ltrs. per hours*20 hrs per day * 200 days per year = 133320 ltrs. per crane * ₹ 42.11 per liter	56.14
	(iii). Insurance cost	1% of capital cost		13.88
	(iv). Depreciation	10.34%		143.49
	(v). License fee (rentals for space provided at wharf)	₹ 210/10 sq. mtr. per month for 200 sq. mtr. for each crane		0.50
	(vi). Others (including direct labour)	5% of capital cost (5% * 1387.69)		69.38
	Total operating cost			346.39
2.	ROCE	@ 16%		222.03
3.	Total Revenue Requirement estimated by KPT			568.42

- (ii). The revised hire charges proposed by the KPT (considering 90% cargo as foreign cargo and 10% as coastal cargo) for different categories is given below:

(₹ per tonne)		
Particulars	Foreign cargo	Coastal cargo
Dry bulk cargo	27.41	16.45
Steel and bagged cargo	51.40	30.84
Other break bulk cargo including timber logs	82.25	49.35

- (iii). The performance-linked tariff is also suitably modified in view of the modified rate proposed by the KPT.

9. The proceedings relating to consultation in this case are available on records at the office of this Authority. An excerpt of the arguments made by the concerned parties at the joint hearing will be sent separately to the relevant parties. These details will also be made available at our website <http://tariffauthority.gov.in>.

10. With reference to the totality of the information collected during the processing of this case, the following position emerges:

- (i). The proposal filed by the Kandla Port Trust (KPT) relates to fixation of hire charge for Mobile Harbour Crane (MHC) of 60 Tonne MHC owned and operated by the KPT. The KPT has proposed the hire charge of the MHC with reference to the optimal capacity determined for handling each of the cargo group viz. dry bulk cargo, steel and bagged cargo and other break bulk cargo and tariff proposed is linked to the performance of the crane. It has adopted the number of working hours at 4000 per annum based on normative level of working hours prescribed in the 2008 guidelines for estimating the power/ fuel cost for loading/ unloading equipment deployed at multipurpose cargo berth. The operating cost items except the repairs and maintenance cost are also estimated by the KPT borrowing the norms prescribed in the 2008 guidelines with reference to multipurpose cargo terminal.

At the Paradip Port Trust (PPT), New Mangalore Port Trust (NMPT) and V.O. Chidambaranar Port Trust (VOCPT), where the ports have authorised service provider(s) to deploy and operate the cranes at their respective port, this Authority has prescribed ceiling rates for hire of the MHC irrespective of individual service provider in line with clause 7 of the Tariff Guidelines of 2005.

In the instant case, the MHC is owned and to be opted as well by the KPT itself and hence exercise in hand is for fixing tariff for the services provided by the port and not for any authorised service providers under clause 7 of the Tariff Guidelines of 2005. Tariff fixation in this case will be based on the cost plus method prescribed in the tariff guidelines for 2005 and is subject to review once in three years.

The tariff guidelines of 2005 require fixation of tariff based on the traffic forecast of the port in the five year/ annual plan and the current/ expected growth and the expenditure projections should be in line with traffic adjusted for price fluctuation with reference to current movement of Wholesale Price Index for All Commodities announced by the Govt. of India. As against the above position, the KPT has arrived at the rate with reference to the optimal capacity of the MHC and for the normative cost of the crane borrowing the norms prescribed in the guidelines of 2008. It is noteworthy that tariff guidelines of 2008 are applicable for PPP projects where bidding is done after 26 February 2008 and it does not apply for the existing Major Ports and Private Terminals.

It may be relevant here to point out that the norms prescribed in the tariff guidelines of 2008 for multipurpose cargo terminal, to the extent relevant, were relied upon to test the reasonableness of the norms adopted by the PPT while fixing ceiling hire charge for standard MHC of 100 Tonne capacity. The approach adopted in the case of the PPT has been applied in the VOCPT, the NMPT case as well for determining ceiling rate for hire of MHC provided by authorised service providers and also in the case of the Visakhapatnam Port Trust (VPT) where the port proposed to hire the crane based on tender route. In all these cases, the ceiling rate have been prescribed based on standard capacity of the MHC of 100 Tonne and for normative cost of operating the MHC in line with the approach followed in the PPT.

It may be relevant to state that the tariff prescribed in the existing SOR of KPT for hire of other equipment are based on the overall cost position of the port and not with reference to cost of operating the specific equipment as such. The instant case is the first exercise of determining tariff for operations of MHC at the KPT on stands alone costing. In the absence of availability of activity based costing for offering this particular service, the approach followed by the KPT of determining the rate based on the capacity of the MHC and for normative cost is found to be in line with the approach followed by this Authority for setting tariff for use of the MHC at the PPT, VOCPT, NMPT and Visakhapatnam Port Trust (VPT) and hence the analysis is proceeded on this basis.

- (ii). (a). The KPT has proposed the optimal capacity of the MHCs for different cargo groups by adopting certain parameters. For dry bulk cargo, the port has estimated the handling rate per hour at 540 tons considering the number of moves per hour at 30 and average load per move at 18 tons. For the said handling rate and adopting working hours of 4000, the annual optimal capacity for handling dry bulk cargo is estimated at 21,60,000 Tonnes per annum per MHC.

For steel & bagged cargo and other break bulk cargo, the port has estimated the handling rate per hour at 53.33% (287.98 tons per hour) and 33.33% (179.98 tons per hour) respectively of the handling rate considered for dry bulk cargo.

The optimal capacity of the MHC based on the said output rate and for 4000 working hours of crane is assessed at 1151928 tonne per annum and 719928 tonnes per annum for steel & bagged cargo and other break bulk cargo including timber logs respectively by the KPT.

- (b). The port has filed another proposal for determining upfront tariff for MHC of 60 T capacity to be deployed under PPP mode in its port which is also expected to handle more or less similar commodities as envisaged by the port owned MHC. The capacity derived by the KPT for port owned MHC and those to be operated by the BOT operator is assessed at the same level, which shows that the productivity levels will be comparable.

Capacity of the port owned MHC is considered at the same level as considered in the upfront tariff proposal of the KPT for engaging MHCs on PPP mode.

Accordingly, the capacity for a 60 tonne capacity MHC is considered at 23,80,000 tonnes per annum for handling dry bulk cargo, 9,52,000 tonnes per annum for handling steel and bagged cargo and 5,96,000 for other break bulk cargo including timber logs for determining the hire charge of MHC.

- (iii). The capital cost of one MHC of 60 T with grab considered by the KPT is ₹ 1387.69 lakhs. The port has not furnished any documentary evidence in the form of the purchase order but the Board note submitted to the its Board of Trustees attached along with the proposal states that the KPT has already issued Letter of Acceptance dated 5 August 2010 to its supplier for procurement of 2 MHC. Since the KPT has already placed the order for the MHC, capital cost of the MHC considered at ₹ 1387.69 lakhs per MHC by the KPT is relied upon and considered in the analysis.

- (iv). (a). The KPT has estimated the fuel cost assuming fuel consumption of 33.33 litres per hour. The KPT in their proposal filed for fixation of upfront tariff for mechanisation of facilities for berth Nos.7 and 8 under the PPP mode has estimated the fuel consumption of 33.3 litres/ hour per 60 tonne MHC which is almost at the level estimated in the instant proposal. The KPT has arrived at the fuel consumption reportedly based on the manufactures manual.

The fuel consumption proposed by the KPT at 33.33 litres per hour per crane, which is reportedly based on the manufacturers manual, is relied upon and considered in the analysis.

The KPT has considered the fuel cost at ₹ 42.11 per litre in its revised calculation. The unit cost of fuel is considered at ₹ 45.98 per litre as obtained at the time of finalising this case as against ₹ 42.11 per litre assumed by the KPT.

- (b). The KPT has estimated repairs and maintenance cost at ₹ 62.99 lakhs per crane reportedly based on the Comprehensive Annual Maintenance Contract estimated at ₹ 377.96 lakhs for two cranes for three years. The guidelines for multipurpose cargo terminal prescribes the norm for estimating repairs and maintenance cost at 5% of the capital cost. This norm is applied to test the reasonableness of the cost estimate furnished by the KPT. The repairs and maintenance cost applying the norms comes to ₹ 69.39 lakhs. The repairs and maintenance cost estimated by the KPT appear to be reasonable when compared to the cost estimated as per the norms. The repairs and maintenance cost as estimated by the KPT may, therefore, be accepted.

- (c). The KPT has estimated insurance at 1% of the capital cost which is found to be comparable at the level allowed in the other tariff cases of other Port Trusts and hence may be allowed.

The expense relating to salaries and wages, management and welfare expense is estimated at 5% of the capital cost of crane. The estimate of other expense at 5% of the capital cost is found to be in line with the expense allowed in the NMPT, PPT, and VPT case and hence may be allowed in the determination of tariff for the MHC in the instant case.

- (d). The KPT has also estimated license fee of ₹ 50 lakhs for the space occupied by the MHC at the wharf. For this purpose, it has assumed 200 sq. mtrs. of area will be occupied by one MHC and has applied the license fee prescribed in its Scale of Rates for storage of cargo. When sought explanation for relevance of considering the license fee when the port itself owns the MHC, it has explained that it is towards the opportunity loss. Since deployment of the MHC is by the port itself the question of license fee does not arise and hence in the notional license fee is not considered in the cost estimates.
- (e). Depreciation is estimated at 10.34% on the capital cost of the crane as per the rate prescribed under the Companies Act 1956.
- (v). The KPT has considered 16% ROCE while arriving at the hire charges for MHC. As per the 2005 guidelines, the tariff approved by this Authority has three years validity, hence the return has been allowed on the average Written Down Value of the MHC for the three years period while fixing hire charge of MHC at PPT, NMPT, VPT and VOCPT (other than the upfront proposal). The same approach is followed in the instant case. The ROCE per MHC on the average written down value of MHC for three years period i.e. ₹ 1100.72 lakhs works out to ₹ 176.11 lakhs.
- (vi). The total estimated annual revenue requirement of operating MHC is ₹ 527.15 lakhs which is aggregate of operating cost of crane ₹ 351.04 lakhs plus 16% return of ₹ 176.11 lakhs as against revenue requirement of ₹ 568.42 lakhs estimated by KPT. As stated earlier, hire charge for MHC is arrived for the capacity of broad cargo groups proposed to be handled by the port in line with the approach followed by the KPT. The said approach has also been followed in the fixation of hire charge of MHC as a stand alone facility by operator in other cases like the NMPT, PPT, VPT and VOCPT also.
- (vii). The statement submitted by the KPT for use of MHC has been modified in line with the above analysis. A copy of the modified statement is attached as **Annex - I**.
- (viii). Clause 4.3. of the tariff guidelines of March 2005 stipulates prescription of concessional tariff for coastal cargo. The said clause further stipulates that the cargo related charges for all coastal cargo, other than thermal coal and POL including crude oil, iron ore and iron ore pellets should not exceed 60% of the normal cargo related charges. The KPT has proposed concessional rates for coastal cargo in line with the Government policy, assuming the share of foreign and coastal cargo in the total optimal capacity as 90% and 10% respectively for each of the three cargo groups. The composition of foreign/ coastal cargo considered is same as assumed by the port in its upfront tariff proposal which is being processed simultaneously with this case. The share of foreign/ coastal cargo assumed by the port is relied upon in this analysis.

- (ix). Subject to modification in the optimal capacity and the estimated revenue requirement as explained in the preceding part of the analysis, the hire charges for one MHC of 60 tonne capacity is determined as follows:

Particulars	₹ in per tonne)	
	Foreign cargo	Coastal cargo
Dry bulk cargo	23.07	13.84
Steel and bagged cargo	57.68	34.61
Other break bulk cargo including timber logs	92.13	55.28

- (x). Clause 5.9. of the tariff guidelines of 2005 recommends linking tariff to the benchmark levels of productivity, providing incentive for better performance and disincentive for performance below the benchmark levels. The KPT has also proposed tariff linked to the performance of the MHC allowing increase/ decrease in the base rate by 5% for increase/ decrease in the productivity by 1000 tonnes per day from the base productivity levels considered for the 60 Tonne MHC for different cargo groups.

The performance-linked tariff proposed by the KPT is in line with the scheme prescribed earlier in other cases. The incentive/ penalty scheme proposed by the KPT is approved subject to modifying the rates in view of revised rates determined in this analysis.

The Kandla Stevedores Association at one place has expressed doubt whether the Efficiency Linked Tariff will work and has requested for a single rate on shift basis. At the same time it has suggested to fix base rate and prescribe percentage increase/ reduction over the base rate of efficiency endorsing the proposal of the KPT.

- (xi). Since the tariff is fixed linked to productivity level, it is necessary to define the conditions in order to avoid ambiguity. The KPT has not proposed conditionalities governing the performance linked tariff though it was specifically advised in its upfront tariff proposal to refer to the scheme and the conditionalities prescribed in the VOCPT.

The conditions for arriving at the average berth day output of MHC, provisions to measure performance in case of breakdown of MHC for more than an hour, stoppage of operations of MHC, etc. prescribed for MHCs fixed at PPT, VOCPT, VPT and NMPT is incorporated in this case also. These conditionalities have also been incorporated in the upfront tariff proposal of KPT for mechanisation of berth nos. 7 and 8. In the above cases, a conditionality is prescribed stating that in case vessel is required to be shifted to anchorage due to breakdown/ non-performance of the MHC by the crane operator, shifting charges will be recovered from the crane operator in addition to a penalty of ₹ 1,00,000 and the shifting charges so recovered will be refunded to the vessel's agent while the penalty will be retained by the port. In the instant case since its port owned MHC, the said condition is suitably modified to state that the shifting charge shall not be levied if shifting of vessel to another berth/ anchorage becomes necessary due to breakdown/ non-performance of the MHC. The KPT may come up with a suitable proposal if it finds any other conditions are relevant to the operations of MHC in its port or finds the conditions prescribed by this Authority are not relevant in its case.

- (xii). The tariff guidelines of 2005 stipulate a tariff validity cycle of 3 years. Accordingly, the hire charge for 60 Tonne MHC fixed by this Authority will be valid for three years from the date of implementation of the Order. The rates fixed are subject to review once in the three years following the usual cost plus method and the rates in future cycle will be determined considering capital cost at written down value.

11. In the result, and for the reasons given above and based on a collective application of mind, this Authority approves the following insertion in Schedule 10. – Charges for hire of Mobile Harbour Crane of 60 tonnes under Chapter – IV Miscellaneous Charges in the existing Scale of Rates of the Kandla Port Trust:

“10. Charges for Hire of Mobile Harbour Crane of 60 tonne Capacity

(I). For Dry Bulk Cargo

Average daily crane performance (in Metric Tonne)	Rate per tonne (in ₹)	
	Foreign	Coastal
7000-7999	19.61	11.77
8000-8999	20.76	12.46
9000-9999	21.92	13.15
10000	23.07	13.84
10001-11000	24.22	14.53
11001-12000	25.38	15.23
12001-13000	26.53	15.92

Note: To calculate the incremental ceiling rates as shown above, the base rate was enhanced to 105% for first thousand tonnes and for the 2nd thousand tonnes the rate was enhanced to 110% of the base rate. The rate for third thousand tonnes was arrived by enhancing the base rate by 115%. The same methodology shall also be adopted to calculate the rate beyond 13000 tonnes. Likewise, ceiling rates for performance below 7000 tonnes shall be calculated by reducing the base rate accordingly.

(II). For Break-bulk cargo:

(A). Steel and Bagged Cargo

Average daily crane performance (in Metric tonne)	Ceiling rate per tonne (in ₹)	
	Foreign	Coastal
3000-3999	54.80	32.88
4000	57.68	34.61
4001-5000	60.56	36.34

Note: To calculate the incremental ceiling rates as shown above, the base rate was enhanced to 105% for first thousand tonnes. The same methodology shall also be adopted to calculate the rate beyond 5000 tonnes. Likewise, ceiling rates for performance below 3000 tonnes shall be calculated by reducing the base rate accordingly.

(B). Other break bulk cargo including timber logs

Average daily crane performance (in Metric tonne)	Ceiling rate per tonne (in ₹)	
	Foreign	Coastal
1500-2499	87.52	52.51
2500	92.13	55.28
2501-3500	96.74	58.04

Note: To calculate the incremental ceiling rates as shown above, the base rate was enhanced to 105% for first thousand tonnes. The same methodology shall also be adopted to calculate the rate beyond 3500 tonnes. Likewise, ceiling rates for performance below 1500 tonnes shall be calculated by reducing the base rate accordingly.

Notes:

- (i). The formula for calculation of average berth-day output is as follows:

$$\frac{\text{Total Quantity loaded / unloaded by the MHC}}{\text{Total time taken from vessel commencement to completion}} \times 24 \text{ hours}$$

- (ii). According to the average berth-day output for the vessel from commencement to completion of loading / discharge of cargo, the appropriate rate of crane hire charge will be chosen for recovery from port users for the full quantity of cargo loaded / discharged.
- (iii). If one MHC works with another MHC, the Berth-day output for the crane will be ascertained on the basis of the quantity as recorded by the MHC load meter.
- (iv). In case of breakdown of the crane for more than one hour till the vessel leaves the berth, the quantity handled by MHC will be determined taking into account cargo loaded / discharged prior to break-down divided by crane working hours and multiplied by 24.
- (v). In case of stoppages of operation of MHC for more than two hours at a stretch for reasons not attributable to the MHC, appropriate allowance will be allowed to the crane while calculating the total time of crane operation in the vessel. Stoppages of MHC for less than 2 hours will not be taken into consideration for the above purpose. No allowance will be allowed for stoppages attributable to the MHC. All stoppages in loading / unloading operations during working of MHC are required to be certified by the KPT Officers or any other agency nominated by the KPT in the daily vessel performance report.
- (vi). No shifting charge shall be levied by the port in case shifting of a vessel from berth to another berth/ anchorage become necessary due to breakdown/ non-performance of MHC.
- (vii). In case of dispute on the average output, the decision of the port trust will be final and binding. ”

12. The rates approved will come into effect after expiry of 15 days from the date of its notification in the Gazette of India and shall remain valid for 3 years.

(Rani Jadhav)
Chairperson

Fixation of hire charge for a 60 tonne HMC owned by the port for cargo handling operation at Kandla Port Trust

Sr. No.	Particulars	As furnished by KPT		As considered by TAMP	
		Workings	Estimates	Workings	Estimates
I	Optimal Capacity				
(a)	Dry bulk cargo				
	Handling rate (tonnes per hour)	30 x 18 (30 moves per hour x 18 tonnes per move)	540	Handling rate as considered in the upfront tariff proposal of KPT as per norms for dry bulk cargo like food grains, coal, etc. is 10000 tonnes per day. [Handling rate per hour: 10000/ (24 * 70% utilisation factor)]	595
	No. of working hours	4000	9072	A norm of 4000 hours of working in a year is prescribed for estimating power / fuel cost	4000
	Annual Handling Capacity for (in tonnes) per crane for handling dry bulk cargo	540 x 40000	2160000	595 x 4000 hours	2380000
(b)	Steel & bagged cargo				
	Handling rate (tonnes per hour)	53.33% of handling rate for dry bulk cargo (53.33% of 540)	287.98	Handling rate as considered in the upfront tariff proposal of KPT as per norms for steel & bagged cargo is 4000 tonnes per day. [Handling rate per hour: 4000/ (24 * 70% utilisation factor)]	238
	Annual Handling Capacity (in tonnes) per crane for handling steel and bagged cargo	287.98 x 40000	1151928	238 x 4000 hours	952000
(c)	Other break bulk cargo including timber logs				
	Handling rate (tonnes per hour)	33.33% of handling rate for drybulk cargo (33.33% of 540)	179.98	Handling rate as considered in the upfront tariff proposal of KPT as per norms for other cargo is 2500 tonnes per day. [Handling rate per hour: 2500/ (24 * 70% utilisation factor)]	149
	Annual Handling Capacity (in tonnes) per crane for handling break bulk cargo	180 x 40000	719928	149 x 4000 hours	596000
			Rs. in lakhs		Rs. in lakhs
II	Capital Cost for 1 Mobile Harbour Cranes of 60 Tonnes capacity procured by KPT	As furnished by KPT	1387.69	As considered by KPT	1387.69
III	Operating cost				
	(a). Fuel cost	33.33*42.11*4000 hrs	56.14	33.33 Ltrs./hr. for 4000 hrs @ Rs.45.98 / ltr.	61.30
	(b). Repairs & Maintenance cost	Comprehensive AMC of Rs. 377.95 lakhs for two cranes for 3 years (Rs. 377.95 lakhs/2 cranes/ 3 years)	62.99	As estimated by KPT	62.99
	(c). Insurance	@ 1% of capital cost	13.88	1% on total capital cost	13.88
	(d). Depreciation	@ 10.34% of capital cost	143.49	As per norms prescribed in Companies Act (@ 10.34%)	143.49
	(e). Rent (License Fee)	Rs.216 / 10 sqm / month for 200 sqm for each crane	0.50	License fee not relevant for port owned HMC hence not considered	0.00
	(f). Salaries and wages of management and staff including welfare and other expenses	@ 5% of capital cost	69.38	5% of Gross fixed Asset Value	69.38
	Total (a) to (f)		346.39		351.04
IV	ROCE				
		@ 16% of capital cost	222.03	16% * 1100.72 lakhs (on written down value of the MHC)	176.11
V	Annual Revenue Requirement	(III + IV)	568.42	(III + IV)	527.15
VI	Proposed rate (Rs. per tonne)				
(a)	Drybulk cargo				
	Foreign	568.42 lakhs / (2160000*90% + (2160000*10%*60%))	27.41	527.15 lakhs / (2380000*90% + (2380000*10%*60%))	23.07
	Coastal	60% of rate for foreign cargo	16.45	60% of rate for foreign cargo	13.84
(b)	Steel & bagged cargo				
	Foreign	568.42 lakhs / (1151928*90% + (1151928*10%*60%))	51.40	527.15 lakhs / (952000*90% + (952000*10%*60%))	57.68
	Coastal	60% of rate for foreign cargo	30.84	60% of rate for foreign cargo	34.61
(c)	Other Break bulk cargo including timber logs				
	Foreign	568.42 lakhs / (719928*90% + (719928*10%*60%))	82.25	527.15 lakhs / (596000*90% + (596000*10%*60%))	92.13
	Coastal	60% of rate for foreign cargo	49.35	60% of rate for foreign cargo	55.28

@ Note : Workings for capital employed

Gross value of MHC Rs. in lakhs

Rate of Depreciation as per provisions of Companies Act

	Year 1	Year 2	Year 3
Value of MHC at the beginning of the year			
Depreciation	1387.69	143.49	143.49
Written down value at the end of the year	143.49	1244.20	1100.72
Average written down value			957.23

1387.69

10.34%

**SUMMARY OF THE ARGUMENTS MADE IN THIS CASE DURING THE JOINT HEARING
BEFORE THE AUTHORITY**

F. No.TAMP/23/2011 -KPT	-	Proposal from the Kandla Port Trust for fixation of the hire charges for two Mobile Harbour Cranes (MHC) to be deployed for operations by the port.
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1. A joint hearing in this case was held on 5 May 2011 at the Kandla Port Trust (KPT) premises. The KPT made a power point presentation of its proposal. At the joint hearing, KPT and the concerned users/ organisation bodies have made their following submissions:

Kandla Port Trust

- (i). We will introduce performance linked tariff scheme based on the model already approved at other ports.
- (ii). Calibration of cranes and automatic measurement of tonnage handled in a dusty environment. Further when ship's derricks & MHC work together, it is difficult to apportion the tonnage handled.
- (iii). We will explain the reasons for difference in figures between our crane proposal and those furnished in PPP.

Kandla Port Stevedores Association

- (i). We are doubtful whether Efficiency Linked Tariff (ELT) will work. We prefer single rate. Even per shift rate is better.
- (ii). We suggest to fix a base rate and allow a percentage increase/ reduction over the base rate for efficiency.

Kandla Steamer Agents Association

- (i). MHC hire charge should be always based on per shift basis. Many private ports follow this practice.
