২৬/০৪/২০২১ইং তারিখে অনুষ্ঠিত কর্তৃপক্ষ সভা নং- ০৪/২০২১ এর আলোচ্য বিষয় ও সিদ্ধান্ত ঃ

আলোচ্য বিষয়-০৩ ঃ বাঅনৌপ-কর্তৃপক্ষের পন্টুন, বার্জ, ফ্ল্যাট ইত্যাদি মেরামতের উদ্দেশ্যে বিদ্যমান রেট সিডিউল হালনাগাদকরনের লক্ষ্যে গঠিত কমিটির প্রতিবেদন কর্তৃপক্ষের বোর্ড সভা কর্তৃক অনুমোদন প্রসংগে।

সিদ্ধান্ত ঃ (১)বাঅনৌপ-কর্তৃপক্ষের পন্টুন, ফ্ল্যাট, বার্জ ইত্যাদি মেরামত কাজের গুনগত মান বজায় রাখার স্বার্থে প্রধান প্রধান আইটেমসমূহের মূল্য/বাজার দর, কাজের মজুরী, ভ্যাট, আইটি ইত্যাদি বৃদ্ধি পাওয়ায় সংশ্লিষ্ট কমিটি কর্তৃক প্রস্তাবিত হালনাগাদকৃত রেট সিডিউল (সংলাগ-০১) অনুমোদন করা হলো।

(২) পরবর্তীতে প্রধান প্রধান আইটেমসমূহের মূল্য/বাজার দর, মজুরী, ভ্যাট, আইটি ইত্যাদি পরিবর্তনের সাথে সামঞ্জস্যতা রেখে প্রতি ০৩ (তিন) বছর অন্তর আলোচ্য রেট সিডিউল হালনাগাদ করতে হবে।

স্বাক্ষরিত/-
০৫/০৫/২০২১
(কমডোর গোলাম সাদেক)
চেয়ারম্যান
বাঅনৌপ-কর্তৃপক্ষ, ঢাকা।

## বাংলাদেশ অভ্যন্তরীণ নৌ-পরিবহন কর্তৃপক্ষ
১৪১-১৪৩, মতিঝিল বা/এ, ঢাকা-১০০০।

নথি নং- ১৮.১১.০০০০.০৩৩.০৬.০০২.২০১৫(খন্ড-০৭)

তারিখঃ ০৫/০৫/২০২১ইং

সদয় অবগতির জন্য প্রদান করা হলো ঃ
প্রধান প্রকৌশলী(মেরিন), যান্ত্রিক ও নৌ-প্রকৌশল বিভাগ, বাঅনৌপক, ঢাকা।
(আগামী ৭(সাত) দিনের মধ্যে সিদ্ধান্তের বাস্তবায়ন অগ্রগতির প্রতিবেদন প্রেরণ করতে হবে।)

০৫.০৫.২০২১

(মুহাম্মদ আবু জাফর হাওলাদার)
পরিচালক(প্রশাসন ও মানব সম্পদ)

সংলাগ-০২

# Bangladesh Inland Water Transport Authority

141-143, Motijheel Commercial Area, Dhaka-1000

## Proposed Rate Schedule for Repairing of Pontoon, Flat, Barge etc.

| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1 | **Renewal of MS Plate (LR/DNV-GL/Member of IACS Grade-A Marine Quality MS Plate) :** | | |
| | Removal of damaged MS plates of deck, hull, bottom, bulkhead, girder, roofs etc. of the pontoon by gas cutter and replacement with the new MS plate of the following thickness by welding on both sides according to condition. The contractor will receive all the scrap materials found by replacing the MS plate and he will fix the unit prices for each of the following plates by deducting the value of scrap material. | | |
| | a) 3 mm | $m^2$ | 3,645 |
| | b) 5 mm | $m^2$ | 6,075 |
| | c) 6 mm | $m^2$ | 7,290 |
| | d) 7 mm | $m^2$ | 8,505 |
| | e) 8 mm | $m^2$ | 9,720 |
| | f) 9 mm | $m^2$ | 10,935 |
| | g) 10 mm | $m^2$ | 12,150 |
| | h) 12 mm | $m^2$ | 14,580 |
| | i) 14 mm | $m^2$ | 17,009 |
| | j) 15 mm | $m^2$ | 18,224 |
| | k) 16 mm | $m^2$ | 19,439 |
| | l) 18 mm | $m^2$ | 21,869 |
| | m) 20 mm | $m^2$ | 24,299 |
| | n) 25 mm | $m^2$ | 30,374 |
| | The unit price of MS plate of other thickness will be fixed in the same process by deducting the respective value of the scrap material. | | |
| 2 | **Renewal of Small Pieces MS Plate:** | Kg | 143 |
| | Removal of small size damaged MS plates of the pontoon by gas cutter and replacement with the new Marine quality MS plate of required thickness by welding on both sides according to condition. Base plate, doubler plate, bracket, bollard's base plate etc are included in this item. However, the size of each piece of the plate will be from 0.09 to 0.25 $m^2$. | | |
| 3 | **Repair of the Damaged MS Plate :** | | |
| | Removal of bent/crushed MS plate by gas cutter and straighten them by applying heat/pressure and attaching them again by welding on both sides according to condition. | | |
| | a) 6 to 8 mm | $m^2$ | 1,886 |
| | b) 9 to 12 mm | $m^2$ | 2,830 |

(মুহাম্মদ আবু জাফর হাওলাদার)
পরিচালক (প্রশাসন ও মানব সম্পদ)

| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 4 | **Renewal of MS Pipe:** | | |
| | Removal of damaged MS Pipes of Post, Railing, Bollard, Scupper etc. of the pontoon by gas cutter and replacement with the new MS Pipes of required thickness and diameter of the Pontoon by welding on both sides according to condition. The contractor will receive all the scrap materials found by replacing the MS Pipe and he will fix the unit prices the pipes by deducting the value of scrap material. | | |
| | a) dia 1.5 inch | m | 472 |
| | b) dia 2 inch | m | 574 |
| 5 | **Renewal of Stainless Steel (SS) Pipe:** | | |
| | Removal of damaged Pipes of Railing of the pontoon by gas cutter and replacement with the new SS Pipes of required thickness and diameter of the Pontoon by welding on both sides according to condition. The contractor will receive all the scrap materials found by replacing the SS Pipe and he will fix the unit prices the pipes by deducting the value of scrap material. | | |
| | a) dia 1 inch | m | 390 |
| | b) dia 1.5 inch | m | 607 |
| | c) dia 2 inch | m | 808 |
| 6 | **Renewal of GI Pipe:** | | |
| | Removal of damaged Pipes of Railing of the pontoon by gas cutter and replacement with the new GI Pipes of required thickness and diameter of the Pontoon by welding on both sides according to condition. The contractor will receive all the scrap materials found by replacing the GI Pipe and he will fix the unit prices the pipes by deducting the value of scrap material. | | |
| | a) dia 1 inch | m | 271 |
| | b) dia 1.5 inch | m | 426 |
| | c) dia 2 inch | m | 513 |
| 7 | **Repair of the Damaged MS/SS/GI Pipe :** | m | 125 |
| | Removal of bent/crushed MS/SS pipe by gas cutter and straighten them by applying heat/pressure and attaching them again by welding on both sides according to condition. | | |
| 8 | **Renewal of MS Angle (BSRM, KSRM, RSRM etc):** | kg | 112 |
| | Removal of damaged MS angles and replacement with new MS angles of suitable size from 38×38×6 mm to 75×75×6 mm by welding. | | |
| 9 | **MS Angle Repair :** | m | 206 |
| | Removal of curved MS angles by gas cutter and straighten them by applying heat/pressure and attaching them again by welding. | | |
| 10 | **Renewal of Cantilever Deck :** | m | 1,164 |
| | Construction of the cantilever deck (150 mm × 6 mm) behind the deck of the pontoon by the new 6 mm MS Plate according to the instructions with MS bracket at an interval of 600 mm by welding. The size of the bracket is 150×150×6 mm. | | |

(মুহাম্মদ আবু জাফর হাওলাদার)
পরিচালক (প্রশাসন ও মানব সম্পদ)

| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 11 | **Cantilever Deck Repair :**<br>The cantilever deck and the brackets will be repaired by removing the old and damaged (bent, distorted etc) cantilever deck and brakets by gas cutter and replaced them by the existing old usable plates of the pontoon by welding. The size and dimensions of the cantilever deck and the brackets will be the same as mentioned in item "Renewal of Cantilever Deck". | m | 400 |
| 12 | **Renewal of Bilge Angle :**<br>The new bilge angle of size 75 x 75 x 8 mm will be fitted by welding continuously along the length of the angle so that no water can enter inside. The weld beads should be smooth and uniform all through the length. | m | 1,002 |
| 13 | **Bilge Angle Repair :**<br>Bilge angle shall be repaired by removing the damaged bilde angle by gas cutter and replacing them by existing old usable bilge angle by welding continuously along the length of the angle so that no water can enter inside. The weld beads should be smooth and uniform all through the length. | m | 206 |
| 14 | **Removing Old Welding & Re-welding:**<br>Old damaged welding of any thickness of any part of Pontoon will be removed completely by chipping process and welding again in the same manner as it was before (Butt Joint / Fillet Joint / Angle etc). | m | 165 |
| 15 | **Filling up the Small Holes of Pitted Plate:**<br>The small holes of the pitted plate will be filled by welding. The average size of each hole will be about 3 $cm^3$. | nos. | 30 |
| 16 | **Renewal of CGI Sheet / Tin :**<br>Removal of the damaged CGI Sheet/Tin of the wall/ceiling of the superstructure of the pontoon and replacement them with the new color coated CGI Sheet / Tin of minimum thickness 0.46 mm fitted with ¼ inch galvanized nut-bolts and washers. During the time of fitting of CGI Sheet / Tin, there should be overlapping of two waves in transverse direction and minimum 150 mm in the longitudinal direction. The overlapping size will not be counted for the bill (this item includes all other goods and wages except MS angles. The price of the MS angles will be included in item "Renewal of MS Angles". | $m^2$ | 700 |
| 17 | **CGI Sheet/Tin Repair:**<br>The CGI Sheet/Tin of the superstructure wall and roof will be repaired by removing the damaged CGI Sheet/Tin and replacing with usable existing CGI Sheet/Tin of minimum thickness 0.46 mm fitted with ¼ inch galvanized nut-bolts and washers in the process as mention in "Renewal of CGI Sheet /Tin". | $m^2$ | 250 |
| 18 | **Door Construction (New) :**<br>The Door will be constructed by 18 Gauge GI Sheet and the door frame will be constructed by 38X38X6 MS angles by spot welding at an interval 100 mm. Two flat bars of 38X5 mm will be attached by welding with frame in the middle of the door. To open and close the door, 2 nos handles made of MS Flat Bars will be welded on both sides of the door. The door will be connected to the superstructures by 3 nos Pre-Fabricated MS Hinges which will be welded to the superstructures. | $m^2$ | 2,870 |

(মুহাম্মদ আবু জাফর হাওলাদার)
পরিচালক (প্রশাসন ও মানব সম্পদ)

| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 19 | **Door Repair :** | $m^2$ | 900 |
| | Removing old / damaged parts of the door and repairing the door by the old and usable materials of the pontoon. If the new angle is required then it will be included in Item "Renewal of MS Angle" and if the new GI/BP Sheet is required then it will be included in Item "GI/BP Sheet (New)". The rest of the materials will be considered to be included in this item. | | |
| 20 | **Window Construction (New) :** | $m^2$ | 2,272 |
| | The window will be constructed by 18 Gauge GI Sheet and the frame will be constructed by 38 X 5 mm MS Flat Bars by spot welding at an interval 100 mm. The window will be double shuttered and the average dimension will be 1150 X 800 mm. Each shutter will be connectec by 3 nos MS Hinges of 19 mm dia which will be welded to the superstructures. There will be single MS Flat Bar handle to be welded at each shutter of the window. | | |
| 21 | **Window Repair :** | $m^2$ | 1,000 |
| | The window will be repaired by the existing usable materials of the pontoon according to the standard size of the pontoon as mentioned in Item "Window Construction (New)". If the new Flat Bar is required then it will be included in Item "Flat Bar (New)" and if the new GI Sheet is required then it will be included in Item "GI/BP Sheet (New)". The rest of the materials will be considered to be included in this item. | | |
| 22 | **New Construction of Window Grating:** | $m^2$ | 1,000 |
| | The frames of the grating will be constructed by 19 X 5 MS Flat Bars. The pattern of the grating will be square mesh of dimension 75 × 75 mm. The grating will be constructed from MS Rod of 6 mm dia. The Grating will be welded to the window frame of the superstructure. | | |
| 23 | **Repair of Window Grating :** | $m^2$ | 250 |
| | The window grating will be repaired by the existing usable materials according to the standard size as mentioned in Item "New Construction of Window Grating". If the new Flat Bar is required then it will be included in Item "Flat Bar (New)" and if the new MS Rod is required then it will be included in Item "MS Rod". | | |
| 24 | **Repair of Single Shutter Window:** | No. | 130 |
| | The single shutter window will be repaired by removing the damaged portion of the single shutter window by gas and replacing with new 18 Gauge GI Sheet/ BP Sheet and fixing by welding the shutter with MS hinges of 11 mm Dia. The new GI Sheet / BP Sheet required for repairing the single shutter window will be included in Item "GI/BP Sheet (New)". | | |
| 25 | **GI Sheet / BP Sheet (new) :** | $m^2$ | 1,213 |
| | The partially or completely damaged GI sheets of the doors and windows will be removed and replaced by 18 Gauge new GI sheets with spot welding. | | |
| 26 | **The following goods will be supplied and welded according to the** | | |
| | a) 200 mm Galvanized Catch Hook (6mm) | No. | 40 |
| | b) 200 mm Steel Tower Bolt | No. | 50 |
| | c) Tri Circle Lock (75w) | No. | 260 |
| | d) Door ring (75 dia and 6mm rod) | No. | 40 |
| | e) Door & window hinge | No. | 80 |

(মুহাম্মদ আবু জাফর হাওলাদার)
পরিচালক (প্রশাসন ও মানব সম্পদ)

| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 27 | **Toilet Construction (New) :** | No. | 59,241 |
| | The new toilet will be contructed with MS plate and MS angle according to the instruction and the dimension of the toilet shall be Length-1500 mm, Width-900 & Height-2750 mm. There will be BP Sheet door, ventilator, big size toilet pan with foot rest, plate box for holding the pan, doubler plate, Spikes for Concrete plaster, CGI Sheet roof etc. | | |
| | a) 6 mm MS plate : | | |
| | i) 1500 × 900 × 6 mm - 2 Nos. | | |
| | ii) 900 × 900 × 6 mm - 1 No. | | |
| | b) The roof of the toilet will be constructed by the new color coated CGI Sheet/Tin of minimum thickness 0.46 mm fitted with 1/4 inch galvanized nut-bolts and washers. During the time of fitting of GI Sheet / Tin, there should be overlapping of two waves in transverse direction and minimum 150 mm in the longitudinal direction. The dimension of the roof will be 900 × 1500 mm. | | |
| | c) The door will be constructed with 18 Gauge GI Sheet/BP Sheet by spot welding. The dimension of the door will be 1900 × 700 mm. | | |
| | d) 50 nos Spikes of MS Plate with dimension 75×75 mm shall be welded on the wall of the toilet (the part of the wall where there will be concrete plaster) | | |
| | e) Concrete casting maintaining the standard ratio of 1:2:4 of the materials and net cement finish will be done on the floor and on the part of the wall where there are spikes. | | |
| | f) 1 No. scupper pipe of MS Plate will be fitted by welding. The dimension of the scupper pipe is Length 2.00 m, dia 130-150 mm and thickness of 6 mm. | | |
| | g) 1 no Large size toilet pan with footrest will be supplied and fiited on the concrete floor of the toilet. | | |
| | h) MS plate for making box under the pan : | | |
| | i) 1 No. 490 × 330 × 6 mm | | |
| | ii) 2 Nos. 490 × 100 × 6 mm | | |
| | iii) 2 Nos. 330 × 100 × 6 mm | | |
| | i) Doubler Plate around scupper pipe : | | |
| | 2 Nos. 300 × 300 × 6 mm | | |
| | j) MS Angle : | | |
| | Size: L-50 × 50 × 6 mm | | |
| | Length: 30.00 m | | |
| | k) Supply and fitting of country made wall tiles less than, equal or equivalent to 250mm x 330mm in size on walls and floors | | |
| 28 | **Toilet Repair :** | | |
| | The toilet will be repaired with new MS plate, MS angle, GI/BP Sheet (for door), CGI Sheet, ventilator, big size toilet pan with foot rest, plate box for holding the pan, doubler plate, Spikes for concrete plaster, concrete plaster etc. according to the instruction. The dimension of the toilet shall be Length-1500 mm, Width-900 & Height-2750 mm. | | |
| | a) 6 mm MS plate : | $m^2$ | 7,290 |
| | i) 1500 × 900 × 6 mm - 2 Nos. | | |
| | ii) 900 × 900 × 6 mm - 1 No. | | |

(মুহাম্মদ আবু জাফর হাওলাদার)
পরিচালক (প্রশাসন ও মানব সম্পদ)

| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| | b) The roof of the toilet will be constructed by the new color coated CGI Sheet/Tin of minimum thickness 0.46 mm fitted with 1/4 inch galvanized nut-bolts and washers. During the time of fitting of GI Sheet / Tin, there should be overlapping of two waves in transverse direction and minum 150 mm in the longitudinal direction. The dimension of the roof will be 1900 × 1500 mm. | $m^2$ | 700 |
| | c) The door will be constructed with 18 Gauge GI Sheet/BP Sheet by spot welding. The dimension of the door will be 1900 × 700 mm. | No. | 1,846 |
| | d) 50 Nos. Spikes of MS Plate with dimension 75×75×5 mm shall be welded on the wall of the toilet (the part of the wall where there will be concrete plaster) | No. | 1,574 |
| | e) Concrete casting maintaining the standard ratio of 1:2:4 of the materials and net cement finish will be done on the floor and on the part of the wall where there are spikes. | No. | 1,746 |
| | f) 1 No. scupper pipe of MS Plate will be fitted by welding. The dimension of the scupper pipe is Length 2.00 m, dia 130-150 mm and thickness of 6 mm. | No. | 6,441 |
| | g) 1 No. Large size toilet pan with footrest will be supplied and fiited on the concrete floor of the toilet. | No. | 1,200 |
| | h) MS plate for making box under the pan : | $m^2$ | 7,290 |
| | i) 1 No. 490 × 330 × 6 mm | | |
| | ii) 2 Nos. 490 × 100 × 6 mm | | |
| | iii) 2 Nos. 330 × 100 ×6 mm | | |
| | i) Doubler Plate around scupper pipe : | $m^2$ | 7,290 |
| | 2 Nos. 300 × 300 × 6 mm | | |
| | j) MS Angle : | kg | 112 |
| | Size : L-50 × 50 × 6 mm | | |
| | Length : 30.00 m | | |
| | k) Supply and fitting of country made wall tiles less than, equal or equivalent to 250mm x 330mm in size on walls and floors | $m^2$ | 600 |
| 29 | **Bench Wood (new):** | $m^3$ | 126,153 |
| | Damaged wood bars and MS Angles of the bench will be removed and replaced by new very good quality Gorjon wood bars each with dimension 150 × 32 mm. 3 pieces of Gorjon bars will be attached on the seat and 2 pieces of Gorjon bars will be attached on the back support of the bench with 6 mm Galvanized nut-screws. The height and width of the bench will be 450 mm and 480 mm respectively and the slope of the back supoort of the bench will be as such that the upper edge is 50 mm offset from the lower edge. The bench should be painted by 2 coat enamel varnish paint. (All materials and wages, except angles, will be counted in this item. If any new angles are required, the amount will be included in Item "Renewal of MS Angle". | | |
| 30 | **Title Board Construction (new) :** | $m^2$ | 1,213 |
| | The existing old damaged title board will be removed and new title board will be constructed with 18 gauge GI/BP sheet, MS angle of L-38×38×6mm, flat bars etc. The width of the title board will be 600 mm. The title board will be fitted in the front side of the superstructure with the angle of its frame by Spot welding at an interval of 100 mm. (All materials and workmanship charges, except angles, will be counted in this item. If any new angles are required, the amount will be included in Item "Renewal of MS Angle". | | |

(মুহাম্মদ আবু জাফর চাওলাদার)
পরিচালক (প্রশাসন)

| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 31 | **Tilte Board Repair:**<br>Title board will be repaired by removing the damaged part of the existing title board and fixing them with usable materials of the pontoon. If the new Angle is required then it will be included in Item "Renewal of MS Angle" and if the new GI Sheet is required then it will be included in Item "GI Sheet/BP Sheet (New)". | $m^2$ | 400 |
| 32 | **Counter Table (New):**<br>The counter table will be constructed by wood or steel of dimensions, Length-750 mm, Breadth-450 mm and height-750 mm. There will be two (02) drawers in the counter table. | No. | 2,500 |
| 33 | **Counter Table Repair:**<br>The counter table will be repaired in the process as described in Item "Counter Table (New)". | No. | 600 |
| 34 | **Crew-room Ceiling Construction :**<br>The existing damaged hardboard of ceiling will be removed and replaced with new hardboard (6 mm thick) by making the frame with 38 X 38 mm Gorjon Wood Bar and fitting the board with the frame by wooden spike. The ceiling will be painted by 2 coat marine enamel paint. | $m^2$ | 900 |
| 35 | **Crew-bunk Construction :**<br>The damaged crew-bunk will be removed and new bunk will be constructed by new high quality Gorjan wood plank (30 mm thick) and MS Angel. The dimension of the bunk is Length-2.13m, Breadth-0.76m and height 0.60m. The wooden plank will be fixed to the angle by nut-bolts. After making the surface of the wooden plank smooth and uniform in size and shape, 3 coat Varnish paint will be applied (All materials and workmanship charges, except angles, will be counted in this item. If any new angles are required, the amount will be included in Item "Renewal of MS Angle". | $m^3$ | 126,153 |
| 36 | **Renewal of Flat Bar:**<br>New MS Flat bars of different sizes (19×5 mm to 35×5 mm) will be supplied and fitted by welding or nut-bolts in any position as required. | kg | 143 |
| 37 | **Repair of Flat Bar:**<br>Flat bar will be repaired by removing the flat bar by cutting the damaged screw-nuts and welding. Then the flat bar will be straightened and fixed again with the help of new screw-nut / welding as per requirement. | kg | 40 |
| 38 | **Writing Name and Number:**<br>The name of the Authority, pontoon serial number, location of the pontoon, toilet, passenger cabin etc. will be written in Enamel Paint in different places of the Pontoon Superstructure according to the direction of the authority. The measurement will be taken only for the part of the writing. | $m^2$ | 550 |
| 39 | **Damaged Single Bollard Removal:**<br>Old damaged single Bollard will be removed by using gas cutter. | kg | 65 |
| 40 | **Damaged Double Bollard Removal:**<br>Old damaged double Bollard will be removed by using gas cutter. | kg | 65 |

(মুহাম্মদ আবু জাফর হাওলাদার)
পরিচালক (প্রশাসন ও মানব সম্পদ)

| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 41 | **Single Bollard Construction (New):** | | |
| | The new Single Bollard will be constructed with new MS Plate, MS Angle, MS Pipe etc. and fitted at exact location on the deck by welding. According to the standard size (as mentioned below) deck plate will be cut by gas cutter. Then Insert Plate will (size as mentioned below) be welded there with adjacent deck plates continuously on both sides. The Insert Plate will also be welded continuously with the web frame, angles, bulkheads or any other structural members that pass through and under the Inser plate. If supportive structural members are not available, then additional angles will be fitted under the Insert plate and extended them up to the adjuscent deck plates according to the direction and welded with the Insert plate and deck plates continuously. Then the bollard pipe will be fitted in the centre of the insert plate by penetrating the insert plate and welded on both sides of the insert plate. The bollard pipe will be extended up to a certain diatance (as mentioned below) under the Insert plate and supported by 4 nos standard bracket around the pipe. The bracket will be welded continuously on both sides with the bollard pipe. A doubler plate (size as mentioned below) will be fitted on top of the Insert plate making a hole at the centre to let the bollard pipe pass through it. The doubler plate will be welded to the Insert plate and the bollard in the process of full penetration welding. Finally a round cap plate is welded on top of the bollard pipe. The dimension of plates and pipes to be used for the construction of single bollard are given as follows : | | |
| | **Single Bollard: Category-1** | No. | 17,197 |
| | i) 1 No. MS Insert Plate : 800 × 500 × 15 mm | | |
| | ii) 1 No. MS Doubler Plate : 300 × 300 × 25 mm | | |
| | iii) 1 No. MS Cylinder/Pipe : | | |
| | Height-650 mm (Extend 350 mm below deck), Dia-200 mm, thick-11 mm | | |
| | iv) 1 No. MS Round Cap: Dia-250 mm and thickness-6 mm | | |
| | v) MS Angle Stiffener : 63 × 63 × 6 mm; length 3000 mm. | | |
| | **Single Bollard: Category-2** | No. | 50,384 |
| | i) 1 No. MS Insert Plate : 800 × 600 × 15 mm | | |
| | ii) 1 No. MS Doubler Plate : 400 × 400 × 25 mm | | |
| | iii) 1 No. MS Cylinder/Pipe : | | |
| | Height-2600 mm (Extension upto bottom), Dia-250 mm & thick-15 mm | | |
| | iv) 1 No. MS Round Cap: Dia-300 mm and thickness-10 mm | | |
| | v) MS Angle Stiffener : 75 × 75 × 6 mm; length 3000 mm. | | |
| 42 | **Double Bollard Construction (New):** | | |
| | The new double Bollard will be constructed with new MS Plate, MS Angle, MS Pipe etc. and fitted at the exact location on the deck by welding. The double bollard will be fitted following the same method as described in Item "Single Bollard Construction (New)". The dimension of plates and pipes to be used for the construction of double bollard are given as follows : | | |
| | **Double Bollard: Category-1** | No. | 35,238 |
| | i) 1 No. MS Insert Plate : 1500 × 500 × 15 mm | | |
| | ii) 1 No. MS Doubler Plate : 800 × 300 × 25 mm | | |
| | iii) 2 Nos. MS Cylinder/Pipe : | | |

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| S.N | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| | Height-650 mm (Extend 350 mm below deck), Dia-200 mm, thick-11 mm | | |
| | iv) 2 Nos. MS Round Cap: Dia-250 mm and thickness-6 mm | | |
| | v) MS Angle Stiffener : 63 × 63 × 6 mm; length 6000 mm. | | |
| | **Double Bollard: Category-2** | No. | 99,756 |
| | i) 1 No. MS Insert Plate : 1500 × 600 × 15 mm | | |
| | ii) 1 No. MS Doubler Plate : 800 × 400 × 25 mm | | |
| | iii) 2 Nos. MS Cylinder/Pipe : | | |
| | Height-2600 mm (Extension upto bottom), Dia-250 mm & thick-15 mm | | |
| | iv) 2 Nos. MS Round Cap: Dia-300 mm and thickness-10 mm | | |
| | v) MS Angle Stiffener : 75 × 75 × 6 mm; length 6000 mm. | | |
| 43 | **Single Bollard Repair:** | No. | 2,500 |
| | The damaged plate, angles or pipes of the existing old single bollard will be removed and then they will be cleaned and straightened and repaired with the usable existing materials. Finally the single bollard will be fitted again in its posision by proper welding. | | |
| 44 | **Double Bollard Repair:** | No. | 3,000 |
| | The damaged plate, angles or pipes of the existing old double bollard will be removed and then they will be cleaned and straightened and repaired with the usable existing materials. Finally the double bollard will be fitted again in its position by proper welding. | | |
| 45 | **MS Rod** | kg | 85 |
| | MS rod will be used by welding for repairing window's grating or any other part of the Pontoon. | | |
| 46 | **Supply of FS Wire (New):** | | |
| | FS wire will be made of Standard (Stainless/Galvanized Steel or equivalent) material, there should be minimum 6 nos. of strands, 18 wires in each strand and multiple layer strand type. (1 coil = 1000 ft) | | |
| | a) FS wire: 24 mm dia | Coil | 170,000 |
| | b) FS wire: 28 mm dia | Coil | 220,000 |
| | c) FS wire: 32 mm dia | Coil | 270,000 |
| | d) FS wire: 36 mm dia | Coil | 350,000 |
| | e) FS wire: 40 mm dia | Coil | 420,000 |
| | f) FS wire: 44 mm dia | Coil | 500,000 |
| 47 | **Supply of Anchor (New):** | | |
| | Supply of Stockless Anchor of cast steel with D-type joining shackle. | | |
| | a) Anchor: 200 kg | Nos. | 26,000 |
| | b) Anchor: 300 kg | Nos. | 39,000 |
| | c) Anchor: 400 kg | Nos. | 52,000 |
| | d) Anchor: 600 kg | Nos. | 78,000 |
| 48 | **Supply of Stud Link Chain Cable (New):** | | |
| | Stud Link Chain Cable will be in compliance to International standards & class societies' rules and regulations. (1 Shackle = 27.5 m) | | |
| | a) Stud Link Chain Cable: 24 mm dia | Shack. | 110,000 |
| | b) Stud Link Chain Cable: 28 mm dia | Shack. | 120,000 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| | c) Stud Link Chain Cable: 32 mm dia | Shack. | 135,000 |
| | d) Stud Link Chain Cable: 36 mm dia | Shack. | 155,000 |
| 49 | **Mooring Rope (New):** | | |
| | Mooring Rope will be of synthetic fibre type, light weight (almost neutrally buoyant), highly extensible and useful for very deep water depths. | | |
| | a) Mooring Rope: 24 mm dia | m | 500 |
| | b) Mooring Rope: 28 mm dia | m | 600 |
| | c) Mooring Rope: 32 mm dia | m | 800 |
| | d) Mooring Rope: 36 mm dia | m | 1,000 |
| 50 | **Supply of Winch (Mechanical Type):** | | |
| | a. Type of Winch: Capstan Winch; b. Line Type: Standard; c. Minimum Speed: 6 m/s | | |
| | i) Winch of capacity 5 tonne | No. | 350,000 |
| | ii) Winch of capacity 10 tonne | No. | 450,000 |
| | iii) Winch of capacity 15 tonne | No. | 750,000 |
| 51 | **Pulley (New):** | | |
| | i) Pulley capable of handling 5 tonne load | No. | 10,000 |
| | ii) Pulley capable of handling 10 tonne load | No. | 15,000 |
| | iii) Pulley capable of handling 15 tonne load | No. | 20,000 |
| 52 | **Hold Ladder (New):** | No. | 2,696 |
| | Existing old damaged hold ladder will be removed and new ladder of standard width and 3/5 steps will be constructed with new MS angles of dimension L-38×38×6 mm and fitted inside the hold by welding. | | |
| 53 | **Hold Ladder Repair:** | No. | 1,200 |
| | Hold ladder will be repaired with the usable existing angles of the pontoon or new angles of dimension L-38×38×6 mm. If new Angles required for repairing the ladder will be included in Item "Renewal of MS Angle". | | |
| 54 | **Old Damaged Fender Removal:** | m | 100 |
| | Damaged fender and fender base plate will be removed by gas cutter. | | |
| 55 | **Fender Construction (New):** | | |
| | The fender will be constructed with below mentioned thick new MS plate or with good quality defectless MS/GI pipes of the same thickness. Before placing the fender, a stiffener of MS plate of 150 mm width and below mentioned thickness will be fitted along the longitudinal direction of the fender. Then the fender will be welded with the hull plate by full penetration welding method.The Shape of the fender will be half-round of dia 300 mm. | | |
| | a) 09 mm thickness | m | 6,290 |
| | b) 12 mm thickness | m | 8,386 |
| | c) 15 mm thickness | m | 10,483 |
| | d) 25 mm thickness | m | 17,472 |
| 56 | **Fender Repair :** | m | 1,500 |
| | The damaged fender will be removed by gas cutter, cleaned, straightened and finally fitted or the damged fender will be replaced and repaired with usuable materials by welding properly. | | |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 57 | **Capstan Base/Foundation Construction (New) :** | No. | 20,295 |
| | At suitable position on the deck, a pre-fabricated Square shape MS doubler plate (size as mentioned below) with 5 holes will be fitted by welding continuously all around and through the hole of the doubler plate. Two pieces of MS Vertical Flat Bars (size as mentioned below) will be fitted on the doubler plate by double continuous welding method. These Flat Bars will be fitted at the centre of the doubler plate in such a way so that the Flats bars stay perpendicular to each other. A round base plate (size as mentioned below) will be fitted on top of the flat bar by double continuous welding method. Holes will be made at suitable position for installing the capstan on it with the help of nut-bolts as required. Additional stiffening angles will be fitted under the doubler and adjuscent deck plate by continuous welding. The dimension of plates and angles to be used for the construction of capstan base/ foundation are given as follows : | | |
| | i) 1 No. MS Doubler Plate : 900 × 900 × 12 mm | | |
| | ii) 1 No. MS Round Top Plate: Dia-746 and thickness 9 mm | | |
| | iii) 2 No. MS Vertical Flat Bars : | | |
| | Length-746 mm, Width-150 mm and thickness-9 mm | | |
| | iv) MS Angle Stiffener : 63 × 63 × 6 mm; length 4000 mm. | | |
| 58 | **Capstan Base Repair:** | No. | 5,000 |
| | Defective capstan will be removed, repaired and re-installed with grease. New nut-bolts and Stopper will be fitted if required. | | |
| 59 | **Capstan Supply:** | No. | 22,500 |
| | New high quality iron Capstan similar to the existing conventional capstan of the pontoon, will be supplied and fitted on the foundation of the capstan by nuts and bolts. The dimension of the capstan at the bottom part is approximately 460 mm in dia and 660 mm high. | | |
| 60 | **Capstan Bar Supply :** | No. | 550 |
| | The pontunas of the authorities should be supplied with a new high quality iron caption like conventional capstan, which should be fit in Pontoon (starting dia and elevation should be approximate 460 and 660 respectively) | | |
| 61 | **Chain Sparling Pipe (New):** | No. | 3,339 |
| | A Chain sparling pipe made of high quality MS Pipes of dia-150 mm and thickness 9 mm will be fitted by making hole on deck plate and attaching them by welding on both side.The cap of the sparling pipe will be constructed in such a way that no water can enter the hold of pontoon through the cap of the pipe. The length of the sparling pipe will be not less than 700 mm. | | |
| 62 | **Chain Sparling Pipe Repair:** | No. | 500 |
| | Chain sparling Pipe will be repaired with usable existing sparling pipe of the pontoon in the process as described in Item "Chain Sparling Pipe (New)". | | |
| 63 | **New Construction of Air Vent Pipe :** | No. | 400 |
| | The air vent pipe will be made by MS pipe of 75 mm dia and 6 mm thickness. The height of the air vent pipe will be 250 mm. The air vent pipe will be fitted by cutting the deck plate, attaching a doubler and welding on both sides continuously. The upper part of the air vent pipe should be in the shape of a half-round so that no water or rubbish can enter into the pontoon's hold by the opening of the pipe. | | |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 64 | **Airvent Pipe Repair:** | m | 60 |
| | The airvent pipe will be repaired by cutting the old pipe and straightening them and attaching them as described in "New Construction of Air Vent Pipe" | | |
| 65 | **Coaming Plate Renewal :** | m | 2,323 |
| | Existing old damaged coaming plate will be removed by gas cutted and replaced with new MS plate of 9 mm thickness by welding on both sided at the bottom of the superstructure plate. The height of the coaming plate will be 230 mm. | | |
| 66 | **Coaming Plate Repair :** | m | 600 |
| | Removal of damaged/bent coaming plate by gas cutter and straighten them by applying heat/pressure and attaching them again by welding according to the measurement mentioned in "Coaming Plate Renewal" | | |
| 67 | **Removing Damaged Hatch Cover:** | No. | 60 |
| | Damaged Hatch Cover will be removed by gas cutter. | | |
| 68 | **Hatch Cover Construction (New) :** | No. | 4,824 |
| | The hatch cover will be constructed with new MS plate and MS angle and the coaming will be constructed with MS angle. The size of the hatch cover will be 600 × 600 mm and the size of the opening/coaming will be 530 × 530 mm. The hatch cover will be fitted by 2 new hinge welded properly with the deck plate. A handle made of 8 mm thick MS rod will be fitted on the hatch cover to open and close it easily. There should be locking arrangement in each hatch cover. The materials required for the construction of the hatch cover is given below : | | |
| | i) 1 No. 600 × 600 × 6 mm MS plate for cover | | |
| | ii) 4 Nos. 50 × 50 × 6 mm Angle each of 600 mm long for hatch cover frame. | | |
| | iii) 4 Nos. 50 × 50 × 6 mm Angle each of 530 mm long for hatch coaming. | | |
| 69 | **Hatch Cover Repair :** | kg | 100 |
| | Damaged hatch cover will be repaired with new MS plate and MS angle by welding properly. MS hinge and handle will be provided as per requirement during the repairment of the hatch cover. | | |
| 70 | **Welding Spot on Deck :** | $m^2$ | 100 |
| | Welding spots will be made in a particular place on the deck at an interval of 50 mm to make the deck plate non-skid. The dimension of the weld spot will be 8 mm all along. | | |
| 71 | **Spud Fender (New) :** | m | 6,290 |
| | Spud fender will be constructed following the specification described in Item "Fender Construction (New)" and fitted at the back of the pontoon at the position of the spud. | | |
| 72 | **Spud Fender Repair:** | m | 1,500 |
| | The damaged spud fender will be removed by gas cutter, cleaned, straightened and finally fitted or the damged spud fender will be replaced and repaired with suitable materials by welding properly. | | |
| 73 | Removal of cement, asphalt, garbages etc from the deck and holds of the damaged pontoon. | $m^2$ | 50 |
| 74 | Putting continuous welding on deck, hull, bottom and any other damaged parts of pontoons. | m | 165 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 75 | **Repair of Ramp** | | |
| | Renewal of MS plate for Transverse girder, Longitudinal girder, bracket, Side Plate, Side plate top, Outside flange, Side connecting pulley plate, Tower bottom plate, Tower top cover plate, Ramp deck plate, Front side covered plate, Side bottom plate etc of thickness as mentioned below. | $m^2$ | as renewal of ms plate |
| 76 | **New Construction of Tower/Post for Ramp** | | |
| | There will be 02 (Two) nos. post to lift the ramp. The post will be made of MS Pipe or MS Plate extended down to the bottom of the pontoon and stiffened properly with the structural members. | | |
| | **Tower/Post for Ramp with MS Pipe** | m | 34,947 |
| | i) 1 No. MS Insert Plate : 800 × 800 × 15 mm | | |
| | ii) 1 No. MS Doubler Plate : 600 × 600 × 25 mm | | |
| | iii) 1 No. MS Cylinder/Pipe : | | |
| | Height-as required (Extension upto bottom), Dia-450 mm & thick-20 mm | | |
| | iv) 1 No. MS Round Cap: Dia-550 mm and thickness-10 mm | | |
| | v) MS Angle Stiffener : 75 × 75 × 6 mm; length 13000 mm. | | |
| | vi) MS Bracket 8 nos: 300 × 300 × 10 mm | | |
| | **Tower/Post for Ramp with MS Plate** | m | 39,157 |
| | i) 1 No. MS Insert Plate : 800 × 800 × 15 mm | | |
| | ii) 1 No. MS Doubler Plate : 600 × 600 × 25 mm | | |
| | iii) 2 Nos. U Shape or Channel shape vertical MS Plate spaced 300 mm: | | |
| | Height-as required (Extension upto bottom), 400× 25 + 200 × 25 mm size | | |
| | iv) Rect. MS Plate 400 × 300 × 25 mm to join channel bars, spacing 1000 mm | | |
| | v) MS Angle Stiffener : 75 × 75 × 6 mm; length 13000 mm. | | |
| | vi) MS Bracket 8 nos: 300 × 300 × 10 mm | | |
| 77 | **New Construction of Hinges for Ramp** | | |
| | All the hinges will be made of MS plate of thickness of 25-75 mm (as required) in gangway pocket & ramp with a hole inside of dia 75-150 mm (as required). There will be bush of 10-20 mm thickness (Bronze material) inside the hole of the hinge. A solid MS shaft of dia 75-150 mm (as required) will pass through the hole of the hinges to connect the ramp and pontoon. | kg | 143 |
| 78 | **Modification of Gangway of Pontoon for Fixing Ramp.** | | |
| | Renewal of 10/12 mm ms plate for deck plate, hull plate of ramp | $m^2$ | as renewal of ms plate |
| | Renewal of 6 mm ms plate for Transverse bulkhead plate | $m^2$ | |
| | Renewal of 16 mm ms plate for hinge plate, base plate of hinge | $m^2$ | |
| | Renewal of Longitudinal angles, Vertical Angle support, Bracket for vertical angle | kg | 112 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 79 | **Surface Preparation by Shot Blasting / Sand Blasting for Painting :** | | |
| | To do painting, atmospheric conditions like air temperature, surface temperature of steel, relative humidity, dew point and wind speed must be measured. If the atmospheric conditions are in the range, then the surface preparation & painting works can be done.<br>Ranges of atmospheric conditions:<br>- Relative Humidity ≤ 85%<br>- Surface temperature ≥ dew point + 3◦C<br>- Paint temperature 15-25◦C<br>Plates, angles, flat bar, CGI sheet, GI/BP sheet etc. will be cleaned by using shot blasting/sand blasting. The ISO standard for surface preparation SA 2.5 must be followed. The bare white surface of MS plate must be visible after surface cleaning. | | |
| (a) | Steel surface of all the outer portion of plate, Fender, bollard, Capstain Foundation, Capstain etc. | $m^2$ | 330 |
| (b) | Steel surface of all the inner portion (plate, Bulkhead, Angles, Web, frames, Girders, longitudinals, chain Locker etc.) | $m^2$ | 350 |
| (c) | Surface of the superstructure, toilet (20% of this measurement will be added for frames, Angles, flatbars etc. because the quantity of these parts approximately depends upon the surface area of the plate.) | $m^2$ | 330 |
| (d) | GI/BP sheet surfaces of door, window and title board and also the surface of window grating, collapsible gates, wooden bench and its frames, toilet coaming etc. (20% of the surface area of the windows and doors will be added for frames, Angles, flatbars attached with them. Again the surface area of the collapsible gates and window gratings will be 1.5 times of its total surface area) | $m^2$ | 330 |
| 80 | **Surface Preparation by Mechanical Cleaning for Painting :** | | |
| | To do painting, atmospheric conditions like air temperature, surface temperature of steel, relative humidity, dew point and wind speed must be measured. If the atmospheric conditions are in the range, then the surface preparation & painting works can be done.<br>Ranges of atmospheric conditions:<br>- Relative Humidity ≤ 85%<br>- Surface temperature ≥ dew point + 3◦C<br>- Paint temperature 15-25◦C<br>In the inaccessible areas where blasting is not possible mechanical cleaning such as grinding/ hammering/ chipping/ wire brushing can be used. But in that case ISO ST 3 standard for surface cleaning must be followed. To remove oil/grease from the surface soap water and water jet cleaning can be used. To remove salt water jet cleaning can be used before blasting. Mill scale, rust, salt, oil, grease, dust and if there is an old coating system exists on the MS plate surface, all have to be removed before painting. After surface preparation, surface profile must be checked. Surface profile must be in between 30-75 micron. | | |
| (a) | Steel surface of all the outer portion of plate, Fender, bollard, Capstan Foundation, Capstain etc. | $m^2$ | 130 |
| (b) | Steel surface of all the inner portion (plate, Bulkhead, Angles, Web, frames, Girders, longitudinals, chain Locker etc.) | $m^2$ | 140 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| (c) | Surface of the superstructure, toilet (20% of this measurement will be added for frames, Angles, flatbars etc. because the quantity of these parts approximately depends upon the surface area of the plate.) | $m^2$ | 130 |
| (d) | GI/BP sheet surfaces of door, window and title board and also the surface of window grating, collapsible gates, wooden bench and its frames, toilet coaming etc. (20% of the surface area of the windows and doors will be added for frames, Angles, flatbars attached with them. Again the surface area of the collapsible gates and window gratings will be 1.5 times of its total surface area) | $m^2$ | 130 |
| 81 | **Painting :** | | |
| | After performing the surface preparation by the method described earlier, the paint will be applied on the same day and in no case will be applied on the next day. 1st coat paint must be applied using paint brush. After the 1st coat, the second coat paint must be applied within 22 hours to 48 hours. The third and the latter coats of paints will be applied similarly within 22 hours to 48 hours after the application of the previous coat. For the second coat or the next coats, painting can be done with the roller painting brush. If the amount of humidity in the air is high (more than 90% percent), then painting can not be done. The inner part of the bollards, fenders, air vent pipes etc. will be painted before fitting. | | |
| (a) | Outer surface of the bottom and outer surface of the hull of the pontoon from bottom to the waterline at 400 mm. | | |
| | i) Marine Red Lead Primer of thickness 50 micron | $m^2$ | 132 |
| | ii) Marine Red Lead Primer of thickness 50 micron | $m^2$ | 132 |
| | iii) Marine Anti-fouling of thickness 50 micron | $m^2$ | 181 |
| (b) | Outer surface of the deck and outer surface of the rest of the hull plate above the waterline at 400 mm, outer surface of the fender, all deck-out fittings such as Captain, Bollard, air vent pipes, chain spurling pipe, the inner and outer part of the coming plate, the cantilever deck, the brackets etc. | | |
| | i) Marine Red Lead Primer of thickness 50 micron | $m^2$ | 132 |
| | ii) Marine Enamel Paint (Grey/Black) of thickness 50 micron | $m^2$ | 120 |
| | iii) Marine Enamel Paint (Grey/Black) of thickness 50 micron | $m^2$ | 120 |
| (c) | All parts, ie, inner side of deck, hull plates, bulkheads, web frames, angles, brackets, chain lockers etc inside the holds of the Pontoon. 20% of the total surface area of the deck, bottom, hull plates, bulkheads the chain lockers will be added to measure the surface area of the web frames, angles, brackets etc. | | |
| | i) Marine Red Lead Primer of thickness 50 micron | $m^2$ | 132 |
| | ii) Marine Special Aluminium Hold Paint of thickness 50 micron | $m^2$ | 115 |
| | iii) Marine Special Aluminium Hold Paint of thickness 50 micron | $m^2$ | 115 |
| (d) | Inner parts of the chain locker..... | | |
| | i) Marine Red Lead Primer of thickness 50 micron | $m^2$ | 132 |
| | ii) Marine Bituminous Paint of thickness 50 micron | $m^2$ | 100 |
| (e) | Inside and outside of the superstructure wall, roof, all the CGI sheets, toilet, kitchen, GI/BP sheets of doors and windows, angles, bracket, flat bars, grill, (20% of this measurement will be added for frames, Angles, flatbars etc. because the quantity of these parts approximately depends upon the surface area of the plate.) | | |
| | i) Marine Red Lead Primer of thickness 50 micron | $m^2$ | 132 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| | ii) Marine Enamel Paint (White) of thickness 50 micron | $m^2$ | 120 |
| 82 | **Supplying and Applying Paint (Epoxy Type Paint) :** | | |
| | After performing the surface preparation by the method described in Surface Preparation for Painting, the paint will be applied immediately on the same day. In case of failure to conduct painting on the same day, a sweep blasting have to be done before painting. For painting airless spray/brush & roller have to be used. To give stripe coat or painting in an inaccessible area brush can be used. For airless spray tip size TDS (Technical Data Sheets) of the paint has to be followed. For recoating in a coated surface, instruction for recoating in the TDS of the paints has to be followed. To achieve the stated dry film thickness (DFT) proper wet film thickness (WFT) has to be maintained. After finishing the painting proper curing time have to be given to cure the paints properly. Depending on environment and application method, thinning ratio can be from 0%-15%. All of the paints must be lead free and environmentally friendly. Paint application must be supervised accordingly and inspection report must be signed by at least a NACE CIP level – 1 inspector. | | |
| (a) | Outer surface of the bottom and outer surface of the hull of the pontoon from bottom to the waterline at 400 mm. | | |
| | **Brush & Roller** | | |
| | i) Epoxy ZC primer of thickness 50 micron | $m^2$ | 154 |
| | ii) Epoxy all purpose primer of thickness 50 micron | $m^2$ | 156 |
| | iii) Epoxy M/I Oxyde of thickness 50 micron | $m^2$ | 160 |
| | iv) Antifouling Paint of thickness 50 micron | $m^2$ | 181 |
| | v) Antifouling Paint of thickness 50 micron | $m^2$ | 181 |
| | **Airless Spray** | | |
| | i) Epoxy ZC primer of thickness 50 micron | $m^2$ | 167 |
| | ii) Epoxy all purpose primer of thickness 50 micron | $m^2$ | 176 |
| | iii) Epoxy M/I Oxyde of thickness 50 micron | $m^2$ | 181 |
| | iv) Antifouling Paint of thickness 50 micron | $m^2$ | 207 |
| | v) Antifouling Paint of thickness 50 micron | $m^2$ | 207 |
| (b) | Outer surface of the deck and outer surface of the rest of the hull plate above the waterline at 400 mm, outer surface of the fender, all deck-out fittings such as Captain, Bollard, air vent pipes, chain spurling pipe, the inner and outer part of the coming plate, the cantilever deck, the brackets etc. | | |
| | **Brush & Roller** | | |
| | i) Epoxy ZC primer of thickness 50 micron | $m^2$ | 154 |
| | ii) Epoxy all purpose primer of thickness 50 micron | $m^2$ | 156 |
| | iii) Epoxy Enamel of thickness 50 micron | $m^2$ | 160 |
| | iv) Epoxy Enamel of thickness 50 micron | $m^2$ | 160 |
| | v) PU Enamel of thickness 50 micron | $m^2$ | 186 |
| | vi) PU Enamel of thickness 50 micron | $m^2$ | 186 |
| | **Airless Spray** | | |
| | i) Epoxy ZC primer of thickness 50 micron | $m^2$ | 154 |
| | ii) Epoxy all purpose primer of thickness 50 micron | $m^2$ | 156 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| | iii) Epoxy Enamel of thickness 50 micron | $m^2$ | 181 |
| | iv) Epoxy Enamel of thickness 50 micron | $m^2$ | 181 |
| | v) PU Enamel of thickness 50 micron | $m^2$ | 213 |
| | vi) PU Enamel of thickness 50 micron | $m^2$ | 213 |
| (c) | All parts, ie, inner side of deck, hull plates, bulkheads, web frames, angles, brackets, chain lockers etc inside the holds of the Pontoon. 20% of the total surface area of the deck, bottom, hull plates, bulkheads the chain lockers will be added to measure the surface area of the web frames, angles, brackets etc. | | |
| | **Brush & Roller** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 130 |
| | ii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | iii) Marine Aluminum Paint of thickness 50 micron | $m^2$ | 115 |
| | iv) Marine Aluminum Paint of thickness 50 micron | $m^2$ | 115 |
| | **Airless Spray** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 146 |
| | ii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 147 |
| | iii) Marine Aluminum Paint of thickness 50 micron | $m^2$ | 127 |
| | iv) Marine Aluminum Paint of thickness 50 micron | $m^2$ | 127 |
| (d) | Inner parts of the chain locker | | |
| | **Brush & Roller** | | |
| | i) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | ii) Bituminous Black Paint of thickness 50 micron | $m^2$ | 100 |
| | iii) Bituminous Black Paint of thickness 50 micron | $m^2$ | 100 |
| | **Airless Spray** | | |
| | i) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 146 |
| | ii) Bituminous Black Paint of thickness 50 micron | $m^2$ | 107 |
| | iii) Bituminous Black Paint of thickness 50 micron | $m^2$ | 107 |
| (e) | Inside and outside of the superstructure wall, roof, all the CGI sheets, toilet, kitchen, GI/BP sheets of doors and windows, angles, bracket, flat bars, grill, (20% of this measurement will be added for frames, Angles, flatbars etc. because the quantity of these parts approximately depends upon the surface area of the plate.) | | |
| | **Brush & Roller** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 130 |
| | ii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | iii) Marine Enamel of thickness 50 micron | $m^2$ | 120 |
| | iv) Marine Enamel of thickness 50 micron | $m^2$ | 120 |
| | **Airless Spray** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 146 |
| | ii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 147 |
| | iii) Marine Enamel of thickness 50 micron | $m^2$ | 133 |
| | iv) Marine Enamel of thickness 50 micron | $m^2$ | 133 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| 83 | **Supplying and Applying Paint (Conventional/Alkyd Type Paint) :** | | |
| | After performing the surface preparation by the method described in Surface Preparation for Painting, the paint will be applied immediately on the same day. In case of failure to conduct painting on the same day, a sweep blasting have to be done before painting. For painting airless spray/brush & roller have to be used. To give stripe coat or painting in an inaccessible area brush can be used. For airless spray tip size TDS (Technical Data Sheets) of the paint has to be followed. For recoating in a coated surface, instruction for recoating in the TDS of the paints has to be followed. To achieve the stated dry film thickness (DFT) proper wet film thickness (WFT) has to be maintained. After finishing the painting proper curing time have to be given to cure the paints properly. Depending on environment and application method, thinning ratio can be from 0%-15%. All of the paints must be lead free and environmentally friendly. Paint application must be supervised accordingly and inspection report must be signed by at least a NACE CIP level – 1 inspector. | | |
| (a) | Outer surface of the bottom and outer surface of the hull of the pontoon from bottom to the waterline at 400 mm. | | |
| | **Brush & Roller** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 130 |
| | ii) Marine grade ZC primer of thickness 50 micron | $m^2$ | 130 |
| | iii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | iv) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | v) Marine Grade Red Oxide Primer of thickness 50 micron | $m^2$ | 108 |
| | vi) Antifouling Paint of thickness 50 micron | $m^2$ | 181 |
| | vii) Antifouling Paint of thickness 50 micron | $m^2$ | 181 |
| | **Airless Spray** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 146 |
| | ii) Marine grade ZC primer of thickness 50 micron | $m^2$ | 146 |
| | iii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 147 |
| | iv) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 147 |
| | v) Marine Grade Red Oxide Primer of thickness 50 micron | $m^2$ | 118 |
| | vi) Antifouling Paint of thickness 50 micron | $m^2$ | 207 |
| | vii) Antifouling Paint of thickness 50 micron | $m^2$ | 207 |
| (b) | Outer surface of the deck and outer surface of the rest of the hull plate above the waterline at 400 mm, outer surface of the fender, all deck-out fittings such as Captain, Bollard, air vent pipes, chain spurling pipe, the inner and outer part of the coming plate, the cantilever deck, the brackets etc. | | |
| | **Brush & Roller** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 130 |
| | ii) Marine grade ZC primer of thickness 50 micron | $m^2$ | 130 |
| | iii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | iv) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | v) Marine Enamel of thickness 50 micron | $m^2$ | 120 |
| | vi) Marine Enamel of thickness 50 micron | $m^2$ | 120 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| | **Airless Spray** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 146 |
| | ii) Marine grade ZC primer of thickness 50 micron | $m^2$ | 146 |
| | iii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 147 |
| | iv) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 147 |
| | v) Marine Enamel of thickness 50 micron | $m^2$ | 133 |
| | vi) Marine Enamel of thickness 50 micron | $m^2$ | 133 |
| (c) | All parts, ie, inner side of deck, hull plates, bulkheads, web frames, angles, brackets, chain lockers etc inside the holds of the Pontoon. 20% of the total surface area of the deck, bottom, hull plates, bulkheads the chain lockers will be added to measure the surface area of the web frames, angles, brackets etc. | | |
| | **Brush & Roller** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 130 |
| | ii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | iii) Marine Aluminum Paint of thickness 50 micron | $m^2$ | 115 |
| | iv) Marine Aluminum Paint of thickness 50 micron | $m^2$ | 115 |
| | **Airless Spray** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 146 |
| | ii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 147 |
| | iii) Marine Aluminum Paint of thickness 50 micron | $m^2$ | 127 |
| | iv) Marine Aluminum Paint of thickness 50 micron | $m^2$ | 127 |
| (d) | Inner parts of the chain locker | | |
| | **Brush & Roller** | | |
| | i) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | ii) Bituminous Black Paint of thickness 50 micron | $m^2$ | 100 |
| | iii) Bituminous Black Paint of thickness 50 micron | $m^2$ | 100 |
| | **Airless Spray** | | |
| | i) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 146 |
| | ii) Bituminous Black Paint of thickness 50 micron | $m^2$ | 107 |
| | iii) Bituminous Black Paint of thickness 50 micron | $m^2$ | 107 |
| (e) | Inside and outside of the superstructure wall, roof, all the CGI sheets, toilet, kitchen, GI/BP sheets of doors and windows, angles, bracket, flat bars, grill, (20% of this measurement will be added for frames, Angles, flatbars etc. because the quantity of these parts approximately depends upon the surface area of the plate.) | | |
| | **Brush & Roller** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 130 |
| | ii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 132 |
| | iii) Marine Enamel of thickness 50 micron | $m^2$ | 120 |
| | iv) Marine Enamel of thickness 50 micron | $m^2$ | 120 |
| | **Airless Spray** | | |
| | i) Marine grade ZC primer of thickness 50 micron | $m^2$ | 146 |
| | ii) Marine Grade Lead Free Red Primer of thickness 50 micron | $m^2$ | 147 |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| | iii) Marine Enamel of thickness 50 micron | $m^2$ | 133 |
| | iv) Marine Enamel of thickness 50 micron | $m^2$ | 133 |
| 84 | **Plate Gauging Cost** | | |
| | The thickness of different steel plates to be measured after surface preparation by Ultrasonic Thickness Detector and 02 (Two) sets of Shell Expansion Drawing showing the gauging report to be submitted by incorporating any DoS (Department of Shipping, Bangladesh) Enlisted Company/Firm. | | |
| | (a) Thickness Gauging of Diffrerent Plates after surface preparation using Ultrasonic Thickness Detector (Number of Spot) | No. | 150 |
| | (b) Submission of 02 Sets of Shell Expansion Drawings | LS | 15,000 |
| 85 | **Non Destructive Testing (NDT) Cost** | | |
| | Non Destructive Testing (NDT) of different parts of welded joint of structures of pontoon will be done using Phased Array Ultrasonic Testing (PAUT) or Radiographic Testing (RT) and 02 (Two) sets of NDT test report including drawings, films etc. to be submitted by incorporating any DoS (Department of Shipping, Bangladesh) Enlisted Company/Firm. | | |
| | (a) NDT of different parts of welded joint using Radiographic Testing (RT). (Unit will be Number of Spot, where 1 Spot is equal to 300 mm) | No. | 1,000 |
| | (b) NDT of different parts of welded joint using Phased Array Ultrasonic Testing (PAUT). (Unit will be Number of Spot where, 1 Spot is equal to 500 mm) | No. | 750 |
| | (c) Submission of 02 (Two) sets of NDT test report with drawings, films etc. | LS | 15,000 |
| 86 | **Salvage Charge for completely submerged pontoon in water** | | |
| | The cost of salvage operation of pontoon which is completely submereged into the water. (The cost will be fixed during preparation of the Estimation for repair work depending upon the practical/real situation of the pontoon) | | |
| | TP Pontoon | LS | 5.5-6.0 lakh |
| | LP Pontoon | LS | 5.5-6.0 lakh |
| | MP Pontoon | LS | 3.5-4.0 lakh |
| | SP Pontoon (48′) | LS | 2.5-3.0 lakh |
| | SP Pontoon (30′) | LS | 1.5-2.0 lakh |
| | **Salvage Charge for partially submerged pontoon in water** | | |
| | The cost of salvage operation of pontoon which is partially submereged in the water. (The cost will be fixed during preparation of the Estimation for repair work depending upon the practical/real situation of the pontoon) | | |
| | TP Pontoon | LS | 3.5-4.0 lakh |
| | LP Pontoon | LS | 3.5-4.0 lakh |
| | MP Pontoon | LS | 2.5-3.0 lakh |
| | SP Pontoon (48′) | LS | 1.5-2.0 lakh |
| | SP Pontoon (30′) | LS | 1.0-1.3 lakh |
| | **Carrying Charge** | | |
| | The cost of carrying a pontoon safely from respected ghat to the repairing site nd from repairing site to the respected ghat after completion of the repair works. The cost will be fixed during preparation of the Estimation for repair work epending upon the practical/real situation of the pontoon) | | |
| | P Pontoon | LS | 1.7-1.9 lakh |

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| SN | Description of Items | Unit | Proposed Rate, BDT |
|---|---|---|---|
| | LP Pontoon | LS | 1.7-1.9 lakh |
| | MP Pontoon | LS | 1.1-1.3 lakh |
| | SP Pontoon (48′) | LS | 0.8-0.9 lakh |
| | SP Pontoon (30′) | LS | 0.8-0.9 lakh |
| 89 | **Docking & Undocking Charge** | | |
| | The cost of docking and undocking of the pontoon. | | |
| | TP Pontoon | LS | 150,000 |
| | LP Pontoon | LS | 100,000 |
| | MP Pontoon | LS | 75,000 |
| | SP Pontoon (48′) | LS | 75,000 |
| | SP Pontoon (30′) | LS | 75,000 |
| 90 | **Slipway Rent / Dockyard Rent** | | |
| | The cost of rent for keeping the pontoon at dockyard/shipyard for the duration of whole repair works (Rate: BDT 125 per day per meter considering the repairing duration of 45 days for Small Pontoon, 60 days for Medium Pontoon and 75 days for Large & Terminal Pontoon in average). | | |
| | TP Pontoon | LS | 285,000 |
| | LP Pontoon | LS | 250,000 |
| | MP Pontoon | LS | 145,000 |
| | SP Pontoon (48′) | LS | 80,000 |
| | SP Pontoon (30′) | LS | 50,000 |

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পরিচালক (প্রশাসন ও মানব সম্পদ)