हिंदी रुपांतर

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TARIFF AUTHORITY FOR MAJOR PORTS

GNo.27 **Delhi,** **26 February 2008**

NOTIFICATION

In compliance of the policy direction issued by Government of India in the Ministry of Shipping, Road Transport & Highways (MSRTH) under Section 111 of the Major Port Trusts Act, 1963 (38 of 1963), as conveyed by MSRTH vide its communication No.PR-14019/25/2007-PG dated 12 February 2008, the Tariff Authority for Major Ports hereby notifies the following guidelines for upfront tariff setting for PPP Projects at Major Port Trusts, 2008:

Guidelines for upfront tariff setting for PPP Projects at Major Port Trusts, 2008.

1. Preliminary

1.1. These guidelines may be called 'Guidelines for upfront tariff setting for PPP projects at Major Port Trusts, 2008'.

1.2. These guidelines shall come into effect from the date of their publication in the Gazette of India and shall remain in force until the Government decides to amend or modify or revoke them.

1.3.1. These guidelines shall apply to all PPP projects for which bids will be invited by setting tariff caps upfront in the manner provided hereinafter when such projects are awarded under BOT/BOOT or any other arrangement for private sector participation under the Major Port Trusts Act, 1963 adopted by the Government as amended from time to time.

1.3.2. It is clarified that the Guidelines for Regulation of Tariff at Major Ports, 2004 which were notified in the Gazette of India vide Gazette No.39 dated 31 March 2005, as may be amended from time to time, shall continue to govern the tariff setting for the Major Port Trusts and the private terminals already operating thereat and also for the projects where bidding process is concluded before publication of these guidelines in the Gazette.

1.4. If any difficulty arises in giving effect to these guidelines, the Government, in consultation with the Tariff Authority for Major Ports (TAMP), may make such orders, not inconsistent with the basic features of these guidelines, as may be necessary for removing the difficulty.

2. Overall Approach

2.1. Tariff caps for handling various commodities or providing various services by private operators licensed by Major Port Trusts under Section 42 of the MPT Act shall be set upfront by TAMP following these guidelines.

2.2. Once tariff caps are set for handling different commodities or providing various services for a port, they would apply to all terminals that are bid out subsequently in the same port during the next five years for handling identical commodity or for providing similar services.

2.3. The Port Trust concerned shall approach TAMP with its proposal for fixing tariff caps and shall include the tariff caps so fixed in the bid document as upfront tariff.

2.4. For the purpose of fixing upfront tariff, TAMP shall follow a normative cost based approach which will recognize capital and operating costs estimated based on the norms set by

these guidelines and allow a reasonable return on capital employed, which is 16% as of now.

2.5. The upfront tariff so set by TAMP will only be the ceiling levels.

2.6. While doing so, TAMP should comply with the policy directions issued by the Central Government from time to time, like concessions to coastal cargo / containers, concessions to transshipment containers etc.

2.7.1. Tariff caps will be reviewed once in five years to adjust for any extraordinary events that could not have been foreseen by a prudent person. However, these Tariff caps, as and when so reviewed and revised, will be applicable to projects that are bid out subsequently.

2.7.2. Before reviewing the tariff caps, the norms relating to performance to be applied shall be set at progressively higher levels than those adopted in the past, and would take into account the technological developments.

2.8. Tariff caps will be indexed to inflation but only to an extent of 60% of the variation in Wholesale Price Index (WPI) occurring between 1 January 2008 and 1 January of the relevant year. Such automatic adjustment of tariff caps will be made every year and the adjusted tariff caps will come into force from 1 April of the relevant year to 31 March of the following year.

For this purpose, the WPI for all commodities announced by the Government of India will be considered.

When tariff caps are reviewed as set out under clause 2.7.1 above, variation in WPI will be measured with reference to the WPI as on 1 January of the year in which such a review is made.

Illustration:

(i). Let the tariff cap for a commodity be Rs.x which is set in the year 2008. If the variation in WPI as of 1 January 2009 with reference to 1 January 2008 is (+)5%, then the tariff cap for the year 2009 will be Rs.x [1 + (5/100 x 60/100)] = Rs.1.03x. The revised tariff cap will take effect from 1 April 2009 and will remain in force till 31 March 2010.

(ii). If the variation in WPI as of 1 January 2010 with reference to 1 January 2008 is (-) 3%, then the tariff cap for the year 2010 will be Rs.x [1 + (-3/100 x 60/100)] = Rs.0.982x. The revised tariff cap will take effect from 1 April 2010 and will remain in force till 31 March 2011.

2.9.1. Before commencement of commercial operations, the private operator shall approach TAMP for notification of Scale of Rates containing ceiling rates applicable to his operations, as required under Section 48 of the Major Port Trusts Act 1963 (MPT Act).

2.9.2. The Scale of Rates to be framed by TAMP as per clause 2.9.1 shall be in line with the tariff caps prescribed for the port and included in the bid document, subject to indexation explained in clause 2.8 above. Such Scale of Rates and statement of conditions shall be notified by TAMP in the Gazette of India as required by MPT Act.

3. Estimation of Capacity, Capital Cost and Operating Cost

3.1. Optimum capacity cost of developing such capacity and the associated operating cost for fixing tariff caps shall be determined on the basis of normative estimates.

3.2. The norms for fixing upfront tariff in case of the container handling operation are set out at **Annex-I**, and those for iron ore, coal, liquid bulk and multipurpose berths are at **Annex-II, III, IV** and **V** respectively. TAMP may make necessary adjustments in these norms, based

on the justification to be furnished by the concerned Port Trust keeping in view the port specific conditions having impact on the norms prescribed in these guidelines.

3.3. Capacity

3.3.1. Optimal capacity of a terminal should be determined taking into consideration various components of a facility that may be required to be created, equipment and plant and machineries to be provided, productivity level and utilization level as per the norms prescribed.

3.3.2. Tariff should be prescribed with reference to the optimal capacity of the terminal irrespective of any traffic forecast.

3.4. Capital cost

3.4.1. Capital cost should be estimated for the following broad categories by applying the relevant norms prescribed.

(i). Civil construction cost including dredging and reclamation.
(ii). Equipment and Plant and Machinery
(iii). IT Systems
(iv). Other costs including preliminary expenses, financing cost, interest during construction, etc.

3.5. Operating Cost

3.5.1. The annual operating cost of the terminal shall be estimated following the norms prescribed for operating the terminal at the optimal capacity determined in terms of clause 3.3.1 above.

3.5.2. The operating cost can be grouped under the following major heads:

(i). Power and Fuel
(ii). Repairs and Maintenance.
(iii). Insurance
(iv). Depreciation
(v). Licence Fee for lands and buildings and other port assets allotted by the Port Trusts under the Concession Agreement.
(vi) Other expenses.

3.5.3. Depreciation should be calculated following the Straight Line Method as per the life norms prescribed in the Companies Act.

3.5.4. The Licence Fee (rentals for land, buildings and other port assets) should be taken as per the rate prescribed in the Scale of Rates of the concerned Port Trust.

3.5.5. Revenue share will not be considered as an item of cost for fixing the upfront tariff.

3.6 TAMP in consultation with the concerned Port Trust may decide on a particular item of expenditure, which it considers necessary for incorporation, while computing the upfront tariff cap, for which the norms are not explicit in the Guidelines.

3.7 Return on Capital Employed

3.7.1. A fair return on capital employed will be allowed on the capital cost determined in terms of clause 3.4.1. The norm for determining the quantum of Return on Capital Employed is 16% as of now.

3.8 Revenue requirement and framing of Scale of Rates (SOR)

3.8.1. The annual revenue requirement of operating the terminal at the normative optimal capacity is the sum of the annual operating cost determined in terms of clause 3.5 above and the return on capital employed calculated in the manner prescribed in clause 3.7 above.

3.8.2. The annual revenue requirement is to be achieved through realization of tariff. The tariff cap for different individual services is therefore, to be set appropriately by TAMP in such a way as to achieve the annual revenue requirement.

3.8.3. The conditionalities for providing various services may also be prescribed along with tariff cap following the existing policy guidelines and the position obtaining at the concerned Major Ports.

3.8.4 TAMP, either on its own or based on any complaints received, will enquire into any alleged wrong application of Scale of Rates by an operator. If the operator fails to comply with such directions given, the concerned Port Trust can initiate penal action against the operator in accordance with the provisions of the relevant Concession Agreement.

3.8.5 If any question arises requiring clarifications or interpretation of the Scale of Rates and the statement of conditionalities of a private operator, the matter shall be referred to TAMP and its decision in this regard will be binding on the operator.

4. Performance Monitoring

4.1. The performance norms for a project would be clearly brought out in the bid document itself. The private operator would be expected to perform at least at the levels contained in the concession agreement.

4.2. The actual performance of the private operators will be monitored by TAMP. If any complaint regarding quality of service is received, TAMP will enquire into such allegation and forward its findings to the Port Trust. If any action is to be taken against the private operators, the Port Trust shall initiate appropriate action in accordance with the provisions of the relevant Concession Agreement.

(Brahm Dutt)
Chairman

Annex - I

NORMS FOR FIXATION OF UPFRONT TARIFF FOR SERVICES RENDERED AT CONTAINER TERMINAL

1.0 Tariff Structure

The tariff structure for services performed at a container terminal can be grouped under the following three major groups:

(1) Container Handling Charges
(2) Ground Rent Charges
(3) Miscellaneous Charges

2.0 Norms for apportionment of total Revenue requirement

The total Revenue requirement determined as per these guidelines is apportioned among the aforesaid major tariff groups in the following manner and rates for individual tariff items under each of the groups can be determined.

Tariff Group	Percentage of total revenue allocated
Container Handling Charges	90
Ground Rent Charges	7
Miscellaneous Charges	3

3.0 Norms for calculation of optimal Capacity of Terminal

The optimal capacity of the terminal is reckoned as 70% of the maximum capacity. The optimal capacity of the terminal is the lower value of the optimum quay capacity and optimal stack yard capacity.

3.1 Determination of Optimal Quay Capacity

The optimal quay capacity is 70% of the maximum number of TEUs that can be handled across the quay over a period of one year.

Optimum Quay Capacity = A X B X C X D X E TEUS where

A = Number of gantry cranes deployed for work in an year
B = Number of working hours of gantry cranes in an year
C = Average number of moves per gantry crane
D = TEU ratio
E = 70%

The norms for the above parameters are given in **Table 4.**

Table 4
Norms for calculation of Quay Capacity

Parameter	Norm
A.	Berths length/100 (rounded off)
B.	24 X 365 hours
C.	25 moves/hour (Gross value)
D.	1.3
E.	70%

3.2 Determination of Optimal Yard Capacity

The Optimal Yard Capacity is 70% of the maximum number of Containers (in TEUs) that could pass through the yard in an year.

$$\text{Optimal Yard capacity} = 0.7 \times \frac{G \times H \times P}{S \times D} \text{ TEUs where}$$

G = Total ground slot in TEUs
H = Average Stack height
P = Period in No. of days

S = Surge factor
D = Average Dwell Time (measured as the time in days from the time a container is placed in the yard until it leaves it irrespective of the free time allowed in the Scale of Rates)

The norms for the above parameters are given under **Table 5.**

Table 5
Norms for Calculation of Yard Capacity

Parameter	Norm
G	720 TEus per hectare
H	2.5
P	365
S	1.3
D	4 days for export 2 days for import

4.0 Norms for calculation of Capital cost

4.1. The norms for calculations of capital cost are given under **Table 1** below:

Table 1
Norms for Calculation of Capital Cost

S. No.	Group	Norm	
1.	Civil Construction cost	As per the estimates given by the Port Trust for construction of civil works for achieving maximum capacity.	
2.	Container Handling equipment (*)	Equipment	Cost per unit in Rupees lakhs
		Quay gantry crane	2630
		Rail mounted gantry crane	567
		Rubber Tyred Gantry crane	750
		Reach stacker	190
		Tractor Trailer	38
3.	IT System cost	2% of the sum total of the civil construction and container handling equipment cost.	
4.	Other Cost including Financing cost and Interest during construction.	10% of the sum total of the civil construction and container handling equipment cost.	

(*) Note: Capital cost of equipment should be updated before fixing tariff caps in order to capture the prevailing market rate.

4.2 Norms for determining equipment requirement

Table 2

Norms for estimation of Equipments requirement

S. No.	Equipment	Norms
1.	Quay gantry crane	One for 100 m of berth length
2.	Rail mounted gantry crane	One for handling 6 Rakes/day
3.	Rubber Tyred Gantry crane	Three for each quay gantry crane
4.	Reach stacker and or Top Lift Truck	One for nine RTGs
5.	Tractor Trailers	Six for each Quay gantry crane

5.0 Norms for calculation of operating cost

5.1. The operating cost incurred in a container terminal is grouped under the following major heads and is to be calculated for the optimal capacity as determined under Section 3 above.

(1) Power and Fuel
(2) Repairs and Maintenance
(3) Insurance
(4) Depreciation
(5) Licence Fee
(6) Other expenses consisting of
  (a) Salaries and wages of operating and maintenance staff including welfare and other expenses towards them.
  (b) Management and general overheads comprising
    (i) Salaries of management and administration staff including welfare and other expenses towards them
    (ii) Maintenance of computer and other office equipments
    (iii) Any other miscellaneous cost

5.2. The norms for various items of operating cost given above are given under **Table 3** below:

Table 3
Norms for operating cost

S.No.	COST ITEM	NORM
1.	(a) Power (b) Fuel	8 KWH/TEU * 4 Ltrs/TEU *
2.	(a) Civil repair and maintenance (b) mechanical and electrical equipment repair and maintenance	1% of cost of all civil assets 2% of cost of mechanical and electrical equipment
3.	Insurance	1% of Gross Fixed Assets Value
4.	Depreciation	As per norms prescribed in Companies Act or any norms prescribed in the licence agreement whichever is higher.
5.	Licence Fee (rentals for land and other port assets)	As per the rate prescribed in the prevailing Scale of Rates of the concerned Port Trust.
6.	Other expenses (a) For Terminals having capacity less than 0.5 million TEUs (b) For others	 15% of Gross Fixed Assets value 10% of Gross Fixed Assets value

* **The rate per unit of power and per liter of fuel (diesel) prevailing on date to be taken for calculation of cost**

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Annex - II

NORMS FOR FIXATION OF UPFRONT TARIFF
FOR SERVICES RENDERED AT IRON ORE TERMINAL

1.0 Tariff Structure

The tariff structure for services rendered at a mechanized Iron Ore terminal can be grouped under the following three major groups :

(1) Iron Ore Handling charges
(2) Storage charges
(3) Miscellaneous charges

2.0 Norms for apportionment of total Revenue requirement

The total Revenue requirement determined as per these guidelines is apportioned among the aforesaid major tariff groups in the following manner and rates for individual tariff items under each of the groups can be determined.

Tariff Group	Percentage of total revenue allocated
Iron Ore Handling Charges*	98
Storage charges**	1
Miscellaneous charges	1

* **The above norms are prescribed on the basis that the Iron Ore handling charges is a composite charge comprising of charges for unloading of Iron ore from wagons, storage at the yard for prescribed period and loading on to ship**

** **Storage charges is the charges levied for storage of Iron Ore at the yard beyond allowable period of 25 days.**

3.0 Norms for calculation of optimal capacity of terminal

The optimal capacity of the terminal is reckoned as 70% of the maximum capacity. The optimal capacity is the lower value of the optimal quay capacity and optimal stack yard capacity.

3.1 Determination of optimal quay capacity

The optimal quay capacity is 70% of the maximum or possible quantity of Iron ore that could be loaded on to the ship in a period of one year expressed in tons.

Optimal quay capacity

$$= 0.7 \left\{ \frac{S1}{100} \times P1 + \frac{S2}{100} \times P2 + \frac{S3}{100} \times P3 \right\} \times 365$$

S1 - Percentage share of capacity of capesize vessels
P1 - Ship day output of capesize vessels
S2 - Percentage share of capacity of Panamax vessels
P2 - Shipday output of Panamax vessels
S3 - Percentage of share of capacity of Handy and handymax vessels
P3 - Shipday output of Handy size and Handymax vessels

S1, S2 and S3 are to be determined taking into consideration the draft availability and type of vessel expected to be handled at particular port.

The norms for ship-day output for various type of vessels are given in Table 1

TABLE 1
Norms for Ship-day output

Type of Ship	Norms for Loading
Capesize	60,000 tons/day
Panamax	55,000 tons/day
Handy Size & Handy max	25,000 tons/day

3.2 Determination of Optimal Yard Capacity

The optimal yard capacity is 70% of the maximum quantity of iron ore that could pass through the yard:

$$\text{Optimal Yard capacity} = 0.7 \times A \times \frac{U}{100} \times Q \times T \text{ tons}$$

A - Area of the yard made available by the port for stackyard development in sq.m.
U - Percentage of total stackyard area that could be used for stacking
Q - Quantity that could be stacked per sq.m. of area
T - Turnover ratio of the plot in an year

The norms for the above parameters are given in Table 2.

Table 2
Norms for calculation of optimal Yard Capacity

Parameters	Norm
A	As provided by Port
U	70%
Q	15 ton/sq.m.
T	12

4.0 Norms for calculation of Capital cost

4.1 The norms for calculation of capital cost are given under Table 3 below:

Table 3
Norms for calculation of Capital Cost

Sl.No.	Group	Norm
1.	Civil Construction cost	As per estimates given by the Port Trust for construction of civil works listed under Section 4.2 for achieving maximum capacity
2.	Iron Ore Handling Equipment	As per estimate given by Port Trust for 2 stream working with the list of equipments given under Section 4.3.
3.	Miscellaneous *	5% of civil and equipment cost

*** It includes the cost of all other facilities required such as pollution control, fire fighting equipment, Interest During Construction (IDC), upfront payment, working capital margin, miscellaneous equipments, power supply, lighting, etc.**

4.2 The civil construction cost shall include the following :

Sl. No	Loading Terminal
1.	Berth apron and approach *
2.	Stack yard
3.	Rail tracks for stacker, Reclaimer, Ship loader,Wagons
4.	Conveyor galleries
5.	Transfer towers
6.	Wagon tippling station (or Dumper House)
7.	Marshalling yard
8.	Others a) Buildings b) Roads c) Water supply and drainage system, etc.

* **Does not include berth construction cost and berth side dredging if any, which are to be accounted for framing tariff for berth hire**.

4.3 The ore handling equipment shall include the following :

Sl. No.	Loading Terminal
1.	Ship loader – 2 Nos.,
2.	Reclaimer – 2 Nos.
3.	Wagon tippler – 2 Nos.
4.	Stacker – 2 Nos.
5.	Belt Conveyors with metal detectors and weighers for receiving and Shipping system
6.	Cranes- 2 Nos.
7.	Pay loaders – 4 Nos.
8.	Workshop equipments
9.	Electrical Power & Control switch gears

4.4 Calculation of Berth Hire

For arriving at tariff for berth hire, the revenue requirements is to be calculated. The revenue requirement is operating cost plus 16% ROCE. The Capital cost will comprise of the following :

(i) Cost of construction of berth
(ii) Cost of dredging if any carried out alongside the berth.

The above two costs are to be obtained from the estimates given by the Port Trust. The operating cost is only the maintenance charges for which the norm is 1% of the above capital cost (items (i) and (ii) above).

After calculating the revenue requirement as above, the berth hire per GRT is formulated taking into account the values of GRT of vessels considered for calculation of capacity. For arriving at per hour berth hire rate, the value of berth hire per GRT is to be divided by number of working hours of the vessel which is 70% of 365 X 24 hours.

5.0 Norms for calculation of Operating cost

The operating cost incurred in an iron ore terminal is grouped under the following major heads and is to be calculated for the optimal capacity

(1) Power and fuel cost
(2) Repair and maintenance
(3) Insurance
(4) Depreciation
(5) Licence Fee
(6) Other expenses consisting of
  (a) Salaries and wages of operating and maintenance staff including welfare and other expenses towards them
  (b) Management and general overheads comprising
    (i) Salaries of management and administration staff including welfare and other expenses towards them
    (ii) Maintenance of computers and other office equipment
    (iii) Any other miscellaneous cost

The norms for various items of operating cost given above are given in Table 4 below :

Table 4
Norms for operating cost

Sl. No.	Group	Norm
1.	Power	1.4 unit/ton
2.	(a).Repair and maintenance of civil assets (b).Repair and maintenance of mechanical and electrical equipments including spares	1% of cost of all civil assets 7% of cost of all mechanical and electrical equipments
3.	Insurance	1% of Gross Fixed Assets value
4.	Depreciation	As per norms prescribed in Companies Act or any norms prescribed in the licence agreement whichever is higher.
5.	Licence Fee (rentals for land and other port assets)	As per Scale of Rates of the concerned Major Port Trust
6.	Other expenses	5% Gross Fixed Assets value

Annex - III

NORMS FOR FIXATION OF UPFRONT TARIFF FOR SERVICES RENDERED AT COAL TERMINAL

1.0 Tariff Structure

The tariff structure for services rendered at a mechanized Coal terminal can be grouped under the following three major groups :

(1) Coal Handling charges
(2) Storage charges
(3) Miscellaneous charges

2.0 Norms for apportionment of total Revenue requirement

The total Revenue requirement determined as per these guidelines is apportioned among the aforesaid major tariff groups in the following manner and rates for individual tariff items under each of the groups can be determined.

Tariff Group	Percentage of total revenue allocated
Coal Handling Charges*	98
Storage charges**	1
Miscellaneous charges	1

* **The above norms are prescribed on the basis that the coal handling charges is a composite charge comprising of charges for unloading of coal from wagons, storage at the yard for prescribed period and loading on to ship for coal loading terminal and unloading from ship, storage at the yard for prescribed period and loading onto wagons/trucks for coal unloading terminal.**

** **Storage charges is the charges levied for storage of coal at the yard beyond allowable period of 25 days.**

3.0 Norms for calculation of optimal capacity of terminal

The optimal capacity of the terminal is reckoned as 70% of the maximum capacity. The optimal capacity is the lower value of the optimal quay capacity and optimal stack yard capacity.

3.1 Determination of optimal quay capacity

The optimal quay capacity is 70% of the maximum or possible quantity of coal that could be loaded (in the case of loading terminal) or unloaded (in the case of unloading terminal) on to or from the ship in a period of one year expressed in tons.

Optimal quay capacity

$$= 0.7 \left\{ \frac{S1}{100} \times P1 + \frac{S2}{100} \times P2 + \frac{S3}{100} \times P3 \right\} \times 365$$

S1 - Percentage share of capacity of capesize vessels
P1 - Ship day output of capesize vessels
S2 - Percentage share of capacity of Panamax vessels
P2 - Shipday output of Panamax vessels
S3 - Percentage of share of capacity of Handy and handymax vessels
P3 - Shipday output of Handy size and Handymax vessels

S1, S2 and S3 are to be determined taking into consideration the draft availability and type of vessel expected to be handled at a particular port.

The norms for ship-day output for various type of vessels are given in Table 1

TABLE 1
Norms for Ship-day output

Type of Ship	Norm	
	Loading	Unloading
Capesize	-	50,000 tons/day
Panamax	40,000 tons/day	35,000 tons/day
Handy Size & Handy max	20,000 tons/day	15,000 tons/day

3.2 Determination of Optimal Yard Capacity

The optimal yard capacity is 70% of the maximum quantity of coal that could pass through the yard:

$$\text{Optimal Yard capacity} = 0.7 \times A \times \frac{U}{100} \times Q \times T \text{ tons}$$

A - Area of the yard made available by the port for development in sq.m.
U - Percentage of total yard area that could be used for stacking
Q - Quantity that could be stacked per sq.m. of area
T - Turnover ratio of the plot in an year

The norms for the above parameters are given in Table 2.

Table 2
Norms for calculation of optimal Yard Capacity

Parameters	Norm
A	As provided by Port
U	70%
Q	3 Tons/Sq.m.
T	12

4.0 Norms for calculation of Capital cost

4.1 The norms for calculation of capital cost are given under Table 3 below:

Table 3
Norms for calculation of Capital Cost

Sl. No.	Group	Norm
1.	Civil Construction cost	As per estimates given by the Port Trust for construction of civil works listed under Section 4.2 for achieving maximum capacity
2.	Coal Handling Equipment	As per estimate given by Port Trust for 2 stream working with the list of equipments given under Section 4.3
3.	Miscellaneous *	5% of civil and equipment cost

* **It includes the cost of all other facilities required such as pollution control, fire fighting equipment, upfront payment, interest during construction (IDC), working capital margin, miscellaneous equipments, power supply, lighting, etc.**

4.2 The civil construction cost shall include the following :

Sl. No	Loading Terminal	Unloading Terminal
1.	Berth apron and approach *	Berth apron and approach
2.	Stack yard	Stack yard
3.	Rail tracks for stacker, Reclaimer, Ship loader, Wagons	Rail tracks for stacker, Reclaimer, Ship unloader Wagons
4.	Conveyor galleries	Conveyor galleries
5.	Transfer towers	Transfer towers
6.	Wagon tippling station (or Dumper House)	Wagon loading station and Truck loading station
7.	Marshalling yard	Marshalling yard
8.	Others a) Buildings b) Roads c) Water supply and drainage system	Others a) Buildings b) Roads c) Water supply and drainage system

* **Does not include berth construction cost and berth side dredging if any, which are to be accounted for framing tariff for berth hire.**

4.3 The coal handling equipment shall include the following :

Sl. No	Loading Terminal	Unloading Terminal
1.	Ship loader – 2 Nos.	Ship Unloader- 2 Nos.
2.	Reclaimer- 2 Nos.	Reclaimer – 2 Nos.
3.	Wagon tippler – 2 Nos.	Wagon loader, Truck Loader – 1 No, each
4.	Stacker – 2 Nos.	Stacker – 2 Nos.
5.	Belt Conveyors with metal detectors and weighers	Belt Conveyors with metal detectors and weighers
6.	Cranes – 2 Nos.	Cranes – 2 Nos.
7.	Pay loaders and dozers – 4 Nos.	Pay loaders and Dozers – 4 Nos.
8.	Workshop equipments	Workshop equipments
9.	Electrical Power & Control switch gears	Electrical Power & Control switch gears

4.4 Calculation of Berth Hire

For arriving at tariff for berth hire, the revenue requirements is to be calculated. The revenue requirement is operating cost plus 16% ROCE. The Capital cost will comprise of the following :

(i) Cost of construction of berth
(ii) Cost of dredging if any carried out alongside the berth.

The above two costs are to be obtained from the estimates given by the Port Trust. The operating cost is only the maintenance charges for which the norm is 1% of the above capital cost (items (i) and (ii) above).

After calculating the revenue requirement as above, the berth hire per GRT is formulated taking into account the values of GRT of vessels considered for calculation of capacity. For arriving at per hour berth hire rate, the value of berth hire per GRT is to be divided by number of working hours of the vessel which is 70% of 365 X 24 hours.

5.0 Norms for calculation of operating cost

The operating cost incurred in a Coal terminal is grouped under the following major heads and is to be calculated for the optimal capacity

(1) Power and fuel cost
(2) Repair and maintenance
(3) Insurance

(4) Depreciation
(5) Licence Fee
(6) Other expenses consisting of
  (a) Salaries and wages of operating and maintenance staff including welfare and other expenses towards them
  (b) Management and general overheads comprising
    (i) Salaries of management and administration staff including welfare and other expenses towards them
    (ii) Maintenance of computers and other office equipment
    (iii) Any other miscellaneous cost

The norms for various items of operating cost given above are given in Table 4 below :

Table 4
Norms for operating cost

Sl.No.	Group	Norm
1.	Power	1.4 unit/ton
2.	(a) Repair and maintenance of civil assets (b) Repair and maintenance of mechanical and electrical equipments including spares	1% of cost of all civil assets 7% of cost of all mechanical and electrical equipments
3.	Insurance	1% of Gross Fixed Assets value
4.	Depreciation	As per norms prescribed in Companies Act or any norms prescribed in the licence agreement whichever is higher.
5.	Licence Fee (rentals for land and other port assets)	As per Scale of Rates of the concerned Major Port Trust
6.	Other expenses	5% Gross Fixed Assets value

Annex - IV

NORMS FOR FIXATION OF UPFRONT TARIFF FOR SERVICES RENDERED AT LIQUID BULK TERMINAL

1.0 Tariff Structure

The tariff structure for services rendered at a liquid bulk terminal can be grouped under the following two major groups :

(1) Liquid bulk cargo handling charges
(2) Miscellaneous charges

2.0 Norms for apportionment of total Revenue requirement

The total Revenue requirement determined as per these guidelines is apportioned among the aforesaid major tariff groups in the following manner and rates for individual tariff items under each of the groups can be determined.

Tariff Group	Percentage of total revenue allocated
Liquid Cargo Handling Charges	95
Miscellaneous charges	5

The above norm is prescribed on the basis that the cargo handling charges include the cargo loading or unloading charges (as the case may be), transportation through pipelines and storage charges for storing in tanks, wharfage, etc.

3.0 Norms for calculation of optimal capacity of terminal

The optimal capacity of the terminal is reckoned as 70% of the maximum capacity.

3.1 Determination of optimal capacity

The capacity of the terminal is mainly dependent on the following factors:-

(1) Type of Cargo to be handled
(2) Cargo mix ratio
(3) Size of vessels to be handled

Considering the above factors, the percentage share of the capacity of the vessels carrying the cargoes expected to be handled in the berth are to be determined.

Then the optimal capacity of the terminal is calculated using the following formula:

$$\text{Optimal capacity} = 0.7 \left\{ \frac{S1}{100} \times P1 + \frac{S2}{100} \times P2 + \frac{S3}{100} \times P3 + \ldots \right\} \times 365$$

S1 - Percentage share of capacity of Cargo type 1
P1 - Handling rate of the vessel carrying Cargo type 1
S2 - Percentage share of capacity of Cargo type 2
P2 - Handling rate of the vessel carrying Cargo type 2
S3 - Percentage of share of capacity of Cargo type 3
P3 - Handling rate of the vessel carrying Cargo type 3

S4, P4, S5, P5 and so on depending on the number of different types of Cargo to be handled at the berth of the particular port.

The norms for handling rate of the vessel carrying different types of liquid bulk are given in Table 1 below:

Table 1
Norms for handling rate

Liquid Bulk	Norms for handling rate
Crude	5000 Tons ./ Hour
POL Products	1000 Tons/ Hour
LPG/ LNG	250 Tons/ Hour
Other Liquids	300 Tons/ Hour

4.0 Norms for calculation of Capital cost

4.1 The norms for calculation of capital cost are given under Table 2 below:

Table 2
Norms for calculation of Capital Cost

Sl. No.	Group	Norm
1.	Civil Construction cost	As per estimates given by the Port Trust for construction of civil works listed under Section 4.2 for achieving maximum capacity
2.	Liquid Cargo Handling Equipment	As per estimate given by Port Trust for the list of equipments given under Section 4.3
3.	Miscellaneous *	5% of civil and equipment cost

* **It includes cost of all other facilities required for operation of the terminal and includes upfront payment, interest during construction (IDC), working capital margin.**

4.2 The civil construction cost shall include the following :

Sl. No.	CIVIL STRUCTURES
01.	Berth apron & approach *
02.	Storage Yard
03.	Tankages
04.	Roads
05.	Buildings, Water Supply, Sewage, etc.

*** Does not include berth construction cost and berth side dredging if any, which are to be accounted for framing tariff for berth hire.**

4.3 The equipment cost shall include the following :

1) Marine loading/ unloading equipment/ flexible Hoses
2) Pipelines
3) Fire Fighting Equipments
4) Power and Lighting, Communication

4.4 Calculation of Berth Hire

For arriving at tariff for berth hire, the revenue requirements is to be calculated. The revenue requirement is operating cost plus 16% ROCE. The Capital cost will comprise of the following :

(i) Cost of construction of berth
(ii) Cost of dredging if any carried out alongside the berth.

The above two costs are to be obtained from the estimates given by the Port Trust. The operating cost is only the maintenance charges for which the norm is 1% of the above capital cost (items (i) and (ii) above).

After calculating the revenue requirement as above, the berth hire per GRT is formulated taking into account the values of GRT of vessels considered for calculation of capacity. For arriving at per hour berth hire rate, the value of berth hire per GRT is to be divided by number of working hours of the vessel which is 70% of 365 X 24 hours.

5.0 Norms for calculation of operating cost

The operating cost incurred for operating a multi purpose cargo berth is grouped under the following major heads and is to be calculated for the optimal capacity

(1) Power and fuel cost
(2) Repair and maintenance
(3) Insurance
(4) Depreciation
(5) Licence Fee
(6) Other expenses consisting of
  (a) Salaries and wages of operating and maintenance staff including welfare and other expenses towards them
  (b) Management and general overheads comprising
    (i) Salaries of management and administration staff including welfare and other expenses towards them
    (ii) Maintenance of computers and other office equipment
    (iii) Any other miscellaneous cost

The norms for various items of operating cost given above are given in Table 3 below:

Table 3
Norms for operating cost

Sl. No.	Group	Norm
1.	Power *	2.4 Lakhs unit/annum/hectare
2.	(a) Repair and maintenance of civil assets (b) Repair and maintenance of mechanical and electrical equipments including spares	1% of cost of all civil assets 2% of cost of all mechanical and electrical equipments
3.	Insurance	1% of Gross Fixed Assets value
4.	Depreciation	As per norms prescribed in Companies Act or any norms prescribed in the license agreement whichever is higher.
5.	Licence Fee (rentals for land and other port assets)	As per Scale of Rates of the concerned Major Port Trust
6.	Other expenses	1% Gross Fixed Assets value

*** As Major power consumption is towards lighting, it is expressed in Units per hectare area taking into account other power requirements**

Annex - V

NORMS FOR FIXATION OF UPFRONT TARIFF FOR SERVICES RENDERED AT MULTI PURPOSE BERTH

1.0 Tariff Structure

The tariff structure for services rendered at a multi purpose berth can be grouped under the following three major groups :

(1) Cargo Handling charges
(2) Storage charges
(3) Miscellaneous charges

2.0 Norms for apportionment of total Revenue requirement

The total Revenue requirement determined as per these guidelines is apportioned among the aforesaid major tariff groups in the following manner and rates for individual tariff items under each of the groups can be determined.

Tariff Group	Percentage of total revenue allocated
Cargo Handling Charges*	90
Storage Charges **	5
Miscellaneous charges	5

* **The above norm is prescribed on the basis that the cargo handling charges include the cargo loading or unloading charges (as the case may be), transportation and storage charges, wharfage, etc**.

** **Storage Charges are the charges levied for storage of cargoes at the transit area beyond allowable period of 5 days for import cargo and 15 days for export cargo.**

3.0 Norms for calculation of optimal capacity of terminal

The optimal capacity of the terminal is reckoned as 70% of the maximum capacity.

3.1 Determination of optimal capacity

The capacity of the terminal is mainly dependent on the following factors:-

(1) Type of Cargo to be handled
(2) Cargo mix ratio
(3) Size of vessels to be handled

Considering the above factors, the percentage share of the capacity of the vessels carrying the cargoes expected to be handled in the berth are to be determined. Then the optimal capacity of the terminal is calculated using the following formula:

Optimal capacity

$$= 0.7 \left\{ \frac{S1}{100} \times P1 + \frac{S2}{100} \times P2 + \frac{S3}{100} \times P3 + \ldots. \right\} \times 365$$

S1 - Percentage share of capacity of Cargo type 1
P1 - Handling rate of the vessel carrying Cargo type 1
S2 - Percentage share of capacity of Cargo type 2
P2 - Handling rate of the vessel carrying Cargo type 2
S3 - Percentage of share of capacity of Cargo type 3
P3 - Handling rate of the vessel carrying Cargo type 3

S4, P4, S5, P5 and so on depending on the number of different types of Cargo to be handled at the berth.

The norms for handling rate of the vessel carrying different type of cargo are given in the Table 1 below:

Table 1
Norms for cargo handling rate

Cargo	Norm
Dry Bulk a) Food grains & Fertilizer	10000 Tons/day for vessels of more than 30000 Tons parcel size
b)Coal,Lime stone, minerals, etc.	7500 Tons/ day for lower parcel size vessels 10000 Tons/ day
Break bulk a) Steel & bagged cargo b) Others	4000 Tons/ day 2500 Tons/ day

4.0 Norms for calculation of Capital cost

4.1 The norms for calculation of capital cost are given under Table 2 below:

Table 2
Norms for calculation of Capital Cost

Sl. No.	Group	Norm
1.	Civil Construction cost	As per estimates given by the Port Trust for construction of civil works listed under Section 4.2 for achieving maximum capacity.
2.	Liquid Cargo Handling Equipment	As per estimate given by Port Trust for the list of equipments given under Section 4.3
3.	Miscellaneous *	5% of civil and equipment cost

*** It includes cost of all other facilities required for operation of the berth and includes upfront payment, interest during construction (IDC), working capital margin.**

4.2 The civil construction cost shall include the following :

Sl. No.	CIVIL STRUCTURES
01.	Berth apron & approach *
02.	Storage Yard
03.	Transit sheds
04.	Roads, Rail tracks
05.	Buildings, Water Supply, Sewage, etc.

*** Does not include berth construction cost and berth side dredging if any, which are to be accounted for framing tariffs for berth hire**

4.3 The equipment cost shall include the following :

1) Level Luffing wharf cranes of 20 T capacity with grab / hook attachments } 3 Nos.
2) Fork Lift Truck 5 Tons 4 Nos.
3) Fork Lift Truck 10 Tons 2 Nos.
4) Pay loaders 10 Tons 3 Nos.
5) Power and Lighting, Communication

4.4 Calculation of Berth Hire

For arriving at tariff for berth hire, the revenue requirements is to be calculated. The revenue requirement is operating cost plus 16% ROCE. The Capital cost will comprise of the following :

(i) Cost of construction of berth
(ii) Cost of dredging if any carried out alongside the berth.

The above two costs are to be obtained from the estimates given by the Port Trust. The operating cost is only the maintenance charges for which the norm is 1% of the above capital cost (items (i) and (ii) above).

After calculating the revenue requirement as above, the berth hire per GRT is formulated taking into account the values of GRT of vessels considered for calculation of capacity. For arriving at per hour berth hire rate, the value of berth hire per GRT is to be divided by number of working hours of the vessel which is 70% of 365 X 24 hours.

5.0 Norms for calculation of operating cost

The operating cost incurred for operating a multi purpose cargo berth is grouped under the following major heads and is to be calculated for the optimal capacity

(1) Power and fuel cost
(2) Repair and maintenance
(3) Insurance
(4) Depreciation
(5) Licence Fee
(6) Other expenses consisting of

(a) Salaries and wages of operating and maintenance staff including welfare and other expenses towards them
(b) Management and general overheads comprising

(i) Salaries of management and administration staff including welfare and other expenses towards them
(ii) Maintenance of computers and other office equipment
(iii) Any other miscellaneous cost

The norms for various items of operating cost given above are given in Table 3 below:

Table 3
Norms for operating cost

Sl. No.	Group	Norm
1.	a) Power b) Fuel For 5 T FLT For 10 T FLT For 10 T payloader	100 units /Hour/Crane* 7 ltrs /Hour* 10 ltrs/ Hour* 12 ltrs/ Hour*
2.	(a) Repair and maintenance of civil assets (b) Repair and maintenance of mechanical and electrical equipments including spares	1% of cost of all civil assets 5% of cost of all mechanical and electrical equipments
3.	Insurance	1% of Gross Fixed Assets value
4.	Depreciation	As per norms prescribed in Companies Act or any norms prescribed in the license agreement whichever is higher.
5.	Licence Fee (rentals for land and other port assets)	As per Scale of Rates of the concerned Major Port Trust
6.	Other expenses	5% Gross Fixed Assets value

*** A norm of 4000 hours of working in an year is to be adopted**.

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