## KARACHI PORT TRUST

## MINUTES OF PRE-BID MEETING HELD ON 24th MARCH, 2025 REGARDING

REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI

**1.** Pre-bid meeting for the subject project was held on 24<sup>th</sup> Mar 2025 in the office of GM(E) at KPT Head Office. Meeting was chaired by the CM&EE-II and attended by the following:

# **KPT Officials:**

1.	Rear Admiral Habib Ur Rehman HI (M)	General Manager (Engg)
2.	Hassan Askari	CM&EE- I & II
3.	Amanullah	DY.CME(FC-II)
4.	Hanif Shah	Dy. Chief Mech Engineer (W/S)
5.	Mudasir	Asstt. Manager Finance

#### Firm's Representatives:

Representatives of following two firms were attended the pre-bid meeting:

S.No	<u>Firm</u>	Name of representative of firm
1.	M/s. Al Meena Marine Engineers	Mr. Shehryar Ahmed
2.	M/s. Esa Engineers	Mr. Faraz

- **2.** The CM&EE-II welcomed the participants and informed that the meeting has been called to clarify any queries which the participating firms may have regarding the subject work.
- 3. The queries raised by the representative of both the firms and agreed by KPT regarding Specification and Terms & Conditions of BOQ of the subject case are summarized as follows:

# (A) (REVISED SCOPE OF WORK):

S. No.	Reference No. with detail of KPT's existing Technical Specification	Query raised by Representative of firm	Unanimous decision By KPT & Firms	Modification
i.	WINCHES 04 NOS. Ref: S.No. D (i). Load testing of the crane to be conducted for smooth & safe operation in all respect.	(M/s. Al Meena Marine Engineers & M/s. Esa Engineers  Following may be added:  "to be Verified from 3rd party Classification Society".	Agreed	Load testing of the crane to be conducted for smooth & safe operation in all respect to be Verified from 3 <sup>rd</sup> party Classification Society.

-: 2 :-

# (B): REVISED BILL OF QUANTITIES (BOQ COST SCHEDULE)

S. No.	Reference No. with detail of KPT's existing Bill of Quantity (B.O.Q)	Query raised by Representative of firm	Unanimous decision by KPT & Firms	Modification
i.	STATEMENT OF TENDERER: Ref: S.No. 9  Delivery / Completion Period: from the date of award of confirmed Work Order by KPT to the firm	(M/s. Al Meena Marine Engineers & M/s. Esa Engineers  May be added to 120 days.	Agreed	Delivery / Completion Period: 120 Days from the date of award of confirmed Work Order by KPT to the firm.
ii.	S.No.10. Terms of Payment: 100% payment against Delivery, completion and satisfactory test / trials of Work	M/s. Al Meena Marine Engineers  & M/s. Esa Engineers Payment may be released as under: a. 40% payment upon shifting of machinery / Items / Components etc.etc (as mentioned in Scope of Work) from F.C Hathi to firm's Workshop and after complete repair / maintenance /overhauling etc. etc. of the same duly verified by KPT's nominated Project Engineer(s) at firm's premises/onboard FC Hathi (where applicable). b. 60% remaining payment after completion of entire work & satisfactory test & trials of complete project as per KPT's tendered Scope of Work.	Agreed	Payment may be released as under:  a. 40% payment upon shifting of machinery / Items / Components etc.etc (as mentioned in Scope of Work) from F.C Hathi to firm's Workshop and after complete repair / maintenance /overhauling etc. etc. of the same duly verified by KPT's nominated Project Engineer(s) at firm's premises / onboard FC Hathi (where applicable).  a. 60% remaining payment after completion of entire work & satisfactory test & trials of complete project as per KPT's tendered Scope of Work.

# (C): REVISED TECHNICAL EVALUATION CRITERIA)

S. No.	Reference No. with detail of KPT's existing Bill of Quantity (B.O.Q)	Query raised by Representative of firm	Unanimous decision by KPT & Firms	Modification
i.	S. No. 6 Mandatory Requirement Registration with Pakistan Engineering Council. Registration Certificate in Technical Category ME-05, ME-06 and Financial Category C-2. Provide attested copy of PEC Certificate.	(M/s. Al Meena Marine Engineers & M/s. Esa Engineers  Financial Category may be mentioned as C-2 / C-3.	Agreed	Registration with Pakistan Engineering Council. Registration Certificate in Technical Category ME-05, ME-06 and Financial Category C-2 / C-3. Provide attested copy of PEC Certificate.

-: 3 :-

ii.	S.No. c  EXPERIENCE OF FIRM	(M/s. Al Meena Marine Engineers & M/s. Esa Engineers		EXPERIENCE OF FIRM (Relevant Work Experience)
		Following may be added "(Relevant Work Experience)"	Agreed	

**b.** Having no other query raised by the representative of participating firms, the pre bid meeting for the subject matter ended with the vote of thanks.

-Sd-Chief Mech & Elect Engineer – II

-Sd-General Manager (Engg)

# DAILY NAI BAAT DATED: <u>12-03-2025</u>

را بی کی بوری ف کا م برخس شدن ایک و کند کا کر بیش ایک و کا م بیش کا کا م بیش شدن ایک و کا که خوا کا که بیش کا ایک و کا که کا م بیش شدن ایک و کا که خوا در استان استان کا که بیش کا در تنگ کا در استان استر یک کی تجد بد با شدن المالمان کا که مرمت اور کمی این اور که بیش کا در کا که این که بیش کا در کا که او که بیش کا دائی که بیش کا که بیش که بیش کا که بیش	ری فراهمد اربر استان این کی پر دو جا سال مسل ای بر استان این کرد او با سال این کرد او با سال کرد او با سال کرد او با سال کرد او با کرد					
المنظم المركب في المنظم المنظ	ری فراهند اربر کی برده بها تا اور است المربی المحلوط المربی المربی المحلوط ا					
راسیل اصور کری تجدید به بشود ایم ترزاد رشافش کی در می ایم کی ترف به به بشود ایم ترزاد رشافش کی در می کی ترف اور می تا این اور می تا این تا این این ام وی شال بی تا این این این این این این این این این ای	کے پردہ بات ال من الافش الیان من والی وسل الیان ایندر المر پائی دک والی الیان کے لیا لی الی الیان					
راسیل اصور کری تجدید به بشود ایم ترزاد رشافش کی در می ایم کی ترف به به بشود ایم ترزاد رشافش کی در می کی ترف اور می تا این اور می تا این تا این این ام وی شال بی تا این این این این این این این این این ای	کے پردہ بات ال من الافش الیان من والی وسل الیان ایندر المر پائی دک والی الیان کے لیا لی الی الیان					
کیز دل بها فی ادر مرحت او Chilathla کی مرحت کے دور اور کا بیافی اور مرحت کا در کرد کے کا مرحت کامل کامل کامل کامل کامل کامل کامل کامل	من الافت التي ولل ولم التي ولل ولم التي ولل ولم التي ولل ولا التي					
کور دید و دوبار و افتال الحصیب اور کسیده کا و دیرو ک استان التی التی مراسل کی انجام دی شال این التی حق التی التی التی مراسل کی انجام دی شال این التی حق التی التی التی التی التی التی التی التی	کلولائل و کل الحداد المحدد ال					
تام مراس کی انجام دی شال قال استان الله الله الله الله الله الله الله ال	الفرام المحلال المحلول المحلو					
بالله المن المن المن المن المن المن المن المن	عدد المراجع و ا					
المن المنافرة المناف	عدد المراجع و ا					
24-03. (پیدا بین الماری المار	1- حام ولي ركح وا كي لل به بهاالدودارة به المرات بحل الاركة بالمركز وجاديات كي المركة حاسة كل ويطنقل بلد كما حام وليس ركة والكفيل في كما كام يا المايية الاركة والمنافرة المؤخرة كام كورة كي دو يالم إذا المحافظ كال المحافظ كالموافق المحافظ كالموافق المحافظ كالموافق					
الاستان المستان المست	1- حام ولي ركح وا كي لل به بهاالدودارة به المرات بحل الاركة بالمركز وجاديات كي المركة حاسة كل ويطنقل بلد كما حام وليس ركة والكفيل في كما كام يا المايية الاركة والمنافرة المؤخرة كام كورة كي دو يالم إذا المحافظ كال المحافظ كالموافق المحافظ كالموافق المحافظ كالموافق					
ل فرمو جليس محاقة شيد بين تجريه حاصل ب وه فيغور دحاد برات يجري أمور في أور دحاد برات يجري الموري ويب ما منس به واقان او قرطق اليه - ال كا علاوه في المركز أمور في اليه - الله كا الاور في المركز في اليه - الله كا الموري في المركز بي المركز في اليه - المركز في المركز	کی لی ای بھیاار دار است بخری اس کرانی می ارد دار سے کری اس کرتی اس کرتی است کی شیر کرد کی اس کرتی است کی شیر کرد کی است کی است کار کرد کی است کی است کی است کار کرد کرد کرد کرد کرد کرد کرد کرد کرد کر					
ی جرفی امور فی درب مائنس سے ذاقان او ذرطق الله سال سے طاوہ شراور شیس بک کا بیشش سے لئے میں بدنی درخان درخان اور سیاب ایس ہا جہ، شراور شیس بک کا بیشش سے لئے میں بدنی درخان بار سیاب فی مرسل فی مرسل فی مرسل میں مربل میں مربل میں مرسل میں مرسل میں مربل میں مرسل میں مرسل میں مرسل میں مرسل میں مرسل میں مرسل میں مربل میں مرسل میں	کی کی کی جها الد فارسے الد والد عن الد والد عن الم روحان کی تھر کی اس کے فی الد والد عن الم روحان کی رو					
000,000 وسے فرایسے کی اور مقام نمایکی ایورٹ فرسٹ مج کر دائلی المورٹ میں کر دائلی میں متعاقد شخصے میں کر موائلی المورٹ میں کار اللی متعاقد شخصے میں تجربیا حاصل ہے، وہ فینڈوروٹ ویزات کا ایک سیست المورٹ میں تجاری اللہ میں اللہ المحال اللہ اللہ میں اللہ اللہ میں اللہ میں اللہ اللہ میں	جدر ارجاریات کی میلانگل بلند کی میلانگل بلند کے سات قام دی کی دیکانگل بلند کا					
کھونیٹرنٹل کو است وقت دی ہوں۔ یا است کا ایک سیٹ ایس متعاقد شہید عمل تقریب کا ایک سیٹ ایس متعاقد شہید عمل تقریب کا ایک سیٹ ایس متعاقد شہید عمل تقریب کا ایک میٹ ایس میٹ کا ایک سیٹ ان درجا تا کہا گئی اور است کا ایک سیٹ کر پھڑ کہا ہاتھ کی است کے ایک میٹ کر پھڑ کہا دی گئی ہوئی ہوئی ہوئی ایک کا ایک میٹ کے ایک کا ایک میٹ کے ایک کا بیاتھ کا ایک کا بیاتھ کا ایک کا بیاتھ کا ایک کا بیاتھ	باعلی ویسیوں بدک المرافر مرافر المرافر مرافر مرافر کے دال فرمر کا المرافر کا المرافز کا					
ا، مروع مر 22 دارا تھ طور کے لیال میڈائن ایڈ گی فی طار دو در کرا ہی ان در بی فی لی بن کا کرانے ہی گئی ماس کر کئی ہیں۔ در کیٹر پارٹو کی جانب سے فوم کے لیز برنے پر ذیل چیف ایکٹر یکل انجینز مرکز کے بذا کیوسٹ کے اتحاء کیلے اتقاد کا چیئی اور کے لیے لیز در سے مرکز کے بذا کیوسٹ کے اتحاء کیلے اتقاد کر پی انجینز کے باتھ اس کی ایان آئی واکھانے کے ساتھ اس کی کا کیا اتقاد اکر بی لیوسٹ کرسے کا دیا ہے بندر کو کشش ، ہے آداد یا چیک ذوائف بنام کرائی کی بذر اور بیان اس می کا دارات کی کے ان ایکٹر انٹر برائی میں بذر ایو بیان می کا دارات کی د	کا انجاز الی ای توریخ و تحویل الی توریخ و تحویل الی تحدید می الی تحدید الی					
ا، مروع مر 22 دارا تھ طور کے لیال میڈائن ایڈ گی فی طار دو در کرا ہی ان در بی فی لی بن کا کرانے ہی گئی ماس کر کئی ہیں۔ در کیٹر پارٹو کی جانب سے فوم کے لیز برنے پر ذیل چیف ایکٹر یکل انجینز مرکز کے بذا کیوسٹ کے اتحاء کیلے اتقاد کا چیئی اور کے لیے لیز در سے مرکز کے بذا کیوسٹ کے اتحاء کیلے اتقاد کر پی انجینز کے باتھ اس کی ایان آئی واکھانے کے ساتھ اس کی کا کیا اتقاد اکر بی لیوسٹ کرسے کا دیا ہے بندر کو کشش ، ہے آداد یا چیک ذوائف بنام کرائی کی بذر اور بیان اس می کا دارات کی کے ان ایکٹر انٹر برائی میں بذر ایو بیان می کا دارات کی د	کا انجاز الی ای توریخ و تحویل الی توریخ و تحویل الی تحدید می الی تحدید الی					
رُ يَكُرُ إِلْمُ كَى جَانِ عَلَمْ مَ لِلْرَجِدُ مِنْ يَدِينَ بِيفِ الْكِرْ فِكَ الْجِيشُ مُركَّ عَلَيْهُ اللهِ مَا اللهِ الله عَالَيْهِ اللهِ الله 2016 عِنْ اللهُ اللهِ ا	(a) قرم کے پردیمائز اوا (S&C) کے فی ل کوایڈ م جوں کے قرم کے کواڈ ٹوائند ساتھ ڈی کرائی ہوگی۔					
ئر کرے بد داکیوست کے اجماء کیلے انقاد کو بھن اور دکھ دیسے کے باور دیے سے کا بنا اس کی این آئی و اکسانے کے ساتھ اس کی کا لیان اتماد کریں لیو کے 51ء ہے بدر کو کش ، ہے آداد یا بینکہ ڈوافٹ بنام کر اپنی پورٹ فرست اگی جانب سے انگل لیا ایل کے لیان این الم آئس برائی محمد بنا اس محل کے اللہ مار اس کا کم واقع کے 100 کس کا کا الم ساتا کی واقع کے 100 کس کا کا الم ساتا کی واقع کے 200 کس کا کہ الم ساتا کی واقع کے 100 کس کے انداز کا الم ساتا کی واقع کے 100 کس کا کہ الم ساتا کی واقع کے 100 کس کا کہ الم ساتا کی واقع کے 100 کس کا کہ الم ساتا کی واقع کے 100 کس کے 100 کس کے 100 کس کے 100 کس کی دائم کی دائم کے 100 کس کا کہ الم ساتا کی واقع کی دو اس کے 100 کس کس کس کے 100 کس	(S&C)، کے کی ل کوایڈر جوں کے ۔ قرم کے جواز تما کھ ساتھ ہی کر انی جول ۔					
سكانية اللى الين آئى و الكان كى ساتھ دى كا في اقدار الاين ليوس 10 - بي بار الديكش، بيد آراد يا ينك ذواف يئام كراي پورت فرس كى جائب سائى لها الى كى بى نام فرائع كى بذرائع بيد بالاس تائى 10 بينى كى كى كى برائع 22 كى دائع 32 كى دائع 34 كى دائع 34 كى دائع	بول كـ رقرم كياد فما كد. ساتون كراني دوك _					
کی جانب سے انگا لیا ایل کے لی ٹی بیڈ آفس برائج میں بذریعہ چالان تح CM نیٹزر کیٹل کے کم ولیر 32، گرونو طور کے لیا ٹی میا آفس بلاگ						
کی جانب سے انگا لیا ایل کے پی ٹی بیڈ آفس برائج میں بذریعہ چالان بھا CM ٹیٹڈر کیٹن کے کمرونیز 25، گروئز طور کے لی ٹی بیڈرائیر چالان	(ط) الكونساني 000					
CM ٹینڈر میٹی کے کروٹیم 32 ، گراؤیڈ فلور کے لی کی صل آفس بلا تا	(كى كى كى)در خوات لزار					
	40 16 - 41 E					
-Lut 12 Ush	によりはいけば					
(۱۵) ايون اين ، بى ايس فى ايس آر لى مرفقيت اونا واكيزيكس بيز (ATL) كافورت كاكالي (4) اى كى كامتر محتى كيليكرى ME-05, ME-05 من						
رجستر چن ارفیقات						
پ بنے (اصل میں ) پر طاقہ نامیر کا کرانا ہوگا کرفرم کو بھی کے پی لی یادیگر سے مابک اسٹر جس کیا گیا۔	100(e) ريخ کاماد					
المعلق الماري المارية	2- بذنگ دستاوی					
ول) كودرست طريقے يركر كيدو تفاكر كيدور لانا فاكر فيندر	としょうしらりしい					
کراتھ تی کروانا خروری ب- مزید روآن درج بالا برا (a - c) اس بنال کی افزل کلی فینار وشادیزات کرما تو سلک کا با کیل کی جوازی تیں ، اوران کے اپنے پینار تول میں کیا جائے گا۔						
3- بذيك كالمسل PPRA-2004 كاثن (36(b) كي مطابق فيذر كالمل ايك التي وو						
الفائح كالمراقة كار بركما والحركا المؤدن والإراب وكر كريد الأكرار بيتورك بالمل						
لفافوں ٹی جمس ٹیں سے ایک پر بختک پر پوزل " دوسے پر "الیاتی پر پوزل" دوس ہو گھیں ایک مربحہ لفائے ٹی دایا کری رہ رہ دیک کا جوریاں میں پر کاملے جو سے اور اور کا میں ہوائے						
سر جمر تفایت میں آب آب کر آب کر پر دھیلٹ گانام اور اوجند وکاسل نام ، دابطہ میر دادر پید واس کا اعراز سے درج کر کر اور چیف سکینیکل اینڈ ایکٹر میکل انجیئز سلال کے ڈیڈ کر کوئیل کے دیا کہ کر جوا کے اعراز						
4- بلسليورن/زرهانت ل رئيز-10,700,000 دونے(سرف ایک کروز اورسات الک						
پورٹ فرمٹ (KPT) كنام (اسل بنى) تحقيقى يرد پوزل كماتھ	ردے) کا ہےآرڈدکراتی کا کرداناورگ۔					
ست كى رقم إدر فيفار ومتاويزات كى فين (اعل في) بسورت	5- بذريكيور <b>ل/</b> زرمنسا:					
تھے افتا کرانی وول ہم کے بغیر لینز رقبول نمیں کرا جائے۔	ہے آرڈر منٹلی پر پوزل کے سا					
مِنْكَ 24-03-2025 كو GM(E) أَفَى، كَ لِي لُ بِيرًا فَي،	6- يرى لامينك: يرى بد					
دل۔ الحطے کا تاریخ کے احد 90 وان تک موڑ رہے گی۔	ایڈ ٹی ڈکٹا مرد ڈ مگرا تی ٹن 7- بول کی مدے گئے ابول					
ويشاش CM&EE-II لمالهنت ، كرونمبر 32 ، كراؤنز فلور،	8- بول مسلندی تارخ:					
£ 11:00 £ 15-04-2025 300 \$ 10 hat	ك لى لى بيد آس الدي كا					
ل اى دن اور 15-04-2025 ك 15-04-2025 ك 11:30 ك 15-04-2025 ك ك ال ك الم الم الله الله الله الله الله الله ا	تک فقا جالی جائینهٔ مسلل پر پوز خدوشه به مار مدور مسل					
و الما الله الله الله الله الله الله الله	وہ میں ہوں وہدھان ہے۔ نینڈر کینل اکر وفیر 32 بیں ک					
تى ير يوزار بعد يس كلو ليا مي كي	لتمنيكي الوريرا الرفرمون كاماليا					
رول 2004 كرمان كى يا تام ديك فون كوم وركر في كان	_1100fdd9					
	نامل ہے۔					
يف منكينيكل اينذ النيكثر يكل الجيشرُ - ١١						
ائم آئی یار ژاویت و بارف کرایگا معمود و مساحد کار	nes 1 1					
021-99214450: http://www.ppra.gov.pk اور http://www.kj	الول براه 1.gov.pk					
PID K-2792/24 حافلا						



# DAILY THE NEWS DATED: 12-03-2025



 All the interested firms who possess experience in relevant field may obtain the tender documents available on downloaded version at websites of KPT, PPRA & Ministry of Mantime Affairs as well as on the links of Ministry of Maritime Affairs as well as on the links of Ministry of Maritime Affairs Twitter & Facebook Accounts. However, ender document fees amounting to Rs 5,000/- via Pay Order in the name of Karachi Port Trust should be submitted at the time of tender submission alongwith Technical Bid. OR

All the interested firms who possess experience in relevant field may also obtain a set of Tender documents from CM&EE Tender Committee Room No 32 Ground Floor at KPT Head Office, Eduljee Dinshaw Road, Karachi during working hours, upon submission of

- (a) Request & Authorization letters from Proprietor/Director/ Partner of firm on firm's letter head for issuance of bid document addressed to DY. Chief Elect Engineer (S&C)-KPT. Authorized person of firm must show original CNIC and attached a copy of the same with authorization
- letter

  (b) Document fee @ Rs 5,000/- wa cash, pay order or bank draft drawn in the name of Karachi Port Trust (KPT) to be deposited by the applicant in HBL KPT Head Office Branch through Chaltan The Chaftan will be issued from CM&EE Tender Committee Room No 32 Ground Floor at KPT Head Office, Edulge Dinshaw Road, Karachi.

  (c) Copy of certificates of NTN, GST, SRB & fresh copy of Active Tax payer List (ATL)

- Tax payer List (ATL)

  (d) Copy of registration certificate with PEC in Technical Category ME-05 ME-06 and Financial Category C-2.

  (e) Undertaking on Rs 100/- Stamp Paper (in original) to be submitted regarding not blacklisting of firm from RPT or any other other Government Organization / Agency.

  2. BIDDING DOCUMENTS. All the bidding documents (either downloaded or purchase physically) should be property filled, signed, stamped and submitted alongwith the Tender and also documents as mentioned above at Para-1 (c to e) are also to be submitted, without which the tender will not be accepted.
- 3. BIDDING PROCESS: As per Clause 36 (b) of PPRA Rules-2004 3. BIDDING PROCESS. As per clauses 30 (I) of PPPA Rules-2004 for "Single Stage - Two envelope procedure". Tender documents duly filled, stamped & signed be submitted in Two Separately Seated Envelops, one marked as "TECHNICAL PROPOSAL and the other as "TIMANCIAL PROPOSAL". Both envelopes should be placed in one seated envelop, indicating the name of the project, complete name & address of bidder and addressed to Chief Mech & Elect Engineer. II. EVPT Engineer -II - KPT.
- Ligures 1-1- Not. 4, BID SECURITY / EARNEST MONEY. Pay Order amounting to Rs 10.700,000/- (Rupees: Ten Million and Seven Hundred Thousand Only) in favour of Karachi Port Trust (KPT) should be submitted (in original) with the Technical Proposal.
- 5 Pay Orders of Bid Security / Earnest Money and Tender Document Fee (in original) must be attached with the Technical Bid without which, the Tender shall not be accepted.
- PRE-BID MEETING: Pre-Bid Meeting will be held on 24-03-2025 in the office of GM(E) at KPT Head Office, Eduljee Dinshaw Road, Karachi.
- 7. BID VALIDITY: Bid should be valid for 90 days from the date of
- 7. BID VALIDITY: Bid should be valid for 90 days from the date of opening of Technical Bid.

  8. DATE OF B BID OPENING: The bid should reach in the Room No. 32 of CM&EE-II Deptt. at Ground Fleor of KPT Head Office, Edulgee Dinshaw Road, Karachi not later than 1100 hours on 15 04-2025 in Certhical Proposals shall be opened on the same day i.e. 15 04-2025 at 1130 hours in the presence of bidder's authorized representative, who may so wish to witness, at the CM&EE-Tender Committee Room No 32 at RFT Head Office, in the first instance Technical Bid will be open and Financial Proposals of only the Technically qualified times shall be opened later on.
- KPT reserves the right to accept any or to reject any or all the offers at any time and annul the process as per PPR-2004.

Chief Mechanical & Electrical Engineer-II M.I.Yard, West Wharf Karachi Telephone No. 021-99214955 Fax No. 021-99214450 http://www.kpt gov.pk & http://www.ppra.gov.pk "SAY NO TO CORRUPTION"

# KARACHI PORT TRUST

MECHANICAL & ELECTRICAL DEPARTMENT

Documents for
TECHNICAL BID
(NOTE: PRICE CAN NOT BE QUOTED
IN TECHNICAL BID)

Name of work:

## **TENDER DOCUMENTS FOR THE:**

REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI

#### **Contents:**

- i. Instruction for Tender (02 Pages).
- ii. The Tender and Performa 'A' & 'B' (04 + 01 Pages) (For Technical Bid).
- iii. Revised Scope of Work (06 Pages).
- iv. Revised Technical Evaluation Criteria (TEC) (04 Pages- Landscape)
- v. Revised Bill of Quantity (B.O.Q Cost Schedule) (10 Pages) (for Tech Bid)
- vi. The General Conditions of Contract with the Form of the Agreement and Bond (19 Pages).

One complete set of these Tender Documents duly filled in, signed & stamped (without mentioning the price in Technical Bid), must be delivered at CM&EE's Tender Committee Room No. 32 at Ground Floor, KPT Head Office before 11.00 A.M on 15-04-2025 in a sealed cover superscribed as per the Tender Notice.

Issued to	Name and Addresses of Tenderer:-
Date	

N. B: All tender documents read carefully, to be filled properly and duly singed & stamped each paper. Incomplete tender bids will not be considered.

NOTE: The Bid Security / Earnest Money amounting to Rs 10,700,000/- (Rupees: Ten Million Seven Hundred Thousand Only) (Refundable) and Tender Documents Fee amounting to Rs 5,000/- (Rupees: Five Thousand Only) (Non Refundable) both in the shape of Pay Orders in-original be submitted along-with Technical Proposal in the name of Karachi Port Trust (KPT) without which the tender will not be accepted.

# KARACHI PORT TRUST MECH. & ELECT. ENGINEERING DEPARTMENT-II

#### "INSTRUCTION FOR TENDER"

- 1. The Tenderer should examine carefully the General Conditions of Contract, the Specification and the drawing supplied herewith. He should visit and inspect the Site on his own responsibility and at his own expense to obtain all the information which may be necessary for the purpose of making a Tender.
- 2. The Tenderer set down the rates and prices against the items in the Bill of Quantities are to be the full inclusive value of the finished work described there under and shall cover profit and all obligations of every kind which under the Contract are to be borne by the Contractor.
- 3. The Quantities set out in the Bill of Quantities are estimated only and their accuracy or inaccuracy shall in no way effect the validity of the Tender or of any Contract based thereon. The total amount of the various item set out in the Bill of Quantities at the rates or prices inserted by the Tenderer shall be stated in each case, but this figure is required solely for the purpose of facilitating the comparison of the various Tenders received and shall not be deemed to be the actual sum which is to be paid to the Contractor for the execution of the work. The actual sum to be paid to the Contractor whose Tender is accepted will be determine by measuring the work, actually done in accordance with the Contract and valuing it the rates or prices inserted by the Contractor in the Bill of Quantities.
- 4. The Contractor whose Tender accepted will be required to enter into an Agreement Form of which (subject to any necessary adaptations) will be as set out in the Form appended to the General conditions of the Contract.
- 5. The Contractor whose Tender accepted will also be required to furnish as Security deposit in cash, or in approved public Rupee security or in approve Bankers guaranteed Bond valid till the successful completion of the Contract, for the sum equivalent to Five percent (5%) of the Contractor price for the due performance of the Contract, (see Clause-9 of the General Conditions of Contract).
- **6. Tenders must be made on the separate Form** supplied herewith must be accompanied by two copies of the Bill of quantities fully price, monies out and totaled in ink and sign by Tenderer. Tender must be reached to the Chief Mechanical & Electrical Engineer Karachi Port Trust, not later than the time stated in the Tender Notice.
- 7. No unauthorized alteration may be made in the Form of Tender or the accompanying Documents and if alteration is made or if the Bill of Quantities is not properly filled in, or if these instructions are not fully complied with the Tender may be rejected.
- **8.** Tenderer must be produced evidence with their Tender, that they had experience and are fully capable carrying out the work of this class and magnitude and must give full details of the plant they propose to use on the works in **Proforma "A".**
- **9.** The Board of Trustees of the Karachi Port Trust reserves to themselves the right to reject any Tender without any reason or to accept any Tender in whole or in part and do not hind themselves to accept the lowest or any Tender.
- 10. Should there be any doubt or obscurity as to the meaning of any Tender Documents or if any further information is required, the Tenderer must address his enquiry in writing (in duplicate) to the Chief Mechanical & Electrical Engineer Karachi Port Trust, not later than two weeks before the date fixed for the delivery of Tender.
- 11. Unless otherwise agreed all payments to be made to the Contract, under the Contract will be made locally in Pakistan Rupee Currency.

(INSTRUCTION FOR TENDER Page 1/2)

- 12. Each Tender must be accompanied by the requisite amount of Earnest money deposit either in Pay Order / Demand Draft / Bank Guarantee of a recognized Pakistan or a foreign bank with presence in Pakistan to the Chief Accounts Officer Karachi Port Trust (Please Note: UBL Bank Guarantees are not acceptable). Bankers Guaranteed Bond valid for an indefinite period or a pay order drawn in favor of the Chief Accounts Officer Karachi Port Trust. The earnest money will be refunded to the unsuccessful Tenderer to after the Tender are decided. It will be optional with the successful Tenderers to re-appropriate the Earnest Money or part of the Earnest Money for the payment or part payment towards the Security deposit. (See Clause-9 of the General Conditions of Contract).
- 13. The Tender must be sent in a sealed cover envelope required as described in the Tender Notice and must be reached to the Chief Mechanical & Electrical Engineer Karachi Port Trust, before the due time and date fixed for opening of the Tender.
- **14.** The Contractors have to quote items rate as per schedule of quantities attached with Tender. Any insertion of percentage whether below or above on the rates after filling of the rates shall make the Tender invalid and the Tender will not be considered.

CHIEF MECHANICAL & ELECTRICAL ENGINEER KARACHI PORT TRUST

(INSTRUCTION FOR TENDER Page 2/2)

# KARACHI PORT TRUST MECH. & ELECT. ENGINEERING DEPARTMENT-II

# "THE TENDER"

Tender are required to fill in the blanks space in this tender Form and the attached Performa "A" To,

The Chief Mechanical & Electrical Engineer KARACHI PORT TRUST KARACHI PAKISTAN

Description of work
1. Having examined the drawing, General Conditions of Contract, and special condition of Contract (if any), specification and Bill of Quantities for the above named works. We the undersigned offer to carry on the said works in conformity with the said Drawings General Conditions of the Contract, Special conditions of Contract (if any ) specification and Bill of quantities for the sum of Rupees:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
We undertakes if our tender is occupied in whole or in part to commence the work with in days of receipt of the Engineer's order to commence and to complete and deliver the whole of the work comprised in the Contract with in Days calculated form the last days of the aforesaid period in which the works are to be commenced.
3. If our tender is accepted in whole or in part we will furnish a Security deposit for due performance of the Contract in accordance with <b>Clause-9 of the General Conditions of Contract</b> .
<b>4.</b> We agree to abide by the tender for a period of Days form the date fixed for receiving same and it shall remain binding upon us may be accepted at any time before expiration of that period.
5. Unless and until a formal Agreement is prepared and executed, this tender, together with your written acceptance thereof, shelf constitutes a binding Contract between us.
<b>6.</b> We understand that you are not bound to accept the lowest or any tender; you may receive and accept any tender in part or in whole.
7. We further agree to pay all cost toward the execution of the Contract Agreement including the cost of stamps.
8. We agree that should we withdraw the offer within the aforesaid period or fail to execute the formal Contract Agreement and / or make the required Security deposit, the Board of Trustees of Karachi Port Trust shall be at liberty at their absolute discretion to appropriate our earnest money deposit of Rs Either as agreed liquidated damages without any proof whatsoever of the extend of such damages or an account, reserving to themselves the right to recover from us any further loss or expenses to which they may have been put directly or indirectly by reason of any failure on our part as aforesaid.

(THE TENDER Page 1/4)

				В	

9. * We have deposited / sent by Cheque No	
Certificate Cheque No/enclose a Bank gu	
As Earnest money in favour of <b>Chief Accounts Officer</b> No	, Karachi Port Trust and noid his receipt
No Dated	
<b>10.</b> We agree to maintain the work in good order for a date of its completion.	period of Months, from the
Dated	TENDERER
Place	(Full signature)
Signed by Mr	For and on
Behalf of Messrs	
*Dolato whichover is Not Applicable	

\*Delete whichever is Not Applicable

(THE TENDER Page 2/4)

# <u>KARACHI PORT TRUST</u> MECH. & ELECT. ENGINEERING DEPARTMENT-II

# PROFORMA "A"

(To be submitted with the tender)

Particulars	Details
1. Experience as a Contractor.	
2. Work carried out in the past with detailed cost, particulars and the year in which they were under taken etc.	
3. Bankers reference regarding Financial status.	
4. Whether registered with any other Department or Organization? If so, give details.	

(THE TENDER Page 3/4)

	Particulars	Details
5.	Plant and equipment in possession(Give Detail with cost)	
6.	Technical personnel employed; give Names and other details.	
7.	If your firm registered?	2.
8.	State Capital of your firm.	
9.	Details of Income tax, Sales tax, registration etc.	
10.	Number of years of actual work carried out in Pakistan.	
11.	Attach attested copy of certificate of past work of the same nature carried out as that in tender.	
12.	Electrical Contractor license No. and date.	
		SIGNATURE OF TENDERER
Da	te:	Signed by Mr
Pla	ce:	For and on behalf of

(THE TENDER Page 4/4)

# KARACHI PORT TRUST MECH & ELECT ENGG. DEPARTMENT-II

# PROFORMA – "B"

S.NO	P A R T I C U L A R S	DETAILS
1.	In case of "SOLE PROPERIETOR SHIP" concern.  a. Full Name of the Proprietor.  b. Business address and Phone No. if any.  c. Residential address and Phone No. if any.  d. Certified copy of certificate of registration with Registrar of Firms to be attached.	
2.	In case of "PARTNERSHIP" Concern:  a. Name of the Partners with their business/ residential address and Phone No. if any.  b. Partnership Deed & Certificate of Registration (Certified copies to be attached)	
3.	In case of "PRIVATE LIMITED COMPANY".  a. Name of all Directors with their Business/Residential address and Phone No., if any.  b. Memorandum & Articles of Association of the Company and Certificate of in corporation. (Certified copies to be attached.)	
4.	In case of "PUBLIC LTD., COMPANY".  Memorandum & Articles of Association and (Certified copies to be attached).	
5.	In case firm is to be represented by "ATTORNEY".  a. Legal Status and full particulars of the Attorney.  b. Period of validity of Power of Attorney (Certified copies of Special or General Power of Attorney duly executed on Stamp Paper of proper value and authenticated/attested by a competent Authority to be attached.	
6.	G.I.R. No: Income Tax and amount of Income paid during the last assessment year(state year of Assessment)	
7.	A Certificate from the Bankers, sealed and addressed to the KPT showing the financial position of the Institution tendering, should be enclosed.	

SIGNATURE AND SEAL OF THE TENDERER	
SIGNED BY MR.	
FOR & ON BEHALF OF	

# KARACHI PORT TRUST MECH & ELECT ENGG. DEPARTMENT-I

## REVISED SCOPE OF WORK

REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI.

The subject electro mechanical crane's components, sheaves gears, pneumatic gears system, pulleys, bearings, wire rope, coupling, shaft found damaged during operation. Same needs to be dismantled and repaired as per following scope of work.

S. No.	Description	Qty
<u>A</u>	REPAIRING / COMMISSIONING	
I.	Damaged / corroded Ms 12 mm luffing gear box floor plate to be renewed.	07 Tons approx.
	Note:	(may
	1-Before welding engineering plan i.e. WPS to be submitted for joint discussion / approval.	increased/ decreased)
	2-Qualified welder and compatible electrodes to be used.	
	3-All welding cutting and rigging tested equipment's, with proper safety gears	
	to be used during the repair work.	
II.	MS 1.5 inch dia (BSP) safety railing at floor plate of luffing gear system around 60 meter (approx) to be renewed.	60 meters approx. (may increased/
		decreased)
III.	Operator cabin needs to be refurbished electrical control system and gangway	01 No.
IV.	Complete luffing gear box need to be renewed with imported equaling to existing requirement or over rated capacity.	01 No.
V.	<u>Luffing Gear Motor:</u>	01 No.
	Gearbox motor to be dismantled.	
	Motor casings need to be casted and machine work to be carried out.	
	Motor armature and rotor to be tested.      Consistent Associated Services of the mater to be corried out.	
	<ul> <li>Servicing / overhauling &amp; re-winding of the motor to be carried out.</li> <li>Motor bearings to be replaced</li> </ul>	
	<ul> <li>Motor bearings to be replaced.</li> <li>If motor found beyond repair then new motor to be arranged of same</li> </ul>	
	specification.	
	Servicing of thruster break unit, Qty 01 No to be carried out.	
	Motor shaft coupling to be renewed as per existing.	
VI.	Shaft / Trueness / Alignment Work and Following work to be carried out.	03 Nos.
	• Shaft, dia 140 mm, L= 824 mm, Qty 01 No.	
	<ul> <li>Connecting shaft, dia 280 mm, L=390mm,Qty 02 Nos.</li> <li>Checking of shaft trueness and perform NDT/ MPI.</li> </ul>	
	Straightness of shaft(s) to be done by hydraulic press.	
	If found any defect like cracks & beyond Straightness then new shaft to	
	be fabricated.	
	<ul> <li>Transportation &amp; lifting of shafts from KPT to workshop and vise-versa will be done by contractor.</li> </ul>	
VII.	Coupling:	
	Coupling bore dia 140 mm, Qty 01 No as per size and metallurgy to be renewed.	01 No.

VIII.	Gears:	06 Nos.
	Spur gear 11 teeth. 02 nos.	
	Spur gear wheels, 84 teeth, 02 Nos.     Spreakete, 08 teeth, 03 Nos.	
	<ul> <li>Sprockets, 08 teeth, 02 Nos.</li> <li>All open gears to be removed, checking gears by visual test, checking</li> </ul>	
	teeth groove, gear NDT/MPI. If found any defect then new gears to be	
	renewed as per size and metallurgy.	
IX.	Pedestal Bearing:	06 Nos.
17.	Housing of the pedestal bearing 06 no, to be repaired / replaced as per	00 1403.
	NDT report.	
	06 Nos. pedestal bearing aluminum bronze shells to be renewed with	06 Nos.
	new one.	
X.	Port & Sthd rack straightness in both axes on face plate to be checked	02 Racks
	<ul> <li>Port &amp; Stbd rack straightness in both axes on face plate to be checked.</li> <li>Straightness to be done by hydraulic press (if required).</li> </ul>	
	<ul> <li>If found beyond straightness then new rack to be fabricated.</li> </ul>	
	Transportation & lifting of rack from workplace to KPT and vice versa will	
	be done by contractor.	
	Rack bushes and pins 04 Nos. to be renewed.	04 Nos.
	Racks driven pin (Dia, 111mm, Qty 110 Nos.) to be checked, repaired /	110 Nos.
	replaced as per NDT report.	
	Poeks upper shaft (with put helts weekers etc.) found democrad poed to	00 Nos
	<ul> <li>Racks upper shaft (with nut bolts, washers etc.) found damaged need to be replaced 02 Nos. completely</li> </ul>	02 Nos.
XI.	I. Compensation tower found damage, need to replace completely as per	40 Tons
	drawing & material specification.	
	<ul><li>II. Ladder, grating, railing &amp; platform to be replaced.</li><li>III. Total weight of the tower is approx 40 tons.</li></ul>	
	III. Total weight of the tower is approx 40 tons.  Note:	
	IV. Before welding engineering plan i.e WPS to be submitted for joint	
	discussion / approval.	
	V. Qualified welder and compatible electrodes to be used.	
	VI. All welding, cutting and rigging tested equipment's with proper safety gears to be used during the repair work.	
XII.	JIB:	10 Tons
Z.II.	Total Length of the jib 46 meter,	10 10110
	Removal of damaged / corroded area of Crane jib according of the UT	
	report and replace with one of same size and material.	
	<ul> <li>Jib angles to be replaced in some cross bracing in bottom chord.</li> <li>Gusset plates to be replaced in come cross bracings in bottom chord.</li> </ul>	
	<ul> <li>Gusset plates to be replaced in come cross bracings in bottom chord.</li> <li>Pin brackets to be replaced in bottom chord at near part of the jib.</li> </ul>	
	Hinge pins to be replaced.	
	Vertical H-Bearing to be replaced 02 Nos. at rear part of the jib.	
	Plates to hold traverse block of pins rack with bushes to be replaced 04	
	Nos. in top of H-beam at rear part of the jib.	
	<ul> <li>Front side channel and angels for holding a pulley to be replaced.</li> <li>Front side separator plate (15 Nos.) to be replaced.</li> </ul>	
	<ul> <li>Complete ladder &amp; railing on jib to be replaced with new one (Approx 46</li> </ul>	
	meter).	
	All above activities will be done as per drawing material specification.	
	Note:	
	<ol> <li>Before welding engineering plan i.e. WPS to be submitted for joint discussion / approval.</li> </ol>	
	II. Qualified welder and compatible electrodes to be arranged & used.	
	III. All welding, cutting and rigging tested equipment's with proper safety	
	gear to be use during the repair work.	
	gear to be use during the repair work.	Page: 2/6

XIII.	Main hook block marrying beam to be fabricated new one.  Lifting parts & accessories to be repaired /replaced as per NDT report.	01 No.
XIV.	Auxiliary hook block to be fabricated new one as per sample.  Lifting parts & accessories to be repaired / replaced as per NDT report.	01 No.
XV.	<ul> <li>Pulley / Sheaves to be renewed.</li> <li>All pulleys (33 Nos.) of tower and jib to be dismantled.</li> <li>Pulleys 33 Nos. replaced with new one including bushes &amp; bearing as per drawing.</li> <li>Axel and shaft (material C45 of C60 or equivalent) to be repaired / replaced as per NDT report.</li> <li>Rope guard to be renewed.</li> <li>Pulley Details:-</li> <li>OD 870mm, width 85 mm, Qty 09 Nos.</li> <li>OD 980 mm, width 90 mm, Qty 24 Nos.</li> </ul>	33 Nos.
V// //	Material: ST60 or equivalent.    State   California   California	04 ! - !-
XVI.	<ul> <li>Electrical Cable:</li> <li>All cable for control and supply associated with jib and tower as per existing need to be replaced complete in all respect.</li> <li>All sensor, switches, contractors, relays, limit switch, safeties system, load cell and gauges, need to be refurbish / replaced.</li> <li>Cable tray need to be replaced, Qty 60 meters.</li> </ul>	01 job
XVII.	<ul> <li>Pneumatic Greasing System:-</li> <li>Complete grease system with pump motor, copper/ SS pipe need to be refurbished / replace.</li> </ul>	01 job
XVIII.	Wire Rope:	01 job
	<ul> <li>Main hoist wire rope dia 38 mm.</li> <li>Auxiliary hoist wire rope dia 34 mm</li> <li>Old wire rope to be dismantled and place it on berth</li> <li>Proper cleaning of the crane drum to be carried out.</li> <li>New wire rope to be arranged and installed &amp; re-wind on the drums of crane.</li> <li>Rigging the new wire rope from rope drums through pulleys to snatch block and to be installed properly.</li> <li>Certified wire as per drawing need to be supplied and replace by contractor.</li> </ul>	
XIX.	Slewing Bearing:-	01 No.
	Only inspection of the bearing to be done cleaning, servicing and replacement of oil as per existing.	
XX.	Excess ladder from deck to compensation tower to be checked, repaired / replaced as per requirement.	02 Tons
XXI.	Excess ladder railing from deck to compensation tower to be checked, repaired / replaced as per requirement	40 meters
XXII.	Alignment to be carried out of jib & compensation.	01 job
XXIII.	Main bottom bearing hinges bracket's to be renewed.	04 Nos.
	Bore to be machined (Line Bore)	02 Nos.
	Pin to be made as per bore size.	02 Nos.
XXIV.	Main top hinge bracket's to be fabricated.	04 Nos.
	Bore to be machined (Line Bore)	02 Nos.
)	Pin to be made as per bore size.	02 Nos.
XXV.	Complete jib, compensation tower, floor plate, excess ladder etc to be sand blasted / grit blasted / hydro blast surface to be achieved S.A 2.5.  Epoxy marine paint to be applied as per existing shade and scheme.	01 job
	Lepony manine paint to be applied as per existing snade and scheme.	Page:3/6

(Nevise	ed Scope of Work –Ref. Maj Refit –Renewal Electro Mech Crane Component Etc FC HATHI) dt. 18-02-2025 FOR TECF	IIIIOAL DID
XXVI.	For installation of jib and compensation tower 04 Nos. Crawlers' / mobile cranes along with lifting equipment (Wire sling, shackles, bucket etc.) to be arranged by the prospective bidder.	01 job
	The other associated any equipment / tool / support etc if to be required the	
	same will be arranged by the contractor.  All the required tools and crane etc, to be at par of the Jib / Tower tonnage /	
	capacity to be handed.	
	The whole job will be monitored through experienced team of Engineers / Supervisors, Riggers etc. till satisfactorily completion. Prior to installation an	
	Engineering plan to be designated on Auto Cad and to be submitted for joint	
XXVII.	discussion / approval  Upon competition of work required load test to be carried out in the presence of	01 job
	KPT Official.	
S.No.	Description Description	Qty
<u>B</u>	ELECTRICAL WORKS.	
I.	The Following AC/DC Motors to be overhauled as per following scope of works a) 02 Nos Indication Motors AC 86KW	
	b) 04 Nos Starter motors AC of winches 440 V, 17 KW	
	c) 02 Nos compound generators DC 38 KW	
	d) 02 Nos Shunt Generators DC 48 KW e) 02 Nos Slewing motors DC 15 KW	
	f) 02 Nos Main Hoist Motors DC 38 KW	
	g) 01 No Auxiliary Hoist Motors DC 38 KW	
	h) 10 Nos Thrust Motors AC 38 KW	
	i) 02 Nos FWD winch Motors AC 10KW j) 02 Nos AFT winch Motors AC 10 KW	
	j) 02 Nos AFT winch Motors AC 10 KW k) 01 No Luffing motor DC 45 KW	
	I) 02 Nos Blower motor AC 440 V	
	m) 02 Nos Blast pump motor 15 KW	
	n) 01 No Compressor motor 440 V 7.5 KW	04 iab
	o) 03 Nos Fresh water motor 2.2 KW p) 01 No Stand by lube oil motor 3 KW	01 job
	q) 01 No Fuel oil transfer motor 1.1 KW	
	r) 06 Nos Navigation light 220 V marine type	
	s) 01 No Red light with fitting 220 v marine type	
	The Following AC/DC alternator to be overhauled as per following scope of works	
	a) 02 Nos Main Alternators (P&S) 460 KW	
	b) 01 No Auxiliary Alternator 132 KW	
	Scope of work	
	<ul> <li>a) Disassembly: (i) Remove the motor from foundation. (ii) take parts of the motors components including the starter, rotor, bearing and winding</li> </ul>	
	b) Cleaning: Thoroughly clean the motor components removing dirt grain &	
	old lubricant	
	Inspection: visually inspect the components for damage, wear or corrosion; check the any sign of over heating, electrical arcing on other damage.	
	damage. d) Repair / Replaced: Repair or replaced the damage parts such as bearing	
	windings, starter on rotors cores, commutators or slip ring, replaced any	
	damage parts.	
	e) Reassemble the motor: Reassemble the components in the correct order.	
	<ul> <li>f) Testing: Perform electrical and mechanical test to ensure the motor functioning properly.</li> </ul>	
	g) Painting / coating: Apply a new coat of paint or varnish to protect the	
	motor from corrosion.	
	h) Re-installation: Motor to be re-installed with following.	
	<ul> <li>Checking and adjusting the motors alignment and balance.</li> <li>Motor nut bolts, seal gasket if any to be checked.</li> </ul>	
	<ul> <li>Motors switch and starter to be checked.</li> </ul>	
	Performing a dynamics balance of the motor.	
		Page:4

II.	ELECTRICAL PANEL WORKS	
	<ul> <li>Main &amp; (Auxiliary panel) to be serviced. The following part to be checked repair/replaced. Note: repaired / replaced quote to quoted separately.</li> <li>a) 06 Nos Main contractors V 220 DC</li> <li>b) 78 Nos Auxiliary contractors V 220 DC</li> <li>c) 06 Nos 63 Amp, 04 Nos 32 Amp, 09 Nos 06 Amp, 03 Nos 20 Amp, 30 Nos 10 Amp</li> <li>d) 08 Nos timer switches, 02 Nos blast pump switches, 04 Nos winches switches, 01 Nos selector rotary switch.</li> <li>e) 30 Nos Bottle type fuse (02 &amp; 04 Amp).</li> <li>f) 11 Nos Ammeter, 03 Nos Power meters, 03 Nos frequency meters, 03 Nos Volt meter</li> <li>g) 08 Nos Break thrusters V 200</li> <li>h) 10 Nos Break Liners 07 Nos Limit switches, 220 V DC</li> <li>i) Carbon holder and the rocker Aram to be washed in Nitric acid &amp; CTC</li> <li>j) Crane &amp; Engine Room Panel internal wiring / cables to be checked and replaced.</li> </ul>	01 Job

S.No.	Description	Qty
<u>C</u>	MACHINERY WORKS	
I.	The following MS perforated / damaged pipe lines to be renewed as per	01 Job
	existing schedule:	
	a) Sea water pipe, MS dia 2-1/2 Inches Length 75 meters.	
	b) Sea water pipe 2" dia length 70 meters.	
	c) Sea water pipe 8" dia length 40 meters	
	d) Sea water pipe MS 6" dia length 70 meters	
	e) Lube oil / fuel oil MS 1-1/2 dia length 100 meters	
	f) Bilges pipe MS 2" dia length 30 meter.	
	g) Air vent, dia 1" & fire hydrant MS 2" dia length 30 meters.	
	h) All fabricated welded pipes to be tested and re-installed with gasket and nut	
	bolts.	
II.	Main engine (Port side) MAN (30/45) to be completely overhauled with all	01 Job
	attached equipment i.e. Turbo Charger, pumps, pressure gauges, exhaust	
	temperature, lube oil cooler, fresh water cooler, all safeties and alternator	
	Parts to be provided by firm.	
III.	Auxiliary Engine (MAN (2876 LE01) top Overhauling to be carried out	01 Job
	Parts will be provided by firm.	
IV.	The following pumps to be overhauled as per requirement.	05 Nos.
	a) 01 No Blast pump	
	b) 02 Nos. Bilges pump	
	c) 01 No GS	
	d) 01 No fuel pump	

S.No.	Description	Qty
<u>D</u>	WINCHES 04 Nos.	
	a) All 04 nos. winch brake lining to be repaired.	08
	b) All 04 nos. brake lining bracket to be checked, repaired/ replaced.	08
	c) All 04 nos. brake lining surface to be polished.	08
	d) All 04 nos. gispy to be adjusted according to anchor chain.	04
	e) All 04 nos. gispy stopper guide to be checked repaired. Replaced according to anchor chain (repair/ replaced quote to be carried out.	04
	f) Any in way removal, repair to be carried out.	-
	g) Fwd Stbd winch gear box bearing to be checked	01 Job

## (Revised Scope of Work –Ref. Maj Refit –Renewal Electro Mech Crane Component Etc FC HATHI) dt. 18-02-2025 FOR TECHINCAL BID

h)	Luffing slewing roller greasing line and greasing nipples to be replaced / repaired.	01 Job
i)	Load testing of the crane to be conducted for smooth & safe operation in all respect.	-
j)	Old steel wire need to be inspected for reused if defective need to be replaced with approved wire from LRS/BV classified society, wire to be supplied by the firm.	-

S.No.	Description	Qty
<u>E</u>	AIR RESERVIOR	
	<ul> <li>a) Both air reservoir to be dismantled serviced / pressure tested at 120 kg/cm.</li> <li>b) Air reservoir valve head to be dismantled all leaky valves to be checked repaired including safety &amp; other associated valves.</li> <li>c) Associated pipe line to be checked and leakage to be rectified.</li> </ul>	02

## (NOTE)

- (All the Drawings as and where applicable /required will be provided by Manora Workshop-KPT upon request by the firm)
- Contract may be awarded item wise to the lowest responsive bidders, provided it aligns with the overall objectives of cost efficiency and operational compability.

#### **TERMS AND CONDITIONS:**

- 1. Tools, lifting equipment, welding machine, welding electrode, gas cutting equipment and gas cylinder is firm's responsibility during the aforementioned repair work.
- 2. Transportations from Craft to work place, to Craft are firm's responsibility.
- 3. Safety and safety equipments are firm's responsibility during repair.
- 4. Any unforeseen work during repair is firm responsibility.
- 5. Upon completion of repair work the satisfactory test trial in the presence of ship Engineer / staff is firm responsibility.

-Sd-MECHANICAL ENGINEER (W/S)

-Sd-DCME (WS)

Page:6/6

# KARACHI PORT TRUST MECH & ELECT ENGG DEPTT -

## REVISED BILL OF QUANTITY (B.O.Q. COST SCHEDULE)

REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI.

S. No.	Description	Qty	Material Charges (Where applicable)	Labour Charges (Where applicable
A	REPAIRING / COMMISSIONING			
I.	Damaged / corroded Ms 12 mm luffing gear box floor plate to be renewed.  Note:  1-Before welding engineering plan i.e. WPS to be submitted for joint discussion / approval.  2-Qualified welder and compatible electrodes to be used.  3-All welding cutting and rigging tested equipment's, with proper safety gears to be used during the repair work.	approx. (may increased/ decreased)	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX
II.	MS 1.5 inch dia (BSP) safety railing at floor plate of luffing gear system around 60 meter (approx) to be renewed.	60 meters approx. (may increased/ decreased)	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXX XXXXXXX XXXXXXX XXXXXXX
III.	Operator cabin needs to be refurbished electrical control system and gangway.	01 No.	XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXX XXXXXXX XXXXXXX
IV	Complete luffing gear box need to be renewed with imported equaling to existing requirement or over rated capacity.	01 No.	XXXXXXX XXXXXXX XXXXXXX XXXXXXX	Not required XXXXXXX XXXXXXX
V.	<ul> <li>Gearbox motor to be dismantled.</li> <li>Motor casings need to be casted and machine work to be carried out.</li> <li>Motor armature and rotor to be tested.</li> <li>Servicing / overhauling &amp; re-winding of the motor to be carried out.</li> <li>Motor bearings to be replaced.</li> <li>If motor found beyond repair then new motor to be arranged of same specification.</li> <li>Servicing of thruster break unit, Qty 01 No to be carried out.</li> </ul>	01 No.	Not required XXXXXXX XXXXXXX XXXXXXX XXXXXX XXXXXX XXXX	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX

YYYYY		Motor shaft coupling to be renewed as per existing.	XXXXXXX XXXXXXX XXXXXXX	XXXXXX
-------	--	---	-------------------------------	--------

Page;1/10

	Nevised B.O.Q - Net. maj Netit - Netiewal Electro mech Grane Componen			
VI.	Shaft / Trueness / Alignment Work and	03 Nos.	XXXXXXX	XXXXXXX
	Following work to be carried out.  • Shaft, dia 140 mm, L= 824 mm,		XXXXXXX	XXXXXXX
	Qty 01 No.		XXXXXXX	XXXXXXX
	<ul> <li>Connecting shaft, dia 280 mm,</li> </ul>		XXXXXXX	XXXXXXX
	L=390mm,Qty 02 Nos.		XXXXXXX	XXXXXXX
	<ul> <li>Checking of shaft trueness and</li> </ul>		XXXXXXX	XXXXXXX
	perform NDT/ MPI.		XXXXXXX	
	Straightness of shaft(s) to be done by		XXXXXXX	XXXXXXX
	hydraulic press.			XXXXXXX
	If found any defect like cracks &  howard Straightness than new short to		XXXXXXX	
	beyond Straightness then new shaft to be fabricated.		XXXXXXX	XXXXXXX
	Transportation & lifting of shafts from		XXXXXXX	XXXXXXX
	KPT to workshop and vise-versa will		XXXXXXX	XXXXXXX
	be done by contractor.			
	,		XXXXXXX	XXXXXX
			XXXXXXX	
VII.	Coupling:	01 No.	XXXXXXX	XXXXXXX
VII.	Coupling bore dia 140 mm, Qty 01 No as per	UT NO.	XXXXXXX	XXXXXXX
	size and metallurgy to be renewed.		XXXXXXX	XXXXXXX
	one and motandigy to be removed.		XXX	*****
VIII.	Gears:	06 Nos.	XXXXXXX	XXXXXXX
VIII.	• Spur gear 11 teeth. 02 nos.	UO NUS.	XXXXXXX	XXXXXXX
	<ul> <li>Spur gear wheels, 84 teeth, 02 Nos.</li> </ul>		XXXXXXX	XXXXXXX
	Sprockets, 08 teeth, 02 Nos.		XXXXXXX	XXXXXXX
	<ul> <li>All open gears to be removed,</li> </ul>		XXXXXXX	XXXXXXX
	checking gears by visual test, checking		XXXXXXX	XXXXXXX
	teeth groove, gear NDT/MPI. If found		XXXXXXX	XXXXXXX
	any defect then new gears to be		XXXXXXX	XXXXXXX
	renewed as per size and		XXXXXXX	*****
	metallurgy.		X	
IX.	Pedestal Bearing:		XXXXXXX	XXXXXXX
IX.	Housing of the pedestal bearing 06 no,		XXXXXXX	XXXXXXX
	to be repaired / replaced as per NDT	06 Nos.	XXXXXXX	XXXXXXX
	report.		XXXXXXX	XXXXXXX
	06 Nos. pedestal bearing aluminum		XXXXXXX	XXXXXXX
	bronze shells to be renewed with	06 Nos.	XXXXXXX	XXXXXXX
	new one.		XXXXXX	700000
Χ.	Pin Rack:		XXXXXXX	
74.	Port & Stbd rack straightness in both axes	02 Racks	XXXXXXX	XXXXXXX
	on face plate to be checked.		XXXXXX	XXXXXX
	Straightness to be done by hydraulic		XXXXXX	XXXXXX
	press (if required).		XXXXXXX	Not
	If found beyond straightness then new		XXXXXXX	required
	rack to be fabricated.		XXXXXXX	XXXXXXX
	Transportation & lifting of rack from  workplace to KPT and vice versa will be		XXXXXXX	XXXXXXX
	workplace to KPT and vice versa will be done by contractor.		XXXXXXX	XXXXXXX
	<ul> <li>Rack bushes and pins 04 Nos. to be</li> </ul>	04 Nos.	XXXXXXX	XXXXXXX
	renewed.		XXXXXXX	XXXXXXX
			XXXXXXX	XXXXXX
			XXXX	
	Racks driven pin (Dia, 111mm, Qty 110)	110 Nos.	XXXXXXX	XXXXXXX
	Nos.) to be checked, repaired / replaced		XXXXXXX	XXXXXXX
	as per NDT report.		XXXXXXX	XXXXXXX
			XXX	
	Racks upper shaft (with nut bolts,	02 Nos.	XXXXXXX	Not
	11 2 2 2 (11111 11111 11111)			

washers etc.) found damaged need to be replaced 02 Nos. completely.		XXXXXXX	required
	<i>1</i>	XXX	

Page;2/10

VI	L. Componentian tower found damage, pood	40 Tono	XXXXXXX	XXXXXXX
XI.	I. Compensation tower found damage, need	40 Tons		
	to replace completely as per drawing &		XXXXXXX	XXXXXX
	material specification.		XXXXXX	XXXXXXX
	II. Ladder, grating, railing & platform to be		XXXXXXX	XXXXXXX
	replaced.		XXXXXXX	XXXXXXX
	III. Total weight of the tower is approx 40		XXXXXX	XXXXXX
	tons.		XXXXXXX	XXXXXXX
	Note:		XXXXXXX	XXXXXXX
	IV. Before welding engineering plan i.e WPS			XXXXXXX
	to be submitted for joint discussion /		XXXXXXX	
	approval.		XXXXXX	XXXXXX
	V. Qualified welder and compatible		XXXXXXX	XXXXXXX
	electrodes to be used.		XXXXXXX	XXXXXXX
	VI. All welding, cutting and rigging tested		XXXXXXX	XXXXXXX
	equipment's with proper safety gears to		XXXXXXX	
	be used during the repair work.		XXXXXX	
VII	• .			VVVVVV
1	<u>JIB:</u>		XXXXXXX	XXXXXX
	Total Length of the jib 46 meter,		XXXXXXX	XXXXXXX
	Removal of damaged / corroded area of		XXXXXXX	XXXXXXX
	Crane jib according of the UT report and		XXXXXXX	XXXXXX
	replace with one of same size and		XXXXXXX	XXXXXXX
	material.		XXXXXXX	XXXXXXX
	<ul> <li>Jib angles to be replaced in some cross</li> </ul>		XXXXXXX	XXXXXXX
	bracing in bottom chord.			
	<ul> <li>Gusset plates to be replaced in come</li> </ul>		XXXXXXX	XXXXXX
	cross bracings in bottom chord.		XXXXXXX	XXXXXXX
	<ul> <li>Pin brackets to be replaced in bottom</li> </ul>		XXXXXXX	XXXXXXX
	chord at near part of the jib.		XXXXXXX	XXXXXXX
	Hinge pins to be replaced.		XXXXXX	XXXXXX
	Vertical H-Bearing to be replaced 02 Nos.		XXXXXXX	XXXXXXX
	at rear part of the jib.		XXXXXXX	XXXXXXX
	Plates to hold traverse block of pins rack	10 Tons		
	with bushes to be replaced 04 Nos. in top		XXXXXXX	XXXXXXX
	of H-beam at rear part of the jib.		XXXXXXX	XXXXXX
	<ul> <li>Front side channel and angels for holding</li> </ul>		XXXXXXX	XXXXXXX
	a pulley to be replaced.		XXXXXXX	XXXXXXX
	<ul> <li>Front side separator plate (15 Nos.) to be</li> </ul>		XXXXXXX	XXXXXXX
	replaced.		XXXXXX	XXXXXX
	Complete ladder & railing on jib to be		XXXXXXX	XXXXXXX
	replaced with new one (Approx 46 meter).		XXXXXXX	XXXXXXX
	All above activities will be done as per drawing material appointment.		XXXXXXX	XXXXXXX
	drawing material specification.		XXXXXXX	XXXXXXX
			XXXXXXX	XXXXXXX
			XXXXXXX	XXXXXXX
			XXXXXXX	XXXXXX
			XXXXXXX	
			XXXXXXX	
			XXXXXXX	
			XXXXXX	
	Note:		XXXXXXX	XXXXXX
	I. Before welding engineering plan i.e. WPS		XXXXXXX	XXXXXXX
	to be submitted for joint discussion /		XXXXXXX	XXXXXX
	approval.		XXXXXXX	XXXXXX
	II. Qualified welder and compatible		XXXXXXX	XXXXXXX
	electrodes to be arranged & used.			
	III. All welding, cutting and rigging tested		XXXXXXX	XXXXXXX
	equipment's with proper safety gear to be		XXXXXXX	XXXXXX
	use during the repair work.		XXXXXXX	XXXXXXX
	use during the repair work.		XXXXXXX	
'	l l	i .		
		ļ	X	
XIII.	Main hook block marrying beam to be	01 No.	XXXXXXX	Not

fabricated new one.	XXXXXXX	
Lifting parts & accessories to be repaired		XXXXXXX
/replaced as per NDT report.	XXXXXXX	XXXXXXX
	XXXX	

Page;3/10

	·			
XIV.	Auxiliary hook block to be fabricated new one	01 No.	XXXXXXX	Not
	as per sample.		XXXXXXX	required
	Lifting parts & accessories to be repaired / replaced as per NDT report.		XXXXXXX	XXXXXX
	replaced as per NDT report.		XXXXXXX	XXXXXX
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		00.11	XXXX	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
XV.	Pulley / Sheaves to be renewed.	33 Nos.	XXXXXXX	XXXXXX
	<ul> <li>All pulleys (33 Nos.) of tower and jib to be dismantled.</li> </ul>		XXXXXXX	XXXXXXX
	<ul> <li>Pulleys 33 Nos. replaced with new one</li> </ul>		XXXXXXX	XXXXXXX
	including bushes & bearing as per		XXXXXXX	XXXXXXX
	drawing.		XXXXXXX	XXXXXXX
	Axel and shaft (material C45 of C60 or		XXXXXXX	XXXXXXX
	equivalent) to be repaired / replaced as		XXXXXXX	XXXXXXX
	per NDT report.		XXXXXXX	XXXXXXX
	<ul> <li>Rope guard to be renewed.</li> </ul>			
	Pulley Details:-		XXXXXXX	XXXXXXX
	<ul><li>OD 870mm, width 85 mm, Qty 09 Nos.</li><li>OD 980 mm, width 90 mm, Qty 24 Nos.</li></ul>		XXXXXXX	XXXXXXX
	<ul> <li>Material: ST60 or equivalent.</li> </ul>		XXXXXXX	****
	iviaterial. 6100 or equivalent.		XXXXX	
XVI.	Electrical Cable:	01 Job	XXXXXXX	XXXXXXX
AVI.	<ul> <li>All cable for control and supply associated</li> </ul>	01 300	XXXXXXX	XXXXXXX
	with jib and tower as per existing need to		XXXXXXX	XXXXXXX
	be replaced complete in all respect.		XXXXXXX	XXXXXXX
	All sensor, switches, contractors, relays,		XXXXXXX	XXXXXXX
	limit switch, safeties system, load cell and		XXXXXXX	XXXXXXX
	gauges, need to be refurbish / replaced.		XXXXXXX	XXXXXXX
	Cable tray need to be replaced,		XXXXXXX	XXXXXXX
	Qty 60 meters.		XXXXXXX	
			X	
XVII.	Pneumatic Greasing System:-	01 Job	XXXXXXX	XXXXXX
	<ul> <li>Complete grease system with pump</li> </ul>		XXXXXX	XXXXXX
	motor, copper/ SS pipe need to be		XXXXXX	XXXXXX
	refurbished / replace.		XXXXXX	XXXXXX
			XXXX	
XVIII.		01 Job	XXXXXXX	XXXXXX
	Main hoist wire rope dia 38 mm.		XXXXXX	XXXXXX
	Auxiliary hoist wire rope dia 34 mm		XXXXXXX	XXXXXXX
	Old wire rope to be dismantled and place it		XXXXXXX	XXXXXXX
	on berth  Proper cleaning of the crane drum to be		XXXXXXX	XXXXXXX
	<ul> <li>Proper cleaning of the crane drum to be carried out.</li> </ul>		XXXXXXX	XXXXXXX
	<ul> <li>New wire rope to be arranged and</li> </ul>		XXXXXXX	XXXXXXX
	installed & re-wind on the drums of crane.		XXXXXXX	XXXXXXX
	Rigging the new wire rope from rope		XXXXXXX	XXXXXX
	drums through pulleys to snatch block and		XXXXXXX	XXXXXXX
	to be installed properly.		XXXXXXX	XXXXXX
	Certified wire as per drawing need to be		XXXXXXX	XXXXXX
	supplied and replace by contractor.		XXXXXXX	XXXXXXX
			XXXXXXX	
			XXXXXX	
XIX.	Slewing Bearing:-	01 No.	Oil to be	XXXXXX
	Only inspection of the bearing to be done		provided	XXXXXX
	cleaning, servicing and replacement of oil as		by KPT	XXXXXX
	per existing.			XXXXXX
XX.	Excess ladder from deck to compensation	02 Tons	XXXXXXX	XXXXXX
	tower to be checked, repaired / replaced as		XXXXXXX	XXXXXX
	per requirement.		XXXXXXX	XXXXXX
			XXX	

XXI.	Excess	ladder	railing	from	deck	to	40	XXXXXXX	XXXXXXX
	compens				, repaire	ed /	meters		
	replaced as per requirement.						XXXXXXX	XXXXXXX	
								XXX	

Page;4/10

XXII.	Alignment to be carried out of jib & compensation.	01 job	Not	XXXXXXX
XXIII.	Main bottom bearing hinges bracket's to be renewed.	04 Nos.	required XXXXXXX XXXXXXXX XXX	
	Bore to be machined (Line Bore)	02 Nos.	Not required XXXXXXX	XXXXXXX XXXXXXX XXXXXXX
•	Pin to be made as per bore size.	02 Nos.	XXXXXXX	
XXIV.	Main top hinge bracket's to be fabricated.	04 Nos.	XXXXXXX	XXXXXX
•	Bore to be machined (Line Bore)	02 Nos.	Not required XXXXXXX	XXXXXXX XXXXXXX XXXXXXX
	Pin to be made as per bore size.	02 Nos.	XXXXXXX X XXXXXXX X	XXXXXXX
XXV.	Complete jib, compensation tower, floor plate, excess ladder etc to be sand blasted / grit blasted / hydro blast surface to be achieved S.A 2.5.  Epoxy marine paint to be applied as per existing shade and scheme.	01 job	Paint to be provided by KPT XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXX	XXXXXXX XXXXXXX XXXXXXX
XXVI.	For installation of jib and compensation tower 04 Nos. Crawlers' / mobile cranes along with lifting equipment (Wire sling, shackles, bucket etc.) to be arranged by the prospective bidder. The other associated any equipment / tool / support etc if to be required the same will be arranged by the contractor. All the required tools and crane etc, to be at par of the Jib / Tower tonnage / capacity to be handed. The whole job will be monitored through experienced team of Engineers / Supervisors, Riggers etc. till satisfactorily completion. Prior to installation an Engineering plan to be designated on Auto Cad and to be submitted for joint discussion / approval.	01 Job	Not required XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXX	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX
I.	Upon competition of work required load test to be carried out in the presence of KPT Official.	01 Job	XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXX XXXXXXX XXXXXXX
	Sub total Material Cost			XXXXXXX
	18 % GST on Material			XXXXXXXX XXXXXXXX
				XXXXXXX

Sub total Labor Cost	XXXXXXX
15% SST on services	XXXXXXX
Total Including GST & SST (A)	XXXXXXX
	XXXXXXX

Page;5/10

S. No.	Description	Qty	Material Charges	Labour Charges
110.			(Where	(Where
	ELECTRICAL WORKS		applicable)	applicable)
<u>B</u>	ELECTRICAL WORKS.			
I.	The Following AC/DC Motors to be overhauled	01 Job.	XXXXXXX	XXXXXXX
	as per following scope of works	0.000.	XXXXXXX	XXXXXXX
	a) 02 Nos. Indication Motors AC 86KW		XXXXXX	XXXXXX
	b) 04 Nos. Starter motors AC of winches		XXXXXX	XXXXXX
	440 V, 17 KW		XXXXXX	XXXXXX
	c) 02 Nos. compound generators DC 38 KW		XXXXXXX	XXXXXX
	d) 02 Nos. Shunt Generators DC 48 KW		XXXXXXX	XXXXXXX
	e) 02 Nos. Slewing motors DC 15 KW		XXXXXXX	XXXXXXX
	f) 02 Nos. Main Hoist Motors DC 38 KW		XXXXXXX	XXXXXXX
	g) 01 No. Auxiliary Hoist Motors DC 38 KW		XXXXXXX	XXXXXXX
	h) 10 Nos. Thrust Motors AC 38 KW		XXXXXXX	XXXXXXX
	i) 02 Nos. FWD winch Motors AC 10KW		XXXXXXX	XXXXXX
	j) 02 Nos. AFT winch Motors AC 10 KW		XXXXXXX	XXXXXXX
	<ul><li>k) 01 No. Luffing motor DC 45 KW</li><li>l) 02 Nos. Blower motor AC 440 V</li></ul>		XXXXXXX	XXXXXXX
	m) 02 Nos. Blast pump motor 15 KW		XXXXXXX	XXXXXXX
	n) 01 No. Compressor motor 440 V 7.5 KW		XXXXXXX	XXXXXXX
	o) 03 Nos. Fresh water motor 2.2 KW		XXXXXXX	XXXXXXX
	p) 01 No. Stand by lube oil motor 3 KW		XXXXXXX	XXXXXXX
	q) 01 No. Fuel oil transfer motor 1.1 KW		XXXXXXX	XXXXXXX
	r) 06 Nos. Navigation light 220 V marine		XXXXXXX	XXXXXXX
	type s) 01 No. Red light with fitting 220 v marine		XXXXXXX	XXXXXXX
	s) 01 No. Red light with fitting 220 v marine type		XXXXXXX	XXXXXXX
	The Following AC/DC alternator to be		XXXXXXX	XXXXXXX
	overhauled as per following scope of works		XXXXXXX	XXXXXXX
	a) 02 Nos. Main Alternators (P&S) 460 KW		XXXXXXX	XXXXXXX
	b) 01 No. Auxiliary Alternator 132 KW		XXXXXXX	XXXXXXX
	Scope of work		XXXXXXX	XXXXXXX
	a) Disassembly: (i) Remove the motor from		XXXXXX	XXXXXX
	foundation. (ii) take parts of the motors components including the starter, rotor,		XXXXXX	XXXXXX
	bearing and winding		XXXXXXX	XXXXXX
	b) <b>Cleaning</b> : Thoroughly clean the motor		XXXXXX	XXXXXX
	components removing dirt grain & old		XXXXXXX	XXXXXX
	lubricant		XXXXXXX	XXXXXXX
	c) Inspection: visually inspect the		XXXXXXX	XXXXXXX
	components for damage, wear or		XXXXXXX	XXXXXXX
	corrosion; check the any sign of over		XXXXXXX	XXXXXXX
	heating, electrical arcing on other damage.		XXXXXXX	XXXXXX
	d) <b>Repair / Replaced</b> : Repair or replaced		XXXXXXX	XXXXXX
	the damage parts such as bearing		XXXXXXX	XXXXXX
	windings, starter on rotors cores,		XXXXXXX	XXXXXX
	commutators or slip ring, replaced any		XXXXXXX	XXXXXXX
	damage parts.		XXXXXXX	XXXXXXX
	e) Reassemble the motor: Reassemble		XXXXXXX	XXXXXXX
	the components in the correct order.		XXXXXXX	XXXXXXX
	f) <b>Testing</b> : Perform electrical and mechanical test to ensure the motor		XXXXXXX	XXXXXXX
	functioning properly.		XXXXXXX	XXXXXXX
	g) <b>Painting / coating</b> : Apply a new coat of		XXXXXXX	XXXXXXX
	paint or varnish to protect the motor from		XXXXXXX	XXXXXXX
	corrosion.		*****	*****

			XXXXXXX	XXXXXXX
			XXXXXX	XXXXXXX
			XXXXXXX	XXXXXXX
	(Revised B.O.Q –Ref. Maj Refit –Renewal Electro Mech Crane		XXXXXX	XXXXXXX
	Component Etc FC HATHI) dt. 18-02-2025 FOR TECHINCAL BID		XXXXXX	XXXXXXX
	TOR TECHNICAL DID		XXXXXX	XXXXXXX
	h) <b>Re-installation</b> : Motor to be re-installed		XXXXXXX	Page:6/10
	with following.		XXXXXXX	XXXXXXX
	<ul> <li>Checking and adjusting the motors</li> </ul>		XXXXXXX	XXXXXXX
	alignment and balance.		XXXXXXX	XXXXXXX
	<ul> <li>Motor nut bolts, seal gasket if any to</li> </ul>		XXXXXX	XXXXXXX
	be checked.		XXXXXX	XXXXXXX
	Motors switch and starter to be		XXXXXX	XXXXXXX
	checked.		XXXXXX	XXXXXXX
	<ul> <li>Performing a dynamics balance of the motor</li> </ul>		XXXXXX	XXXXXXX
	the motor		XXXXXX	XXXXXXX
			XXXXXXX	XXXXXXX
			XXXXXXX	
			XXXXXXX	XXXXXXX
			XXXXXXX	XXXXXXX
			XXXXXXX	XXXXX
			XXXXXXX	XXXXXXX
	ELECTRICAL BANEL WORKS			X
II.	ELECTRICAL PANEL WORKS		XXXXXXX	XXXXXXX
			XXXXXXX	XXXXXXX
	Main O (Associtions of and The		XX	XX
	Main & (Auxiliary panel) to be serviced. The		XXXXXXX	XXXXXXX
	following parts to be checked repair/ replaced.  Note: repaired / replaced quote to quoted		XXXXXXX	XXXXXXX
	separately.		XXXXXXX	XXXXXXX
	a) 06 Nos. Main contractors V 220 DC		XXXXXXX	XXXXXXX
	,		XXXXXX	XXXXXXX
	b) 78 Nos. Auxiliary contractors V 220 DC		XXXXXXX	XXXXXXX
	c) 06 Nos. 63 Amp, 04 Nos. 32 Amp, 09		XXXXXXX	
	Nos. 06 Amp, 03 Nos. 20 Amp, 30 Nos.		XXXXXXX	
	10 Amp		XXXXXXX	
	d) 08 Nos. timer switches, 02 Nos. blast		XXXXXXX	
	pump switches, 04 Nos. winches		XXXXXXX	
	switches, 01 Nos. selector rotary switch.		XXXXXXX	
			XXXXXXX	
	e) 30 Nos. Bottle type fuses (02 & 04 Amp).		XXXXXXX	
	f) 11 Nos. Ammeter, 03 Nos. Power	01 Job	XXXXXXX	
	meters, 03 Nos. frequency meters,		XXXXXXX	
	03 Nos. Volt meter		XXXXXXX	
	g) 08 Nos. Break thrusters V 200		XXXXXXX	
	3,		XXXXXXX	
	h) 10 Nos. Break Liners 07 Nos. Limit		XXXXXXX	XXXXXXX
	switches, 220 V DC		XXXXXX	
	i) Carbon holder and the rocker Aram to be		XXXXXXX	
	washed in Nitric acid & CTC		XXXXXXX	
	j) Crane & Engine Room Panel internal		XXXXXXX	
	j) Crane & Engine Room Panel internal wiring / cables to be checked and		XXXXXXX	
	replaced.		XXXXXXX	XXXXXX
	i opiacoa.		XXXXXXX	
			XXXXXXX	
			XXXXXXX	XXXXXXX
			XXXXX	XXXXX
	Sub total Material Cost			XXXXXXX
				XXXXXXX
				XX

18 % GST on Material	XXXXXXX
	XXXXXXX
	XX
Sub total Labor Cost	XXXXXXX
	XXXXXXX
	XX
15% SST on services	XXXXXXX
	XXXXXXX
	XX
Total Including GST & SST (B)	XXXXXXX
	XXXXXXX
	XX

Page:7/10

S. No.	Description	Qty	Material Charges (Where applicable)	Labour Charges (Where applicable
<u>C</u>	MACHINERY WORKS			
I.	The following MS perforated / damaged pipe lines to be renewed as per existing schedule.  a) Sea water pipe, MS dia 2-1/2 Inches Length 75 meters.  b) Sea water pipe 2" dia length 70 meters.  c) Sea water pipe 8" dia length 40 meters d) Sea water pipe MS 6" dia length 70 meters  e) Lube oil / fuel oil MS 1-1/2 dia length 100 meters  f) Bilges pipe MS 2" dia length 30 meter.	01 Job	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXX XXXXXXX XXXXXXX
	<ul> <li>g) Air vent, dia 1" &amp; fire hydrant MS 2" dia length 30 meters.</li> <li>h) All fabricated welded pipes to be tested and re-installed with gasket and nut bolts.</li> </ul>		XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXX XXXXXXX XXXXXXX
II.	Main engine (Port side) MAN (30/45) to be completely overhauled with all attached equipment i.e. Turbo Charger, pumps, pressure gauges, exhaust temperature, lube oil cooler, fresh water cooler, all safeties and alternator Parts to be provided by firm.	01 Job	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX
III.	Auxiliary Engine (MAN (2876 LE01) top Overhauling to be carried out Parts will be provided by firm.	01 Job	XXXXXXX XXXXXXX XXX	XXXXXXX XXXXXXX
IV.	The following pumps to be overhauled as per requirement: a) 01 No Blast pump b) 02 Nos. Bilges pump c) 01 No GS d) 01 No fuel pump	05 Nos.	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXX XXXXXXX XXXXXXX XXXXXXX
	Sub total Material Cost  18 % GST on Material			XXXXXXX XXXXXXX
	Sub total Labor Cost			XXXXXXX XXXXXXX XXXXXXX
	15% SST on services			XXXXXXX XXXXXXX
	Total Including GST & SST (C)			XXXXXXX XXXXXXX

S. No.	Description	Qty	Material Charges (Where applicable	Labour Charges (Where applicable)
<u>D</u>	WINCHES 04 Nos.		XXXXXXX	XXXXXXXXXX
	All 04 nos. winch brake lining to be repaired.	08	XXXXXXX	XXXXXXXXXX
	<ul> <li>All 04 nos. brake lining bracket to be checked, repaired/ replaced.</li> </ul>	08	XXXXXXX XXXXXXX XXXXXXX	XXXXXXXXXX XXXXXXXXXX
	<ul> <li>All 04 nos. brake lining surface to be polished.</li> </ul>	08	XXXXXXX XXXXXXX	XXXXXXXXXX XXXXXXXXXX
	d) All 04 nos. gispy to be adjusted according to anchor chain.	04	XXXXXXX XXXXXXX	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX
	e) All 04 nos. gispy stopper guide to be checked repaired. Replaced according to anchor chain (repair/ replaced quote to be carried out.	04	XXXXXXX XXXXXXX	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX
	<ul> <li>f) Any in way removal, repair to be carried out.</li> </ul>	-	XXXXXXX	XXXXXXXXX
	g) Fwd Stbd winch gear box bearing to be checked	01 Job	XXXXXXX XXXXXXX XXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
	<ul> <li>h) Luffing slewing roller greasing line and greasing nipples to be replaced / repaired.</li> </ul>	01 Job	XXXXXXX XXXXXXX XXXXXXX	XXXXXXXXXX XXXXXXXXXX
	<ul> <li>Load testing of the crane to be conducted for smooth &amp; safe operation in all respect.</li> </ul>	-	XXXXXXX XXXXXXX	XXXXXXXXXX XXXXXXXXXXX
	<ul> <li>j) Old steel wire need to be inspected for reused if defective need to be replaced with approved wire from LRS/BV classified society, wire to be supplied by the firm.</li> </ul>	-	XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXX
	Sub total Material Cost			XXXXXXXXXX
	18 % GST on Material			XXXXXXXXXX
	Sub total Labor Cost			XXXXXXXXXX
	15% SST on services			XXXXXXXXXX
	Total Including GST & SST (D)			XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX

#### (Revised B.O.Q –Ref. Maj Refit –Renewal Electro Mech Crane Component Etc FC HATHI) dt. 18-02-2025 FOR TECHINCAL BID

S.No	<b>- - - - - - - - - -</b>	Qty	Material Charges (Where applicable	Labour Charges (Where applicable)
<u>E</u>	AIR RESERVIOR			
	<ul> <li>a) Both air reservoir to be dismantled serviced / pressure tested at 120 kg / cm.</li> <li>b) Air reservoir valve head to be dismantled all leaky valves to be checked repaired including safety &amp; other associated valves.</li> <li>c) Associated pipe line to be checked and leakage to be rectified.</li> <li>Sub total Material Cost</li> </ul>	02	XXXXXXX XXXXXXX XXXXXXX	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXX
	18 % GST on Material			XXXXXXXXX
	Sub total Labor Cost			XXXXXXXXX
	15% SST on services			XXXXXXXX
	Total Including GST & SST (E)			XXXXXXXX
	GRAND TOTAL OF (A+B+C+D+E)			XXXXXXXXX

- •(All the Drawings as and where applicable / required will be provided by Manora Workshop-KPT upon request by the firm).
- Contract may be awarded item wise to the lowest responsive bidders, provided it aligns with the overall objectives of cost efficiency and operational compability.

# STATEMENT OF TENDERER:

<u> </u>	ATEMENT OF TENDEREN.
1.	The price quoted is for the REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI as per KPT's tendered Scope of Work & requirements complete in all respect inclusive of Taxes in force at present.
2.	The above mentioned work will be carried out as per KPT's Tendered Scope of Work complete in all respect under the supervision / control of KPT's nominated Project Officer in good and sound conditions. The Work Completion Certificate duly signed by the Project Officer KPT / Incharge user section would be submitted with the bill for payment in quadruplicate duly pre –receipted.
3.	Transportations from Craft to work place, to Craft are firm's responsibility.
4.	Tools, lifting equipment, welding machine, welding electrode, gas cutting equipment and gas cylinder is firm's responsibility during the aforementioned repair work.
5.	Safety and safety equipments are firm's responsibility during repair.
6.	Any unforeseen work during repair is firm responsibility.
7.	Upon completion of repair work the satisfactory test trial in the presence of ship Engineer / staff is firm responsibility.
8.	<u>Validity Period</u> : Our offer is valid for acceptance for a period of <b>90 Days</b> w.e.f. the date of tender opening and further extension if required may be granted on request.
9.	<b>Delivery</b> / <b>Completion Period</b> : from the date of award of confirmed Work Order by KPT to the firm.
10.	<u>Terms of Payment</u> : 100% payment against Delivery, completion and satisfactory test / trials of Work.
11.	<b>Guarantee</b> : <b>12 Month</b> Guarantee /Warranty w.e.f. date of delivery, completion and satisfactory test / trials of subject work.

DATED	
NAME & ADDRESS OF TENDERER	
	SIGNATURE OF TENDERER
	Page:10/10

# **KARACHI PORT TRUST**

(MECH. & ELECT. ENGINEERING DEPARTMENT-II)



# GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract have been approved by the Board of Trustees of Karachi Port Trust Under their Resolution No.21, dated 9<sup>th</sup> April, 1958 for adoptions of works.

# TABLE OF CONTENTS

		PAGE
I.	Table of contents	iv-v
II.	General Conditions of Contract	1-13
III.	Form of Agreement	14

# GENERAL CONDITIONS OF CONTRACT TABLE OF CONTENTS

Clause
--------

		<b>DEFINITION &amp; IN</b>	TERPRETATION	Page
1.	(1)	Definition		1
	(2)	Singular and Plural		1
	(3)	Marginal Headings or Notice		1
	( )	0	SENTATIVE OF THE ENGINEER	
2.	D.,.t:	es and Power of Representative of th		1
2.	Duu	-	9	1
			SNMENT AND SUB-LETTING	
3.	Assi	gnment and Sub-Letting	•••••	2
		E	EXTENT OF CONTRACT	
4.	Exte	ent of Contract		2
_	ъ		ONTRACT DOCUMENTS	
5.		uments Manually Explanatory		•
6.	(a)		Cita	2 2
7.	(b)		n Site	2
7.	rurt	· ·		2
			ENERAL OBLIGATIONS	
8.		8		2
9.	(a)			
10	<b>(b)</b>		ccurity Deposit	3
10. 11.				3
11. 12.			neer	3
13.				3
14.				3
15.		-		4
16.				4
17				4
18.	(1)		•••••	4
	(2)	Expected Risks		4
19.				5
20.		Accident or injury to workman		5
21.	(a)		Fees	5
	<b>(b)</b>		ion etc	5
22.				5
23.				5
24.			rbour	5
25. 26.		11 V	bour	5 5
20.		Clearance of Site on Completion	LABOUR	3
2=		H 65 1 4 6 B		
27.		1 0	t of Wages	6
28.				6
			RK MATERIAL AND PLANT	
29.	(1)	- •	Ship and tests	
	(2)	-		6
26	(3)			6
30.				6
31.	(1)		ing up	6
32.	(1)		Materials	6
33.	(2)		nce	6 6
JJ.		Suspension of Molk		U

# COMMENCEMENT TIME AND DELAYS

34.		Commencement of Works	7
<b>35.</b>	(1)	Possession of Site	7
	(2)	Way leaves, etc	7
<b>36.</b>		Time for completion	7
<b>37.</b>		Extension of Time for completion	7
38.	(1)	Rate of Progress	7
	(2)	Termination of Contract for slow Progress	8
<b>39.</b>		Liquidated Damages for delay	8
40.		Certificate of Completion of Works	8
		MAINTENANCE AND DEFECTS	
41.	(1)	Definition of Period of Maintenance	8
	(2)	Execution of works of Repairs. etc	8
	(3)	Cost of Execution of works of Repair, etc	9
	(4)	Remedy on Contractors failure to carry out work required	9
		ALTERATION ADDITIONS AND OMISSION	
42.	(1)	Variation	9
	(2)	Orders for Variation to be In writing	9
43.	(1)	Valuation of Variations	9
	(2)	Power of Engineer to fix rates	9
	. ,	PROPERTY IN MATERIALS AND PLANTS	
44.	(1)	Plant etc, the Property of the Board	9
	(2)	Revesting of Plant, etc	9
	(3)	Board not liable for damage to plant, etc	10
45.	(-)	No approval by vesting	10
		MEASUREMENT	
46.		Quantities	10
47.		Works to be Measured	10
48.		Method of Measurement	10
		PROVISIONAL SUMS	
49.		Use of Provisional and Contingency Items	10
50.		Items not Mounted out	10
		CERTIFICATE AND PAYMENT	
51.	(1)	Bills for on – account Payment	10
	(2)	Rates and Prices.	10
	(3)	Quantities	10
	<b>(4)</b>	Advances	10
52.	( )	Approval only by Maintenance Certificate	11
53.		Maintenance Certificate	11
54.		Payment of Completion	11
55.		Currency of Payment	11
		REMEDIES AND POWERS	
56.	(1)	Forfeiture	11
	(2)	Valuation at date of forfeiture	12
	(3)	Payment after forfeiture	12
57.	(-)	Urgent Repairs	12
<b>58.</b>		Bribe, Commission, etc.	12
23.		SETTLEMENT OF DISPUTES	
59.		Law Governing the Contract	12
60.		Arbitration	13
00.		1 11 VIVI WIVII	13

# **General Conditions of Contract DEFINITIONS AND INTERPRETATION**

- 1.(1) In the Contract (as hereinafter defined) the following words and expression shall have the meanings hereby assigned to them except where the context otherwise requires:-
  - (a) **"Board"** means the Board of Trusties of the Port of Karachi, Pakistan, and includes the Board's representatives of successors.
  - (b) "Contractors" means the person or person firms or company whose Tender (as hereinafter defined) has been accepted by the Board and includes the Contractor's personal representative successors and permitted assigns.
  - (c) "Engineer" means the Chief Mechanical and Electrical Engineer of the Karachi Port Trust or other Engineer appointed from time to time by the Board.
  - (d) "Representative of the Engineer" means any Engineer Assistant Engineer and any other duly authorized Agents of Agents appointed from time to time by the Board of the Engineer to perform the duties set forth in Clause-2 hereof.
  - (e) "Works" means the works to be executed in accordance with the Contract.
  - (f) "Contracts" means the conditions of Contract, Specification, Drawings, priced Bill of Quantities, Schedule of Rates and prices (if any), Tender and the Contract Agreement.
  - (g) "Contract Price" means the sum named in the Tender subject to such additions there to or deductions there from as may be made under the provisions hereinafter contained
  - (h) "Constructional Plant" means all appliances things of whatsoever nature required in or about the execution completion or maintenance of the works or Temporary works (as hereinafter defined) but does not include materials or other things, intended to from or forming part of the permanent work.
  - (i) "Temporary works" means all temporary works if every kind required in or about the execution completion or maintenance of the works.
  - (j) "Drawing" means the drawing referred to in the specification and any modifications of such drawings approved in writing by the Engineer and such other drawing as may from time to time be furnished or approved in writing by the Engineer.
  - (k) "Site" the lands and other places on, under in or through which the works are to be executed or carried out and any other lands or places provided by the Board for the purpose of the Contract.
  - (l) "Approved" means approved in writing including subsequent written confirmation of previous verbal approval and "approval" means approved in writing including as aforesaid.
  - (m) "Tender" means the offer tendered by the Contractor for the works governed by the Contract.
- (2) Words importing the singular only also include the Plural and vice versa where the contents requires.
- (3) The marginal headings or note in these General Condition shall not be deemed to be part thereof or be taken into consideration in the interoperation or construction thereof or of the Contract.

Singular and Plural

**Marginal Headings** or Notes

#### REPRESENTATIVES OF THE ENGINEER

Duties and Power of 2. Representative of the Engineer.

2. The duties of the Representative of the Engineer are to watch and supervise the works and to test and examine any material to be used or workmanship employed in connection with the works. He shall have no authority to relieve the Contractor of any of his duties or obligations under the Contract nor except as expressly provided hereunder or else where in the Contract, to order any work involving delay or any extra payment by the Board nor to make any variation of or in the Works.

The Engineer may from time to time in writing delegate to the Representative of the Engineer any of the powers and authorities vested in the Engineer and shall furnish to the Contractor, a copy of all such written delegation of powers and authorities. Any written instructions or approval given by the Representative of the Engineer to the Contractor within the terms of such delegation (but not otherwise) shall bind the Contractor and the Board though it had been given by the Engineer, provided always as follows:-

- (a) Failure of the Representative of the Engineer to disapprove any work of material shall not prejudice the power of the Engineer there after to disapprove such work or materials and to order the puling down removal or breaking up thereof.
- (b) If the Contractor shall be dissatisfied by reason of any decision of the Representative of the Engineer he shall be entitled to refer the matter to the Engineer who shall there upon confirm reverse or vary such decision.

#### ASSIGNMENT AND SUB-LETTING

Assignment and subletting 3. The Contractor shall not assign or Sub-let the Contract or any part thereof or any benefit or interest or interest therein or there under without the written consent of the Board.

#### EXTENT OF CONTRACT

#### **N Extent Of Contracts**

4. The Contract comprises the construction, completion and maintenance of the works and except in so far as the Contract otherwise provides provision of all labour materials. Constructional Plant. Temporary works as every thing whether of temporary or permanent nature required in and for such construction completion and maintenance so far as the necessity for providing the same is specified in or reasonably to be inferred from the Contract.

#### **CONTRACT DOCUMENTS**

Documents manually Explanatory Drawings

- 5. The several documents forming the Contract are to be taken as mutually explanatory of one another and in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer whose decision in this respect shall be final.
- 6. **Three (3) copies** of the approved drawings shall be furnished to the Contractor free of cost. The Contractor shall provide and make at his own expense any further copies required by him. At the completion of the Contract the Contractor shall return to the Engineer all drawings provided under the Contract.

One Copy of Drawings to be kept on Site

One copy of drawings furnished to the Contractor as aforesaid shall be kept by the Contractor on the Site and the same shall at all reasonable time be available for inspection and use by the Engineer and the representative of the Engineer.

**Further Drawings** and **Instructions** 

7. The Engineer shall have full power and authority to supply to the Contractor from time to time during the progress of the works such further drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and maintenance of the works and the Contractor shall carry out and bound by the same.

#### **GENERAL OBLIGATIONS**

#### **Contract Agreement**

8. The Contractor shall within **Fourteen (14) days** after written notice of acceptance of the Tender has been posted to the Contractor enter into and execute a Contract agreement, (to be prepared at the cost of the Contractor) in the form annexed, with such modifications as may be necessary.

9. Unless otherwise agreed between the Board and the Contractor the Contractor shall within Fourteen(14) days after written notice of acceptance of the Tender has been posted to the Contractor and before the Contract agreement is entered into and executed, furnish to the Board a security for the due fulfillment of the Contract in cash with the Chief Accounts Officer Karachi Port Trust or the equivalent in approved Public Rupee Securities or Approved Banker's Guaranteed Bond valid till the successful completion of Contract endorsed in the favor of the chief Accounts officer Karachi Port Trust amounting to a sum equal to Five percent 5% of the Contract price. If the Security deposit as aforesaid is made in cash it shall be optional with the Contractor to make the full deposit before entering into and executing the agreement or to deposit Fifty percent 50% of the amount due at the time and the balance to be made up by deduction of Five percent 5 % of the amount payable to the Contractor in each on – account bill or certificate.

**Security Deposit** 

In the event of the Contractor failing to execute a formal Contract or to make a Security Deposit therefore in the manner aforesaid and in the period specified, the Board is entitled appropriate any earnest money or initial deposit made by the Contractor with his Tender without prejudice to their right to claim any further loss or damage which may result to them by reason of the aforesaid defaults of the Contractor as if a Contract is actually executed for purpose of such claim.

Contractor's Failure to Furnish Security Deposit

10. The Contractor shall inspect and examine the Site and its surroundings and shall satisfy himself before submitting the Tender as to the nature of ground and sub - soil, the from and nature of the Site the quantities and nature of the work and materials necessary for the completion of the works and the means of access to the Site of the accommodation he may requires and in general shall himself obtain all necessary information as to risk contingencies and other circumstances which may influence or affect his Tender.

Inspection of Site

11. The Contractor shall be deemed to have satisfied himself before tendering as to correctness and sufficiency of his Tender for the Works and of the rates and prices staged in the priced Bill of quantities and the Schedule of rates ( if any ) which rates and prices shall except in so far otherwise provided in the Contract cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.

**Sufficiency of Tender** 

12. The Contractor shall execute, complete and maintain the works in strict accordance with the Contract to the satisfaction of the Engineer and shall comply with the adhere strictly to the Engineer's Instruction and directions on any matter (whether mentioned in the Contract or not) touching or connecting the work. The Contractor shall take instruction and direction only from the Engineer or (subject to the Limitations referred to in Clause 2 hereof) from the Representative of the Engineer.

Work to be to Satisfaction of Engineer.

13. As soon as practicable after the acceptance of his Tender the Contractor shall if required submit to the Engineer for his approval a Programme showing the order of procedure and method in which he proposes to carry out the Works and shall whenever required by the Engineer or Representative of the Engineer furnish for his information particulars in writing of the Contractor's arrangements for the carrying out of the Works and of the Constructional Plant and Temporary Works which the Contractor intents to supply use or construct as the case the case may be. The submission to and approval by the Engineer or the Representative of the Engineer of such Programme or the furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

Programme to be furnished

14. The Contractor shall give or provide all necessary Superintendence during the execution of the Works and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor obligations under the Contract the Contractor or a competent and authorized agent or representative approved of in writing by the Engineer (which approval may at any time be withdrawn) is to be constantly on the Works and shall give his whole time to the Superintendence of the same. If such approval shall be withdrawn by the Engineer, the Contractor shall as soon as is practicable (having regard to the requirements of replacing him as hereafter mentioned) after receiving written notice of

Contractor's Superintendence

such withdrawal removes the agent from the Site and shall not thereafter employ him again on the Site in any capacity and shall replace him by another agent approved by the Engineer. Such authorized agent representative shall receive on behalf of the Contractor and directions instructions from the Engineer or (subject to the Limitations of Clause 2 hereof) Representative of the Engineer.

Contractor's Employees

- 15. (1) The Contractor shall provide and employ on the Site in connection with the execution and maintenance of the works:-
  - (a) Only such technical assistants are as skilled and experienced in their respective callings and such sub-agents foremen and leading hands as are competent to give proper supervision to the work they are required to supervise.
  - (b) Such skilled semi- skilled and unskilled labour as is necessary for the proper and timely execution and maintenance of the Works.
- (2) The Engineer shall be at liberty to object to and require the Contractor to remove forthwith from the work any person employed by the Contractor in or about the execution or maintenance of the Work who in the option of the Engineer misconducts himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the Engineer to be undesirable and such person shall not be again employed upon the works without the written permission of the Engineer. Any person so removed from the Works shall be replaced without delay be a competent substitute approve by the Engineer.
- (3) The Contractor shall if required by the Engineer deliver to the Engineer or the Representative of the Engineer returns in such form and at such intervals as the Engineer may prescribe showing in detail the supervisory staff and the number of the several classes of labour from time to time employed by the Contractor on the Site.

**Setting Out** 

16. The Contractor shall be responsible for the true and proper setting out of the work and for the correctness of the position levels dimensions and alignment of all part of the Works and for the provision of all necessary instruments appliance and labour in connection therewith. If at any time during the progress of the Works any error shall appear or arise in the position levels dimensions or alignments of any part of the works, the Contractor on being required to do so by the Engineer or the Representative of the Engineer shall at his own expense rectify such error to the satisfaction of the Engineer or the Representative of the Engineer. The checking of any setting out of any line or level by the Engineer or the Representative of the Engineer shall not in any way relieve the Contractor of his responsibility for the correctness thereof and the Contractor shall carefully protect and preserve all bench-marks, Site- rails pegs and other things used in setting out the Works.

Watching and Lighting

- Care of Works
- 17. The Contractor shall in connection with the Works provide and maintain at his own cost all lights, guards fencing and watching when and where necessary or required by the Engineer or the Representative of the Engineer or by and duly constituted authority for the protection of the Works or for the safety and convenience of the public or others.
- 18. (a) From the commencement to the completion of the Works the Contractor shall take full responsibility for the care thereof and of all Temporary works and in case any damage loss or injury shall happen to the work or to any part thereof or to any Temporary Works form any cause whatsoever ( save and except the excepted risks as defined in **sub-Clause (2)** of this **Clause**) shall at his own cost repair and make good the same so that at completion the works shall be in good order and condition and in conformity in every respect with the requirements of the Contract and the Engineer's instructions. The Contractor shall also be liable for any damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations under **Clause 4** hereof.

**Expected Risks** 

(b) The "expected risks" are war, hostilities(whether war be declared or not ) Invasion, act of foreign enemies , rebellion, revolution, Insurrection or military usurped power, civil war or (otherwise than among the Contractor 's own Employees) riot, commotion or disorders or the use or occupation by the Board of any portion of the Works

or disorders or the use or occupation by the Board of any portion of the Works in respect of which a Certificate of Completion has been issued or any such operation of the forces of nature as reasonable foresight and ability on the part of the Contractor could not foresee or reasonably provide against (all of which are herein collectively referred to as "the expected risks.)"

19. The Contractor shall (expect if and so far as the Specification Provides otherwise) indemnify and keep indemnified the Board against all losses and claims for injuries or damage to any persons or any property whatsoever (other than surface or other damage to land being or crops being on the Site suffered by tenants or occupiers) which may arise out of or in consequences of the construction and maintenance of the works and against all claims demands proceeding damage, costs charges and expenses whatsoever in respect of or in relation thereto.

20. The Board shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any Workman or other person in the employment of the Contractor or any sub-contactor and the Contractor shall indemnify and keep indemnified the Board against all such damages compensation and against claims demands proceeding costs charges and expenses whatsoever in respect thereof or in relation thereto.

21. Contractor shall give all notices and pay all fees required to be given or paid by any National or state statute Ordinance or other Law or any Regulation or By- law of any local or other duly constituted authority in relation to the execution of the Works or of any Temporary Works and by the rules and regulations of all public bodies and companies whose property or right are affected or may be affected in any way by the Works or any Temporary Works.

The Contractor shall confirm in all respects with the provisions of any such statue Ordinance or Law as aforesaid and the regulation or By-Law of any Local or other duly constituted authority which may be applicable to the Works or to any Temporary Works and with such rules and regulations of public bodies and companies as aforesaid and shall keep the Board indemnified against all penalties and liabilities of every kind for breach of any such statute Ordinance or Law regulation or By-law.

- 22. All fossils coins articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the Site of the Works shall as between the Board and the Contractor be deemed to be the absolute property of Board and the Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall immediately upon discovery thereof and before removal acquaint the Representative of the Engineer of such discovery and carry out at the expense of the Board Representative of the Engineer's orders as to the disposal of the same.
- 23. The Contractor shall save harmless and indemnify the Board from and against all claim and proceedings for or on account of infringement of any patent rights design trade-mark or name or other protected rights in respect of any constructional Plant machine work or material used for or in connection with the Works or Temporary Works or any of them and from and against all claims demands proceedings damages costs charges and expense whatsoever in respect thereof or in relation there to except where otherwise specified the Contractor shall pay all tonnage and other royalties and other payments or compensation (if any ) for getting stone, sand , gravel clay or other materials required for the Works or Temporary Works or any if them.
- 24. The Contractor shall in accordance with the requirements of the Engineer afford all reasonable opportunities for carrying out their work to any other Contractor employed by the Board and their workmen and to the workmen of the Board and of any other duly constituted authorities who may be employed in the execution on or near the Site of any work not included in the Contract of any Contractor which the Board may enter into in connection with or ancillary to the works.
- 25. Except where otherwise specified the Contractor shall at his own expense supply and provide all the Constructional plant. Temporary Works Materials both for temporary

Damage to Persons and Property

Accident or Injury to workman

Giving Of Notices and Payment Of Fees

Compliance with statue Regulations etc.

Fossils, etc.

Patent Rights and Royalties

Opportunities for other Contractor's

Supply of Plant Materials and Labour and for permanent works labour (Including the supervision thereof) transport to or from the Site and in and about the work and other things of every kind required for the construction completion and maintenance of the works.

Clearance of Site on Completion

26. On the completion of the work the Contractor shall clear away and remove from the Site all constructional plant surplus material rubbish and Temporary works of every kind and leave the whole of the Site and works clean and in a workman like condition to the satisfaction of the Engineer.

#### **LABOUR**

Hours of Employment and payment of Wages Return of Labour Etc.

- 27. The Hours of Employment Regulation and payment of Wages Act so far these are applicable to the Contractor's labour shall be adhered to by the Contractor.
- 28. The Contractor shall if required by the Engineer deliver to the Representative of the Engineer or at his office a return in detail in such from and at such Intervals as the Engineer may prescribe showing the number of the several classes of labor from time to time employed by the Contractor on the Site and such information respecting Constructional plant as the Representative of the Engineer may require.

#### WORK MATERIAL AND PLANT

Quality of Material and workmanship and Tests

29. (1) All Materials and workmanship shall be of the respective kinds described in the Contract and in accordance with the Engineer's Instructions and shall be subjected from time to time to such tests as the Engineer may direct at the place of manufacture of fabrication or on the Site or at all or any or such places. The Contractor shall provide such assistance Instruments, machines, labour and materials as are normally required for examining measuring and testing any work and the quality, weights or quantity of any material used and shall supply samples of materials before incorporation in the works for testing as may be selected and required by the Engineer.

Cost of samples Cost of Test

- (2) All samples shall be supplied by the Contractor at his own cost.
- (3) The cost of making all tests specified in the Contract shall be borne by the Contractor.

Access to Site

30. The Engineer and any person authorized by him shall at all times have access to the works and to the Site and to all workshops and places where work is being prepared or whence materials, manufactured articles, or machinery are being obtained fro works, and the Contractor shall afford every facility for and every assistance in or obtaining the right to such access.

Examination of Work Before Covering Up 31. No work shall be covered up or put out of view without approval of the Engineer or the Representative of the Engineer and the Contractor shall afford full opportunity for the Engineer or the Representative of the Engineer to Examine and measure any work which is about to be covered up or put out of view and to examine foundation before permanent work is placed thereon. The Contractor shall give notice to the Representative of the Engineer whenever any such work or foundation is ready or about to be ready for examination.

Removal of Improper Work and materials

- 32. (1) The Engineer shall during the progress the works have power to order from time to time.
  - (a) The removal from the Site within such time or times as may be specified of any materials which in the opinion of the Engineer are not in accordance with the Contract.
  - (b) The substitution of proper and suitable materials and
  - (c) The removal and proper re-execution (not-with-standing any previous test there of or interim payment therefore) of any work which in respect of materials or workmanship is not In the opinion of the Engineer in accordance with the Contract.

Default of Contractor In compliance

(2) In case of default on the part of the Contractor in carrying out such order the Board shall be entitled to employ and pay other person to carry out the same and all expenses consequent thereon incidental thereto shall be borne by the Contractor and

shall be recoverable from him by the Board or may be deducted by the Board from any monies due or which may become due to the Contractor.

33. The Contractor shall on the written order of the Engineer suspend the progress of the Works or any part thereof for such time to times and such manner as the Engineer may consider necessary and shall during such suspension property protect and secure the Works so far as is necessary in the opinion of the Engineer. The Extra cost (if any) incurred by the Contractor in giving effect to the Engineer's Instructions under this **Clause** shall be born and paid by the Board unless suspension is:-

Suspension of Works

- (a) Otherwise provided for in the Contract or
  - (b) Necessary for the proper execution of the Works or by reason of weather conditions affecting the safety or quality of the Work or by some default on the part of the Contractor or.
- (c) Necessary for the safety of the Works or any part thereof. Provided that the Contractor shall not be entitled to the recover any such extra cost unless he give notice in writing of his intention of claim to the Engineer within 28 days of the Engineer's order. The Engineer shall settle and determine the extra payment to be made to the Contractor in the respect of such claim as the Engineer shall consider fair and reasonable.

#### COMMENCEMENT TIME AND DELAYS

34. The Contractor shall commence the Works on Site within the period named in the tender after the receipt by him on an order in writing to this effect from the Engineer and shall proceed with the same with the due expedition and without delay except as may be expressly, sectioned or ordered by the Engineer or be wholly beyond the Contractor's control.

Commencement of Works

35. (1) Save in so far as the Contractor may prescribe the extent of options of the Site of which the Contractor is to be given possession from time to time and the order in which such portions shall be made available to him and subject to any requirement in the Contract as to the order in which the Work shall be executed, The Engineer will with the written order to commence the Works, give to the Contractor possession of so much of he Site as may be required to enable the Contractor to commence and proceed with the construction of the Works in accordance with the program referred to in Clause 13 hereof (if any) and otherwise in accordance with such reasonable proposals of the Contractor as he shall by notices in writing to the Engineer make and will from time to time as the Works proceed give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the construction of Works with due dispatch is accordance with said program or proposals (as the case may be).

Possession of Site

(2) The Contractor shall bear all expanses and charges for special or temporary way leaves required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional accommodation outside the Site required by him for the purpose of the Works.

Way Leaves Etc.

36. Subject to any requirement in the specification as to completion of any portion of the Works before completion of the whole of the Work, the Work shell be completed within the time stated in the tender calculated from the last day of the period named in the tender as that within which the Works are to be commenced or such extended time as may be allowed under **Clause 37** hereof.

**Time for Completion** 

37. Should the amount of extra or additional Work of any kind or other special circumstances of any kind whatsoever which may occur be such as fairly to entitled the Contractor to any extension of time for the completion of the Works the Engineer shall determine the amount of such extension provided that the Engineer is not bound to take into account any extra or additional Works or other special circumstances unless the Contractor has, within **28 days** after such Works has been commenced or circumstances have arisen or as soon thereafter as is practicable delivered to the representative of the Engineer full and detailed particulars of any claim to extension of time to which may consider himself entitled in order to such claim may be investigated at the time.

Extension of Time for Completion

Rate of Progress

Termination of Contract for slow progress

Liquidated Damages for Delay

Certificate of Completion of Works

Definition of Period of Maintenance

Execution of Works of Repair, Etc.

- 38. (1) The whole of the material plant and labour to be provided by the Contractor under Clause- 4 hereof and mode manner and speed of execution maintenance of the Works are to be of a kind and conducted in a manner approved of by the Engineer. Should the rate of progress of the Works or any part thereof be at any time in the opinion of the Engineer to slow to ensure the completion of Works by the prescribe time or extended time for completion. The Engineer shall so notify the Contractor in writing and the Contractor shall thereupon take such step as the Contractor may think necessary and the Engineer may approved to expedite progress so as the complete the Works by the prescribed time or extended time for completion. If the Works is not being carried on by day and by night and the Contractor shall request permission to work by night as well as by day then if the Engineer shall grant such permission, the Contractor shall not be entitled to any additional payment for so doing.
- (2) Not-with-standing any thing contained hereto in the event of the rate of progress of the Works being such that in the opinion of the Engineer Works cannot be completed by the prescribed time or the extended time, the Engineer my have the Works constructed, completed through any other agency either concurrently with or independently of the Contractor at the risk and cost -of the Contractor or the Engineer may supplement the Contractor's labour plant equipment and materials at the Contractor' cost and risk and in all such cases provisions of Clause-39 hereof shall apply. Further the Board shall have the power to terminate the Contract and withhold payment to the Contractor till the whole of the Works have been constructed completed and maintained in the manner laid down in the Contract and the Contractor shall be liable for any loss or damage which the Board may sustain on the account and forfeiture the provision of Clause 56 and 57 here of shall apply.
- 39. If the Contractor shall fail to complete the Works within the time prescribed by **Clause 36** hereof or extended time then Contractor shall pay to the Board a sum equal to **0.5%** of the total Contract value as liquidated damages for such default and not as a penalty for every week or part of week which shall elapse between the time prescribed by **Clause No. 36** hereof or extended time as the case may be and the date of completion of the Works, up to a maximum of **10%** of the total value of Contract of the Contract. The Board may without prejudice to any other method of recovery deduct the amount of such damages from any monies in the Board's hands due or which may become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his oblige ion to complete the work or form any other of his obligations and liabilities under the Contract nor it will prejudice the Board's right to recover the actual amount of damages, which the Board may suffer on account of delay in completion of the works. Furthermore, the fact that the Board has not deducted any amount of liquidated damages during the execution of works will not prejudice the Board's right either to deduct the same from the final bill or to recover the same through recourse to law.
- 40. As soon as in the opinion of the Engineer the Works shall have been substantially completed and shall have satisfactorily passed final test that may be prescribed by the Contract the Engineer shall on receiving a written undertaking by the Contractor to finish any outstanding Works during the Period of Maintenance issue a Certificate of Completion in respect of the Works, and the period of Maintenance of the Works shall commence from the date of such certificate. Provided that the Engineer may give such a certificate with respect to any part of Works before the completion of the whole of the Works and shall upon the written application of the Contractor give such certificate with respect to any substantial part of the Works which has been both completed to the satisfaction of the Engineer and occupied or used by the Board and when any such certificate is given in respect of a part of the Works such part shall be considered as completed and the period of Maintenance of such part shall commence from the date of such certificate. Provided also that a Certificate of Completion given accordance with the foregoing provisions of any part of the Works occupied and used as aforesaid shall not be deemed to certify completion of any ground of surfaces requiring reinstatement unless such certificate shall expressly so state.

#### **MAINTENANCE AND DEFECTS**

- 41. (I) In these conditions the expression "period of Maintenance" shall mean the period of maintenance named in the Tender calculated from the date of completion of the Works certificate by the Engineer in accordance with Clause 40 hereof or in the event of more then one certificate having been issued by the Engineer under the said Clause from the respective dates so certified and in relation to the period of Maintenance the expression 'the Works' shall be construed accordingly.
- (2) To the Intent that the Works shall at or as soon as practicable after the expiration of the period of Maintenance be delivered up to the Board in as good and perfect condition (fair wear and tear excepted) to the satisfaction of the Engineer as that in which they

Were at the commencement of the period of maintenance the Contractor shall execute all such Works for repair, amendment, reconstruction, reflection and making good of defects, imperfection, shrinkages or other fault as may be required of the Contractor in writing by the Engineer during the period of maintenance or with **Fourteen (14) days** after its expiration as a result of an inspection made by or on behalf of the Engineer.

(3) All such Work shall be carried out by the Contractor at his own expenses if the necessity thereof shall in the opinion of the Engineer be due to the use of materials of Workmanship not in accordance with the Contract or to neglect or failure on the part of the Contractor to comply with any obligation expressed or implied on the Contractor's part under the Contract. If in the opinion of the Engineer such necessity shall be due to any other cause the value of such Works shall be ascertained and paid for as if it were additional Works. Cost of Execution works of Repair Etc.

(4) If the Contractor shall fail to do any such Work aforesaid required by the Engineer the Board shall be entitled to carry out such Works by its own Workman or by other Contractor and if such Works is Work which the Contractor should have carried out at the Contractor's own cost shall be entitled to recover from the Contractor the cost thereof or may deduct the same from any monies due or that become due to the Contractor.

Remedy on Contractor's Failure to carry out Works required

#### ALTERATION ADDITIONS AND OMISSIONS

42. (1) The Engineer shall make any variation of the quality of quantity of the Works or any part thereof that may in his opinion be necessary and for that purpose or if for any other reason it shall in his opinion be desirable

Variation

shall have power to order the Contractor to do and the Contractor shall do any of the following:-

- (a) Increase or decrease the quality of any Work included in the Contract
- (b) Omit any such Work
- (c) Chang the character or quality or kind of any such Work
- (d) Chang the levels, lines, position and dimensions of any part of the Works and
- (e) Execute additional Works of any kind necessary for the completion of the Works.

And no such variation shall in any way validate or invalidate the Contract, but the value (if any) of all such variation shall be taken into account in ascertaining the amount of the Contract price.

(2) No such variation shall be made by the Contractor without an order in writing of the Engineer, provided that no order in writing shall be required for increase or decrease in the quantity of any Work where such increase or decrease is not the result of an order given under his **Clause** but is the result of the quantities exceeding or being less then those stated in the Bill of Quantities. Provided also that if for any reason the Engineer shall consider it desirable to give any such order verbally, the Contractor shall comply with such order and any confirmation in writing of such verbal order given by the Engine whether before or after the carrying out the order shall be deemed to be an order, in writing within the meaning of this **Clause**.

of

Order of variation to

be in writing

Valuation

**Variations** 

43. (1) The Engineer shall determine the amount (if any) to be added to or deducted from the sum named in the tender in respect of any extra or additional Works done or Work omitted by his order. All such Works shall valued at the rates set out in the Contract if in the opinion of the Engineer the same shall be applicable. If the Contract shall not contain any rates applicable to the extra or additional Work then reasonable prices shall be fixed by the Engineer.

Power of Engineer to Fix Rates

(2) Provided that if the nature or amount of any omission or addition relative to the nature or amount of the whole of the Contract Work or to any part thereof shall be such that in the opinion of the Engineer the rate or price contained in the Contract for any time of the work is by reason of such omission or addition rendered unreasonable or inapplicable the Engineer shall fix such other rates or price as in the circumstances he shall think reasonable and proper.

#### PROPERTY IN MATERIALS AND PLANT

Plant Etc. the Property of the Board

Revesting of Plant, Etc.

Board not liable for Damage to plant Etc. No Approval by Vesting

Quantities

Work to be Measured

Method of Measurement

Use o f provisional and Contingency items

Item not monies

Bill for On-account Payments

Rates and Price

44. (1) All constructional plant, Temporary Works and maternities provided by the Contractor shall when bought on to the Site immediately be deemed to become the property of the Board and the Contractor shall not removed the same or any part thereof without the consent in writing of the Engineer. But the Engineer will permit the Contract the exclusive use of all such constructional plant. Temporary Works and material in and for the completion of the Works until the happening of an event which gives right to the Board of exclude Contractor from the Site and proceed with the completion of the Works.

- (2) Upon the removal of any such constructional plant, temporary Works or materials with consent as aforesaid the same shall be deemed to revest in and become the property of the Contractor and upon completion of the Works the reminder of the said constructional plant and temporary Works and any unused material provided by the Contractor shall be deemed to revest in and become the property of the Contractor who shall remove the same. If the Contractor fails to remove any of the said constructional plant, temporary Works of unused materials within such reasonable time after the completion of the Works as may be allow by the Board then the Board may sell the same and shall after deducting from the proceeds the cost charges and expenses of and in connection with such sale pay the balance (if any) to the Contractor.
- (3) The Board shall not at any time be liable for loss or injury to any of the said constructional plant, Temporary Works, or material.
- 45. The operation of the **Clause 44** shall not be deemed to imply any approval by the Engineer of the materials or other matters referred to therein nor shall it prevent the rejection of any such materials at any such time by the Engineer.

### **MEASURMENT**

46. The quantities set out in the Bill of Quantities are estimated quantities of the Work but they are not be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfillment of his obligations under the Contract.

47. The Engineer shall, except as otherwise stated, ascertain and determine by admeasurements the value in accordance with the Contract of Work done in accordance with the Contract. he shall when he require any part or parts of the Works to be measured give notice to the Contractor's agent or representative who shell forthwith attend or send a qualified agent to assist the Engineer or the representative of the Engineer in making such measurement and shall furnish all particulars required by the either of them. Should the Contractor not attend or neglect or omit to send such agent then the measurement made by the Engineer or approved by him shall be taken to be the correct measurement of the Works.

48. The Works shall be measured net notwithstanding any general or local custom except where otherwise specially describe or prescribed in the Contract.

### PROVISIONAL SUMS

- 49. All the sums set out in the Bill of Quantities which shall be stated to be provisional or for contingencies shall be used only at the direction and discretion of the Engineer and if not used either wholly or in part shall as to the amount not used be deducted from the Contract Price.
- 50. All item not monies out in the Bill of Quantities shall be used at the direction and discretion of the Engineer and if used either wholly or in part shall as to amount used, added to the Contract price.

### CERTIFICATE AND PAYMENT

51. (1) The Contractor shall submit to the representative of the Engineer during the execution of the Works on-account bill signed by the Contractor showing the quantities and values of the permanent Works done on the Site as soon as measurements have been recorded as per **Clause 47** hereof.

(2) The rates and prices in such on-account bills shall be in accordance with those in priced Bill of Quantities so far as such rates and prices are applicable and on the approved rates and prices for other items or Works.

(3) The quantities in such on-account bills shall be in accordance with the agreed measurement recorded by the representative of the Engineer as per provision of **Clause 47** hereof.

Quantities

(4) The Contractor will be paid on the certificated of the Engineer the estimated Contract value of the permanent work executed and in addition such amount as the Engineer may consider fair and reasonable for any temporary Works for which separate amounts are provided in the Bill of Quantities subject so far as it applies to a retention of a percentage until the amount retained shall reach the amount of security deposit as per **Clause 9** hereof, after which time no further deduction or retention will be made.

**Advances** 

52. No certificate other then maintenance certificate referred into **Clause 53** hereof shall be deemed to constitute approval of any Work or other matter in respect of which it is issued or shall be taken as an admission of the due performance of the Contract or any part thereof or of the accuracy of an claim or deemed made by the Contractor by the Contractor or of additional or varied Work having been ordered by the Engineer nor shall any other certificate conclude or prejudice any of the powers of the Engineer.

Approval only by Maintenance certificate

53. The Contractor shall not be consider as completed until a maintenance certificate shall have been signed by the Engineer and delivered to the Board stating that the Works have been completed and maintained to his satisfaction. The maintenance certificate shall be given by the Engineer twenty **Eight (08) days** after the expiration of the period of maintenance (or if different period of maintenance shall become applicable different part of the Works the expiration of the latest such period) and full effect shall be given to the **Clause** notwithstanding any previous entry of the Works or the taking possession Working or using thereof or any part thereof by the Board. The security deposit of the Contractor shall be refunded after the maintenance certificate has been issued by the Engineer after deducting any sums which may become due from Contractor in terms of provision of **Clause 38 (2), 39 and 41 (4)** hereof.

Maintenance certificate

54. When the Engineer granted a certificate or certificates of completion of the whole of the Works under Clause 40 hereof and when the Board has ascertained the estimated final sum due to the Contractor the Board shall after allowing for the amount all of previous on account bills and certificate and after allowing for all other payments due form the Contractor to the Board pay to the Contractor such a sum out of balance so calculated as remaining due to the Contractor as will leave to be retained by the Board a sum equal to the security deposit (see Clause 9 hereof).

Payment on Completion

55. Unless otherwise agreed between the Board and the Contractor all payment to be made to the Contractor under this Contract shall be in Pakistani rupee currency.

**Currency of payment** 

# **REMEDIES AND POWER**

56. (1) If the shall become bankrupt or have a receiving order made against him or shall present his petition in bankruptcy or shall make an arrangement with or assignment in favor of his creditors or shall agree to carry out the Contract under a committee of Inspection of his creditors or (being a corporation) shall go into liquidation (other then a voluntary liquidation for the purpose of amalgamation or reconstruction) or if the Contractor shall assign the Contract without the consent in writing of the Board first obtained or shall have an execution levied on the goods or if the Engineer shall certify in writing to the Board that in his opinion the Contractor.

**Forfeiture** 

- (a) has abandoned the Contract or
- (b) without reasonable excuse has filed to commence the Works or has suspended the progress of the Works for **Ten (10)** days after receiving from the Engineer written notice to proceed or
- (c) has failed to remove materials from the Site or to pull down and replace Work for 28 days after receiving from the Engineer written notice that the said materials or Work had been condemned and rejected by the Engineer under these conditions or
- (d) is not executing the Works in accordance with the Contract or is persistently or flagrantly neglecting to carry out his obligations under the Contract or

(e) Has to the determent of good Workmanship or in defiance of the Engineer's instructions to the contrary sublet any part of the Contract?

Then the Engineer may after giving **14 days** notice writing to the Contractor enter upon the Site and the Works and expel the Contractor there from without hereby avoiding the Contract or releasing the Contractor from any of his obligations or liabilities under the Contract or affecting the rights and powers conferred on the Board of the Engineer by the Contract and may himself complete the Works or may employ any other Contractor to complete the Works and Board or such other Contractor may use for such completion so much of the constructional plant temporary Works or materials which have been deemed to become the property of the Board under the provision of the Contract as he or the Board may think proper and Board may at any time sell any of the said constructional plant, Temporary Works and used materials and apply the proceed or sale in or towards the satisfaction of any sums due which may become due to the Board from the Contractor under the Contract.

Valuation at Date forfeiture

(2) The Engineer as soon as may be practicable after any such entry and such entry and expulsion by the Board fix and determine or after reference to the parties or after such investigation or enquiries as he may think fit to make or institute and shall certify what amount (if any) had at the time of such entry and expulsion been reasonably earned by on or would reasonably accrue to the Contractor in respect of Work then actually done by him under the Contract and what was the value of any unused or partially used materials and constructional plant and any temporary Works which have been deemed to become the property of the Board under the provision of the Contract.

Payment after Forfeiture

(3) If the Board shall enter and expel the Contractor under this **Clause** the Board shall not be liable to pay to the Contractor any money on account on the Contract until the expiration of the period of maintenance and thereafter until the cost of completion and maintenance damages for delay in completion (if any) and all other expenses incurred by the Board have been ascertained and the amount thereof certified by the Engineer the Contractor shall be entitled to receive only such sum or sums (if any) as the Engineer may certify would have been due to him upon due completion by him after deducting the said amount. But if such amount shall exceed the sum which would have been payable to the Contractor on due completion by him Contractor shall upon deemed pay to the Board the amount such excess and it shall be deemed a debt due to the Contractor to the Board and shall be recoverable accordingly.

**Urgent Repairs** 

57. If by reason or any accident or failure or other event occurring to in or in connection with the Works or any part thereof either during the execution of the Works or during the period of maintenance any remedial or other Works or repair shall in the opinion of the Engineer or the Representative of the Engineer be urgently necessary for security and the Contractor is enable or unwilling at once to do such Work or repair as the Engineer may by his own or other Workmen do such Works or repair as the Engineer or the Representative of the Engineer may consider necessary. If the Works repairs so done by the Engineer is Works which in the opinion of the Engineer the Contractor was liable to do at his own expense under the Contract all cost and charges property incurred by the Board in so doing shall no demand be paid by the Contractor to the Board or may be deducted by the Board from any monies due or which may become due to the Contractor. Provided always that the Engineer of the Representative of the Engineer (as the case may be) shall as soon as after the occurrence of any such emergency as may be reasonable practicable notify the Contractor thereof in writing.

Bribes Commission

58. Any bribe commission gift or advantages given promised or offered by or on behalf of the Contractor or his partner, agent or servant or any one on his or their behalf to any officer, servant, representative, or agent of the Board or any person on its behalf in relation to the obtaining or to the execution of this or any other Contractor with he Board shall in addition to any criminal liability which may incur subject the Contractor to cancellation of this and all other Contract and also to payments of any loose or damage resulting from such cancellation to the like extent as is provided in case of forfeiture under Clause 56 hereof and the Board shall be entitled to deduct the amounts so payable from any monies otherwise due to the Contractor under this or any other Contract.

settled by the Board in such manner as it shall think fit and sufficient and its decision shall be final and conclusive.

In case hot Works is involved, the Contractor is liable to take permit from the Port Fire Officer before start of the Works, and hot Work is to be carried out according to his directions.

## SETTLEMENT OF DISPUTES

59. This Contract shall be governed by the law of Pakistan. Resort to court by either of the parties in respect of any dispute should be had only to an appropriate court within the limit of KARACHI.

Law Covering the Contract

60 Any dispute regarding the quality of material or Workmanship or currency of measurements or reasonableness of the rate for any item or any other question of an Engineering or Technical nature shall be decided by the Engineer and his decision shall be final and binding on all the parties.

Arbitration

Any other dispute of whatsoever nature (Including the Interpretation of this or any other relevant documents) arising under this Contract (except as to any matters, the decision of which is specially provided for by these conditions) shall be referred to a sole arbitrator to be pointed by the chairman, Karachi Port Trust, who shall have absolute discretion either to a appoint a officer or the K.P.T or any one else as the sole arbitrator. The decision as such sole arbitrator shall be final and conclusive and shall be binding on all the parties to the Contract and the provision of the arbitration Act 1940 and any statutory modification thereof and rules farmed there under shall be deemed to apply to and be incorporated in this Contract.

The Contractor shall not stop the Work during the pendency of the arbitration proceedings, but he shall continue to execute the Work with full speed. However, the Chief Mechanical and Electrical Engineer shall have the power to ask the Contractor in writing to stop the Work in full or in part if he considers it necessary.

# FORM OF AGREEMENT

between t	he Board o	f trustees of	the Port	of Karachi	Incorporate	ed under t	he Karacl	hi Port Trust ne part and
								rt whereas
the Boar	d is	desirous	that	certain	Works	should	-	constructed
viz							ed a ter	 ider by the
								hereas the
								and
has given to				•			due fulfil	llment of the
Contract no	w this ag	greement	is witn	essed as	follows:-			
	_		_				gs as are	respectively
assigned to t							h h	:
								en signed by agineer of the
								construed as
part of this a			, which	siidii be dee	incu to iro	in und be	tenu unu	constitued as
	The said							
(b	) The Drav	wing.						
		eral Condition						
		ial condition	of the C	ontract.				
	The spec							
` '		of Quantities evant Corres						
ν.					the Roard	to the Cor	itractor a	s hereinafter
				•				and maintain
		nity in all res						
		•						construction, cribed by the
Contract.	In witn	who	- <b>-€</b> 41		. 4. 1 1.		41	4* 1 1 .
and s		y and year fii	-		e to nave no	ereinto set	their resp	pective hands
	_	l sealed a		-				
		nd two Trust	ees on be	chalf of the <b>E</b>	Board of Tr			Karachi.
Signe	•	c		• • • • • • • • • • • • • • • • • • • •		Chairman	l	
In the Signe	presence o	T		• • • • • • • • • • • • • • • • • • • •		Trustees Trustees		
0	presence o	f				Trustees		
And	presence o	•						
	for	and on beha				(Contract	or)	
Signe						,	,	
	presence o	f	•••••	• • • • • • • • • • • • • • • • • • • •	•••••	(Contract	or)	

# KARACHI PORT TRUST MECH & ELECT DEPTT – I

REVISED TECHNICAL EVALUATION CRITERIA FOR REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI.

The firm should fulfill the following mandatory requirement / conditions and supporting documents should be submitted accordingly: (Non compliance of any *Mandatory Conditions* will lead to rejection of bid).

S.	Description				
No.		Comply	Not Comply	Remarks	Supporting documents Placed at Flag / S.No.
1.	In case of companies and firms, last 03 years audited financial statements are to be provided showing minimum average turnover of Rs 150 million.  OR				
	In case of individuals / Sole proprietors, last 03 years tax returns filed with FBR are to be provided showing minimum turnover of Rs 150 million minimum on average for 03 years.				
2.	The firm is not blacklisted by KPT or any other Government organization/Agency undertaking on Rs.100 /- stamp paper.				
3.	Registration with Income Tax Deptt. provide photocopy of valid NTN Certificate and Active Tax Payer List (ATL)				
4.	Registration with Sindh Sales Tax with SRB & General Sales Tax with FBR. Provide photocopy of valid SST & GST registration certificate				
5.	Registration with Pakistan Engineering Council. Registration Certificate in Technical Category ME-05, ME-06 and Financial Category C-2. Provide attested copy of PEC Certificate				
6.	The bidder shall submit their bid on original tender documents duly filled with each page signed and stamped against each column as token of acceptance.				
7.	a. The bidder shall submit comparative of their technical specification against the KPT'S tender specification duly filled with each column of each page and duly signed, stamped along with required original / copy of technical literature of offered equipment and drawings required in technical specifications.  b. In case any deviation against the KPT technical specification, the same may be elaborated separately by the bidder.				
8.	Incase of Joint Venture (JV), the leading firm should be registered in Pakistan Engineering Council (PEC) relevant category and having experience in shipbuilding / repair and maintenance of floating crafts.				

# II). TECHNICAL REQUIRMENT

Minimum Qualifying Marks =70% in each category
The points / marks shall be given in the following manners:

# Summary of marks / points

	Category	Maximum point / marks	To qualify Minimum points to be scored separately in each category
a.	Status of firm	10	7 i.e 70% of 10 marks
b	Professional Capability	30	21 i.e 70% of 30 marks
C.	Relevant Experience	40	28 i.e 70% of 40 marks
d	Financial	20	14 i.e 70% of 20 marks
Tota	al	100	70 i.e 70% of 100 marks

S.No.	Description		Min. marks	Max. marks
a.	STATUS OF FIRM : (Max. marks-10) (Min marks 07)			
	i)Private Limited / corporation	05 marks		
	.Partnership	04 marks	3.5 Marks	05 Marks
	. Proprietor	3.5 marks		
	ii) . Completion of 15 years of firm established	05 marks		
	Completion of 10 years of firm established	04 marks	3.5 Marks	05 Marks
	. Completion of 08 years of firm established	3.5 marks		
	.Below 08 years of firm established (Evidence to be provided)	00 marks		
		Total	07 Marks	10 Marks

i). Managerial staff. (10 Marks) • CEO / Director (15 years experience) • Director / General Manager Engineering/ Technical (10 years experience) • Director / General Manager Finance (10 years experience)  ii). Technical staff. (10 Marks) Provide detail of technical staff involved in shipbuilding / repair & maintenance	
<ul> <li>CEO / Director (15 years experience)</li> <li>Director / General Manager Engineering/ Technical (10 years experience)</li> <li>Director / General Manager Finance (10 years experience)</li> <li>ii). Technical staff. (10 Marks)</li> <li>Provide detail of technical staff involved in shipbuilding / repair &amp; maintenance</li> </ul>	
Provide detail of technical staff involved in shipbuilding / repair & maintenance	
of floating Craft.  • Marine / Naval Architect Engineer having 08-10 years experience in shipbuilding / repair and maintenance of floating craft.  • Mechanical / Electronic / Mechatronics Engineer having 08 – 10 years experience in ship / craft repairing.  • Mechanical / Electronic / Mechatronics Engineer having 05 – 08 years experience in ship / craft repairing  iii. OWN Work Facility (10 marks ) (Firm must have their Own Workshop)  Detail to be provided, regarding miscellaneous work of floating craft, repairing workshop facility, fully equipped with machine & tools required for subject work	
having following accessories.  Repairing facility for floating craft (workshop facility) Electrical and Mechanical facilities. 24/7 facility for diagnosing faults.  04 marks 03 marks 03 marks 03 marks	
Total 21 Marks 30 Marks	
c. EXPERIENCE OF FIRM (Max. Marks-40) (Min Marks 28) Give reference to (documentary proof)  Min. marks  Max. marks	
EXPERIENCE OF FIRM	
■ 07 projects for ship / craft repair and maintenance contracts i.e. (TSHD, Bucket   40 marks	
Dredger, Hopper Barge, Tugs, Floating Cranes, Ferry Boats).  • 05 projects for ship / craft repair and maintenance contracts i.e. (TSHD, Bucket Dredger, Hopper Barge, Tugs, Floating Cranes, Ferry Boats).  • 03 projects for ship / craft repair and maintenance contracts i.e. (TSHD, Bucket Dredger, Hopper Barge, Tugs, Floating Cranes, Ferry Boats.  28 Marks  28 Marks	

-4-

d.	FINANCIAL SOUNDNESS (Max. marks-20) (Min. marks-14)		Min. marks	Max. marks
	Turnover Rs 250 Million and above. Rs 200 Million and less than Rs 250 Million. Rs 150 Million and less than Rs 200 Million. Below Rs 150 Million.	20 marks 16 marks 14 marks 00 marks	14 marks	20 marks
	Total		14 Marks	20 Marks
	Grand Total (a+b+c+d)	100 Marks	70 Marks	100 Marks

# NOTE

- A. Contract may be awarded item wise to the lowest responsive bidders, provided it aligns with the overall objectives of cost efficiency and operational compability.
- B. The selection of firm would be made via "Most Advantageous Bid" with 70% weightage to be given to Technical Criteria and 30% weightage to be given to Financial Bid.

# Formula for evaluation:

➤ Technical Score = Bidder's Technical Score X 70

**Total Technical Score** 

Financial Score = Lowest Bid Price X 30

**Bidder's Quoted Price** 

> Total Score = Technical Score + Financial Score

-Sd-M.E (W/S) -Sd-DCM.E(W/S)

-Sd-C.M & E.E. – I

# KARACHI PORT TRUST

MECHANICAL & ELECTRICAL DEPARTMENT



Name of work:

# **TENDER DOCUMENTS FOR THE:**

REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI

#### Contents:

- i. The Tender and Performa 'A' (04 Pages).
- i. Revised Scope of Work (06 Pages).
- ii. Revised Bill of Quantity (B.O.Q Cost Schedule) (10 Pages).

One complete set of these Tender Documents duly filled in, signed & stamped must be delivered at CM&EE Committee Room No. 32 at Ground Floor, KPT Head Office before 11.00 A.M on 15-04-2025 in a sealed cover superscribed as per the Tender Notice.

issued to	Name and Addresses of Tenderer:-
Date	

N. B: All tender documents read carefully, to be filled properly and duly singed & stamped each paper. Incomplete tender bids will not be considered.

# KARACHI PORT TRUST MECH. & ELECT. ENGINEERING DEPARTMENT-II

#### "THE TENDER"

Tender are required to fill in the blanks space in this tender Form and the attached Performa "A" To,

The Chief Mechanical & Electrical Engineer KARACHI PORT TRUST KARACHI PAKISTAN

KARACHI PAKISTAN				
Description of work				
1. Having examin (if any), specification carry on the said wo Special conditions of	ed the drawing, General Conditions of Contract, and special condition of Contract and Bill of Quantities for the above named works. We the undersigned offer to rks in conformity with the said Drawings General Conditions of the Contract Contract (if any ) specification and Bill of quantities for the sum of Rupees (Rs			
with in da whole of the work co	We undertakes if our tender is occupied in whole or in part to commence the work ys of receipt of the Engineer's order to commence and to complete and deliver the imprised in the Contract with in			

- 3. If our tender is accepted in whole or in part we will furnish a Security deposit for due performance of the Contract in accordance with Clause-9 of the General Conditions of Contract.
- **4.** We agree to abide by the tender for a period of .......... Days form the date fixed for receiving same and it shall remain binding upon us may be accepted at any time before expiration of that period.
- 5. Unless and until a formal Agreement is prepared and executed, this tender, together with your written acceptance thereof, shelf constitutes a binding Contract between us.
- **6.** We understand that you are not bound to accept the lowest or any tender; you may receive and accept any tender in part or in whole.
- **7.** We further agree to pay all cost toward the execution of the Contract Agreement including the cost of stamps.
- **8.** We agree that should we withdraw the offer within the aforesaid period or fail to execute the formal Contract Agreement and / or make the required Security deposit, the Board of Trustees of Karachi Port Trust shall be at liberty at their absolute discretion to appropriate our earnest money deposit of Rs ...... Either as agreed liquidated damages without any proof whatsoever of the extend of such damages or an account, reserving to themselves the right to recover from us any further loss or expenses to which they may have been put directly or indirectly by reason of any failure on our part as aforesaid.

(THE TENDER Page 1/4)

F	O	R	F	11	NA	١N	C	IA	L	BI	D
---	---	---	---	----	----	----	---	----	---	----	---

Certificate Cheque No / enclose	No / enclose a Pay Order / enclose a Bank e a Bank guaranteed Bond for Rs
Dated	its Officer, Karaciii I off Trust and noid his receipt No
<b>10.</b> We agree to maintain the work in good of its completion.	order for a period of Months, from the date
Dated	TENDERER
Place	(Full signature)
Signed by Mr	For and on
Behalf of Messrs	
<u></u>	
*Delete whichever is Not Applicable	

Delete whichever is Not Applicable

(THE TENDER Page 2/4)

# KARACHI PORT TRUST MECH. & ELECT. ENGINEERING DEPARTMENT-II

# PROFORMA "A"

(To be submitted with the tender)

Particulars	Details
1. Experience as a Contractor.	
2. Work carried out in the past with detailed cost, particulars and the year in which they were under taken etc.	
Bankers reference regarding Financial status.	
4. Whether registered with any other Department or Organization? If so, give details.	

(THE TENDER Page 3/4)

	<b>Particulars</b>	Details
5.	Plant and equipment in possession(Give Detail with cost)	
6.	Technical personnel employed; give Names and other details.	
7.	If your firm registered?	<b>,</b> ·
8.	State Capital of your firm.	
9.	Details of Income tax, Sales tax, registration etc.	
10.	Number of years of actual work carried out in Pakistan.	
11.	Attach attested copy of certificate of past work of the same nature carried out as that in tender.	
12.	Electrical Contractor license No. and date.	
		SIGNATURE OF TENDERER
Da	te:	Signed by Mr
Pla	ce:	For and on behalf of

(THE TENDER Page 4/4)

# KARACHI PORT TRUST MECH & ELECT ENGG. DEPARTMENT-I

## REVISED SCOPE OF WORK

REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI.

The subject electro mechanical crane's components, sheaves gears, pneumatic gears system, pulleys, bearings, wire rope, coupling, shaft found damaged during operation. Same needs to be dismantled and repaired as per following scope of work:

S.No.	Description	Qty
<u>A</u>	REPAIRING / COMMISSIONING	
I.	Damaged / corroded Ms 12 mm luffing gear box floor plate to be renewed.	07 Tons approx.
	Note: 1-Before welding engineering plan i.e. WPS to be submitted for joint discussion / approval.	(may increased/ decreased)
	2-Qualified welder and compatible electrodes to be used.  3-All welding cutting and rigging tested equipment's, with proper safety gears to be used during the repair work.	
II.	MS 1.5 inch dia (BSP) safety railing at floor plate of luffing gear system around 60 meter (approx) to be renewed.	60 meters approx. (may increased/ decreased)
III.	Operator cabin needs to be refurbished electrical control system and gangway	01 No.
IV.	Complete luffing gear box need to be renewed with imported equaling to existing requirement or over rated capacity.	01 No.
V.	<ul> <li>Gearbox motor to be dismantled.</li> <li>Motor casings need to be casted and machine work to be carried out.</li> <li>Motor armature and rotor to be tested.</li> <li>Servicing / overhauling &amp; re-winding of the motor to be carried out.</li> <li>Motor bearings to be replaced.</li> <li>If motor found beyond repair then new motor to be arranged of same specification.</li> <li>Servicing of thruster break unit, Qty 01 No to be carried out.</li> <li>Motor shaft coupling to be renewed as per existing.</li> </ul>	01 No.
VI.	<ul> <li>Shaft / Trueness / Alignment Work and Following work to be carried out.</li> <li>Shaft, dia 140 mm, L= 824 mm, Qty 01 No.</li> <li>Connecting shaft, dia 280 mm, L=390mm,Qty 02 Nos.</li> <li>Checking of shaft trueness and perform NDT/ MPI.</li> <li>Straightness of shaft(s) to be done by hydraulic press.</li> <li>If found any defect like cracks &amp; beyond Straightness then new shaft to be fabricated.</li> <li>Transportation &amp; lifting of shafts from KPT to workshop and vise-versa will be done by contractor.</li> </ul>	03 Nos.
VII.	Coupling: Coupling bore dia 140 mm, Qty 01 No as per size and metallurgy to be renewed.	01 No.
		Dago:1/6

VIII.	Gears:	06 Nos.
	Spur gear 11 teeth. 02 nos.	
	Spur gear wheels, 84 teeth, 02 Nos.     Spreakete, 03 teeth, 03 Nos.	
	<ul> <li>Sprockets, 08 teeth, 02 Nos.</li> <li>All open gears to be removed, checking gears by visual test, checking</li> </ul>	
	teeth groove, gear NDT/MPI. If found any defect then new gears to be	
	renewed as per size and metallurgy.	
IX.	Pedestal Bearing:	06 Nos.
17.	Housing of the pedestal bearing 06 no, to be repaired / replaced as per	00 1403.
	NDT report.	
	06 Nos. pedestal bearing aluminum bronze shells to be renewed with	06 Nos.
	new one.	
X.	Port & Sthd rack straightness in both axes on face plate to be checked	02 Racks
	<ul> <li>Port &amp; Stbd rack straightness in both axes on face plate to be checked.</li> <li>Straightness to be done by hydraulic press (if required).</li> </ul>	
	<ul> <li>If found beyond straightness then new rack to be fabricated.</li> </ul>	
	Transportation & lifting of rack from workplace to KPT and vice versa will	
	be done by contractor.	
	Rack bushes and pins 04 Nos. to be renewed.	04 Nos.
	Racks driven pin (Dia, 111mm, Qty 110 Nos.) to be checked, repaired /	110 Nos.
	replaced as per NDT report.	
	Poeks upper shaft (with put belts weekers ats.) found democrad pood to	00 Nos
	<ul> <li>Racks upper shaft (with nut bolts, washers etc.) found damaged need to be replaced 02 Nos. completely</li> </ul>	02 Nos.
XI.	I. Compensation tower found damage, need to replace completely as per	40 Tons
	drawing & material specification.	
	<ul><li>II. Ladder, grating, railing &amp; platform to be replaced.</li><li>III. Total weight of the tower is approx 40 tons.</li></ul>	
	Note:	
	IV. Before welding engineering plan i.e WPS to be submitted for joint	
	discussion / approval.	
	V. Qualified welder and compatible electrodes to be used.	
	VI. All welding, cutting and rigging tested equipment's with proper safety gears to be used during the repair work.	
XII.	JIB:	10 Tons
7	Total Length of the jib 46 meter,	10 10110
	Removal of damaged / corroded area of Crane jib according of the UT	
	report and replace with one of same size and material.	
	<ul> <li>Jib angles to be replaced in some cross bracing in bottom chord.</li> <li>Gusset plates to be replaced in come cross bracings in bottom chord.</li> </ul>	
	<ul> <li>Gusset plates to be replaced in come cross bracings in bottom chord.</li> <li>Pin brackets to be replaced in bottom chord at near part of the jib.</li> </ul>	
	Hinge pins to be replaced.	
	Vertical H-Bearing to be replaced 02 Nos. at rear part of the jib.	
	Plates to hold traverse block of pins rack with bushes to be replaced 04	
	Nos. in top of H-beam at rear part of the jib.	
	<ul> <li>Front side channel and angels for holding a pulley to be replaced.</li> <li>Front side separator plate (15 Nos.) to be replaced.</li> </ul>	
	<ul> <li>Complete ladder &amp; railing on jib to be replaced with new one (Approx 46</li> </ul>	
	meter).	
	All above activities will be done as per drawing material specification.	
	Note:	
	,	
	,	
	III. All welding, cutting and rigging tested equipment's with proper safety	
	gear to be use during the repair work.	
	<ul> <li>I. Before welding engineering plan i.e. WPS to be submitted for joint discussion / approval.</li> <li>II. Qualified welder and compatible electrodes to be arranged &amp; used.</li> <li>III. All welding, cutting and rigging tested equipment's with proper safety</li> </ul>	Page:2 /6

XIII.	Main hook block marrying beam to be fabricated new one.	01 No.
XIV.	Lifting parts & accessories to be repaired /replaced as per NDT report.  Auxiliary hook block to be fabricated new one as per sample.  Lifting parts & accessories to be repaired / replaced as per NDT report.	01 No.
XV.	<ul> <li>Pulley / Sheaves to be renewed.</li> <li>All pulleys (33 Nos.) of tower and jib to be dismantled.</li> <li>Pulleys 33 Nos. replaced with new one including bushes &amp; bearing as per drawing.</li> <li>Axel and shaft (material C45 of C60 or equivalent) to be repaired / replaced as per NDT report.</li> <li>Rope guard to be renewed.</li> <li>Pulley Details:-</li> <li>OD 870mm, width 85 mm, Qty 09 Nos.</li> <li>OD 980 mm, width 90 mm, Qty 24 Nos.</li> <li>Material: ST60 or equivalent.</li> </ul>	33 Nos.
XVI.	<ul> <li>Electrical Cable:</li> <li>All cable for control and supply associated with jib and tower as per existing need to be replaced complete in all respect.</li> <li>All sensor, switches, contractors, relays, limit switch, safeties system, load cell and gauges, need to be refurbish / replaced.</li> <li>Cable tray need to be replaced, Qty 60 meters.</li> </ul>	01 job
XVII.	<ul> <li>Pneumatic Greasing System:-</li> <li>Complete grease system with pump motor, copper/ SS pipe need to be refurbished / replace.</li> </ul>	01 job
XVIII.	<ul> <li>Wire Rope: Main hoist wire rope dia 38 mm. Auxiliary hoist wire rope dia 34 mm  <ul> <li>Old wire rope to be dismantled and place it on berth</li> <li>Proper cleaning of the crane drum to be carried out.</li> <li>New wire rope to be arranged and installed &amp; re-wind on the drums of crane.</li> <li>Rigging the new wire rope from rope drums through pulleys to snatch block and to be installed properly.</li> <li>Certified wire as per drawing need to be supplied and replace by contractor.</li> </ul> </li> </ul>	01 job
XIX.	Slewing Bearing:- Only inspection of the bearing to be done cleaning, servicing and replacement of oil as per existing.	01 No.
XX.	Excess ladder from deck to compensation tower to be checked, repaired / replaced as per requirement.	02 Tons
XXI.	Excess ladder railing from deck to compensation tower to be checked, repaired / replaced as per requirement	40 meters
XXII.	Alignment to be carried out of jib & compensation.  Main bottom bearing hinges bracket's to be renewed.	01 job 04 Nos.
AAIII.	Bore to be machined (Line Bore)	02 Nos.
	Pin to be made as per bore size.	02 Nos.
XXIV.	Main top hinge bracket's to be fabricated.	04 Nos.
	Bore to be machined (Line Bore)	02 Nos.
	Pin to be made as per bore size.	02 Nos.
XXV.	Complete jib, compensation tower, floor plate, excess ladder etc to be sand blasted / grit blasted / hydro blast surface to be achieved S.A 2.5.	01 job
	Epoxy marine paint to be applied as per existing shade and scheme.	Pago: 3/6

XXVI.	For installation of jib and compensation tower 04 Nos. Crawlers' / mobile cranes along with lifting equipment (Wire sling, shackles, bucket etc.) to be arranged by the prospective bidder.  The other associated any equipment / tool / support etc if to be required the same will be arranged by the contractor.  All the required tools and crane etc, to be at par of the Jib / Tower tonnage / capacity to be handed.  The whole job will be monitored through experienced team of Engineers /	01 job
	Supervisors, Riggers etc. till satisfactorily completion. Prior to installation an Engineering plan to be designated on Auto Cad and to be submitted for joint discussion / approval	
XXVII.	Upon competition of work required load test to be carried out in the presence of KPT Official.	01 job
S.No.	Description	Qty
<u>B</u>	ELECTRICAL WORKS.	
Ī.	The Following AC/DC Motors to be overhauled as per following scope of works a) 02 Nos Indication Motors AC 86KW b) 04 Nos Starter motors AC of winches 440 V, 17 KW c) 02 Nos compound generators DC 38 KW d) 02 Nos Shunt Generators DC 48 KW e) 02 Nos Slewing motors DC 15 KW f) 02 Nos Main Hoist Motors DC 38 KW g) 01 No Auxiliary Hoist Motors DC 38 KW h) 10 Nos Thrust Motors AC 38 KW i) 02 Nos FWD winch Motors AC 10KW j) 02 Nos AFT winch Motors AC 10 KW k) 01 No Luffing motor DC 45 KW l) 02 Nos Blower motor AC 440 V m) 02 Nos Blast pump motor 15 KW n) 01 No Compressor motor 440 V 7.5 KW o) 03 Nos Fresh water motor 2.2 KW p) 01 No Stand by lube oil motor 3 KW q) 01 No Fuel oil transfer motor 1.1 KW r) 06 Nos Navigation light 220 V marine type s) 01 No Red light with fitting 220 v marine type The Following AC/DC alternator to be overhauled as per following scope	36 Nos.
	of works	
	a) 02 Nos Main Alternators (P&S) 460 KW	
	b) 01 No Auxiliary Alternator 132 KW  Scope of work	
	a) Disassembly: (i) Remove the motor from foundation. (ii) take parts of the motors components including the starter, rotor, bearing and winding b) Cleaning: Thoroughly clean the motor components removing dirt grain &	
	old lubricant	
	<ul> <li>Inspection: visually inspect the components for damage, wear or corrosion; check the any sign of over heating, electrical arcing on other damage.</li> </ul>	
	d) <b>Repair / Replaced:</b> Repair or replaced the damage parts such as bearing windings, starter on rotors cores, commutators or slip ring, replaced any damage parts.	
	e) <b>Reassemble the motor:</b> Reassemble the components in the correct order.	
	<ul> <li>Testing: Perform electrical and mechanical test to ensure the motor functioning properly.</li> </ul>	
	g) <b>Painting / coating:</b> Apply a new coat of paint or varnish to protect the motor from corrosion.	
	<ul> <li>Re-installation: Motor to be re-installed with following.</li> <li>Checking and adjusting the motors alignment and balance.</li> <li>Motor nut bolts, seal gasket if any to be checked.</li> <li>Motors switch and starter to be checked.</li> </ul>	
	<ul> <li>Performing a dynamics balance of the motor</li> </ul>	Page: 4/6

II.   EL	ECTRICAL PANEL WORKS	
rep a) b) c) d) e) f)	in & (Auxiliary panel) to be serviced. The following part to be checked repair/laced. Note: repaired / replaced quote to quoted separately.  06 Nos Main contractors V 220 DC  78 Nos Auxiliary contractors V 220 DC  06 Nos 63 Amp, 04 Nos 32 Amp, 09 Nos 06 Amp, 03 Nos 20 Amp,  30 Nos 10 Amp  08 Nos timer switches, 02 Nos blast pump switches, 04 Nos winches switches, 01 Nos selector rotary switch.  30 Nos Bottle type fuse (02 & 04 Amp).  11 Nos Ammeter, 03 Nos Power meters, 03 Nos frequency meters,  03 Nos Volt meter  08 Nos Break thrusters V 200  10 Nos Break Liners 07 Nos Limit switches, 220 V DC  Carbon holder and the rocker Aram to be washed in Nitric acid & CTC  Crane & Engine Room Panel internal wiring / cables to be checked and replaced.	01 Job

S.No.	Description	Qty
<u>C</u>	MACHINERY WORKS	
I.	The following MS perforated / damaged pipe lines to be renewed as per existing	01 Job
	schedule.	
	a) Sea water pipe, MS dia 2-1/2 Inches Length 75 meters.	
	b) Sea water pipe 2" dia length 70 meters.	
	c) Sea water pipe 8" dia length 40 meters	
	d) Sea water pipe MS 6" dia length 70 meters	
	e) Lube oil / fuel oil MS 1-1/2 dia length 100 meters	
	f) Bilges pipe MS 2" dia length 30 meter.	
	g) Air vent, dia 1" & fire hydrant MS 2" dia length 30 meters.	
	h) All fabricated welded pipes to be tested and re-installed with gasket and nut	
	bolts.	
II.	Main engine (Port side) MAN (30/45) to be completely overhauled with all	01 Job
	attached equipment i.e. Turbo Charger, pumps, pressure gauges, exhaust	
	temperature, lube oil cooler, fresh water cooler, all safeties and alternator	
	Parts to be provided by firm.	
III.	Auxiliary Engine (MAN 2876 LE01) top Overhauling to be carried out	01 Job
	Parts will be provided by firm.	
IV.	The following pumps to be overhauled as per requirement.	05 Nos.
	a) 01 No Blast pump	
	b) 02 Nos. Bilges pump	
	c) 01 No GS	
	d) 01 No fuel pump	

S.No.	Description	Qty
<u>D</u>	WINCHES 04 Nos.	
	a) All 04 nos. winch brake lining to be repaired.	08
	b) All 04 nos. brake lining bracket to be checked, repaired/ replaced.	80
	c) All 04 nos. brake lining surface to be polished.	08
	d) All 04 nos. gyspy to be adjusted according to anchor chain.	04
	e) All 04 nos. gyspy stopper guide to be checked repaired. Replaced according to anchor chain (repair/ replaced quote to be carried out.	04
	f) Any in way removal, repair to be carried out.	-
	g) Fwd Stbd winch gear box bearing to be checked	01 Job

# (Revised Scope of Work – Ref. Maj Refit – Renewal Electro Mech Crane Component Etc FC HATHI) dt. 18-02-2025 FOR FINANCIAL BID

h)	Luffing slewing roller greasing line and greasing nipples to be replaced / repaired.	01 Job
i)	Load testing of the crane to be conducted for smooth & safe operation in all respect.	-
j)	Old steel wire need to be inspected for reused if defective, need to be replaced with approved wire from LRS/BV classified society, wire to be supplied by the firm.	-

S.No.	Description	Qty
<u>E</u>	AIR RESERVIOR	
	a) Both air reservoir to be dismantled serviced / pressure tested at 120 kg/cm	02
	<ul><li>b) Air reservoir valve head to be dismantled all leaky valves to be checked repaired including safety &amp; other associated valves.</li><li>c) Associated pipe line to be checked and leakage to be rectified.</li></ul>	

# (NOTE)

- (All the Drawings as and where applicable /required will be provided by Manora Workshop-KPT upon request by the firm).
- Contract may be awarded item wise to the lowest responsive bidders, provided it aligns with the overall objectives of cost efficiency and operational compability.

#### **TERMS AND CONDITIONS:**

- 1. Tools, lifting equipment, welding machine, welding electrode, gas cutting equipment and gas cylinder is firm's responsibility during the aforementioned repair work.
- 2. Transportations from Craft to work place, to Craft are firm's responsibility.
- 3. Safety and safety equipments are firm's responsibility during repair.
- 4. Any unforeseen work during repair is firm responsibility.
- 5. Upon completion of repair work the satisfactory test trial in the presence of ship Engineer / staff is firm responsibility.

-Sd-

**MECHANICAL ENGINEER (W/S)** 

-Sd-DCME (WS)

Page:6/6

# KARACHI PORT TRUST MECH & ELECT ENGG DEPTT -

# REVISED BILL OF QUANTITY (B.O.Q. COST SCHEDULE)

REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES, GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING ETC OF FC-HATHI.

S. No.	Description	Qty	Material Charges (Where applicable)	Labour Charges (Where applicable
<u>A</u>	REPAIRING / COMMISSIONING			
I.	Damaged / corroded Ms 12 mm luffing gear box floor plate to be renewed.  Note:  1-Before welding engineering plan i.e. WPS to be submitted for joint discussion / approval.  2-Qualified welder and compatible electrodes to be used.  3-All welding cutting and rigging tested equipment's, with proper safety gears to be used during the repair work.	07 Tons approx. (may increased/ decreased)		
II.	MS 1.5 inch dia (BSP) safety railing at floor plate of luffing gear system around 60 meter (approx) to be renewed.	60 meters approx. (may increased/ decreased)		
III.	Operator cabin needs to be refurbished electrical control system and gangway.	01 No.		
IV	Complete luffing gear box need to be renewed with imported equaling to existing requirement or over rated capacity.	01 No.		Not required
V.	<ul> <li>Luffing Gear Motor:</li> <li>Gearbox motor to be dismantled.</li> <li>Motor casings need to be casted and machine work to be carried out.</li> <li>Motor armature and rotor to be tested.</li> <li>Servicing / overhauling &amp; re-winding of the motor to be carried out.</li> <li>Motor bearings to be replaced.</li> <li>If motor found beyond repair then new motor to be arranged of same specification.</li> <li>Servicing of thruster break unit, Qty 01 No to be carried out.</li> <li>Motor shaft coupling to be renewed as per existing.</li> </ul>	01 No.	Not required	

Page: 1/10

VI.	<ul> <li>Shaft / Trueness / Alignment Work and Following work to be carried out.</li> <li>Shaft, dia 140 mm, L= 824 mm, Qty 01 No.</li> <li>Connecting shaft, dia 280 mm, L=390mm, Qty 02 Nos.</li> <li>Checking of shaft trueness and perform NDT/ MPI.</li> <li>Straightness of shaft(s) to be done by hydraulic press.</li> <li>If found any defect like cracks &amp; beyond Straightness then new shaft to be fabricated.</li> <li>Transportation &amp; lifting of shafts from KPT to workshop and vise-versa will be done by contractor.</li> </ul>	03 Nos.	
VII.	Coupling: Coupling bore dia 140 mm, Qty 01 No as per size and metallurgy to be renewed.	01 No.	
VIII.	<ul> <li>Gears:</li> <li>Spur gear 11 teeth. 02 nos.</li> <li>Spur gear wheels, 84 teeth, 02 Nos.</li> <li>Sprockets, 08 teeth, 02 Nos.</li> <li>All open gears to be removed, checking gears by visual test, checking teeth groove, gear NDT/MPI. If found any defect then new gears to be renewed as per size and metallurgy.</li> </ul>	06 Nos.	
IX.	Pedestal Bearing:  • Housing of the pedestal bearing 06 no,	06 Nos.	
	to be repaired / replaced as per NDT report.  • 06 Nos. pedestal bearing aluminum bronze shells to be renewed with new one.	06 Nos.	
X.	<ul> <li>Pin Rack:</li> <li>Port &amp; Stbd rack straightness in both axes on face plate to be checked.</li> <li>Straightness to be done by hydraulic press (if required).</li> <li>If found beyond straightness then new rack to be fabricated.</li> <li>Transportation &amp; lifting of rack from workplace to KPT and vice versa will be done by contractor.</li> <li>Rack bushes and pins 04 Nos. to be renewed.</li> </ul>	02 Racks 04 Nos.	Not required
	Racks driven pin (Dia, 111mm, Qty 110 Nos.) to be checked, repaired / replaced as per NDT report.	110 Nos.	
	Racks upper shaft (with nut bolts, washers etc.) found damaged need to be replaced 02 Nos. completely.	02 Nos.	Not required

XII.	<ol> <li>Compensation tower found damage, need to replace completely as per drawing &amp; material specification.</li> <li>Ladder, grating, railing &amp; platform to be replaced.</li> <li>Total weight of the tower is approx 40 tons.</li> <li>Note:</li> <li>Before welding engineering plan i.e WPS to be submitted for joint discussion / approval.</li> <li>Qualified welder and compatible electrodes to be used.</li> <li>All welding, cutting and rigging tested equipment's with proper safety gears to be used during the repair work.</li> <li>Total Length of the jib 46 meter,</li> <li>Removal of damaged / corroded area of Crane jib according of the UT report and replace with one of same size and material.</li> <li>Jib angles to be replaced in some cross bracing in bottom chord.</li> <li>Gusset plates to be replaced in come cross bracings in bottom chord.</li> <li>Pin brackets to be replaced in bottom chord at near part of the jib.</li> <li>Hinge pins to be replaced.</li> </ol>	40 Tons	
	<ul> <li>Hinge pins to be replaced.</li> <li>Vertical H-Bearing to be replaced 02 Nos. at rear part of the jib.</li> <li>Plates to hold traverse block of pins rack with bushes to be replaced 04 Nos. in top of H-beam at rear part of the jib.</li> <li>Front side channel and angels for holding a pulley to be replaced.</li> <li>Front side separator plate (15 Nos.) to be replaced.</li> <li>Complete ladder &amp; railing on jib to be replaced with new one (Approx 46 meter).</li> <li>All above activities will be done as per drawing material specification.</li> </ul>	10 Tons	
	Note:		
	I. Before welding engineering plan i.e. WPS to be submitted for joint discussion / approval.		
	Qualified welder and compatible electrodes to be arranged & used.		
	III. All welding, cutting and rigging tested equipment's with proper safety gear to be use during the repair work.		
XIII.	Main hook block marrying beam to be fabricated new one. Lifting parts & accessories to be repaired /replaced as per NDT report.	01 No.	Not required

# (Revised B.O.Q –Ref. Maj Refit –Renewal Electro Mech Crane Component Etc FC HATHI) dt. 18-02-2025 FOR FINANCIAL BID

XIV.	Auxiliary hook block to be fabricated new one as per sample.  Lifting parts & accessories to be repaired / replaced as per NDT report.	01 No.	Not required
XV.	<ul> <li>Pulley / Sheaves to be renewed.</li> <li>All pulleys (33 Nos.) of tower and jib to be dismantled.</li> <li>Pulleys 33 Nos. replaced with new one including bushes &amp; bearing as per drawing.</li> <li>Axel and shaft (material C45 of C60 or equivalent) to be repaired / replaced as per NDT report.</li> <li>Rope guard to be renewed.</li> <li>Pulley Details:-</li> <li>OD 870mm, width 85 mm, Qty 09 Nos.</li> <li>OD 980 mm, width 90 mm, Qty 24 Nos.</li> <li>Material: ST60 or equivalent.</li> </ul>	33 Nos.	
XVI.	<ul> <li>Electrical Cable:</li> <li>All cable for control and supply associated with jib and tower as per existing need to be replaced complete in all respect.</li> <li>All sensor, switches, contractors, relays, limit switch, safeties system, load cell and gauges, need to be refurbish / replaced.</li> <li>Cable tray need to be replaced, Qty 60 meters.</li> </ul>	01 Job	
XVII.	<ul> <li>Pneumatic Greasing System:-</li> <li>Complete grease system with pump motor, copper/ SS pipe need to be refurbished / replace.</li> </ul>	01 Job	
XVIII.	<ul> <li>Wire Rope: Main hoist wire rope dia 38 mm. Auxiliary hoist wire rope dia 34 mm</li> <li>Old wire rope to be dismantled and place it on berth</li> <li>Proper cleaning of the crane drum to be carried out.</li> <li>New wire rope to be arranged and installed &amp; re-wind on the drums of crane.</li> <li>Rigging the new wire rope from rope drums through pulleys to snatch block and to be installed properly.</li> <li>Certified wire as per drawing need to be supplied and replace by contractor.</li> </ul>	01 Job	
XIX.	Slewing Bearing:- Only inspection of the bearing to be done cleaning, servicing and replacement of oil as per existing.	01 No.	Oil to be provided by KPT
XX.	Excess ladder from deck to compensation tower to be checked, repaired / replaced as per requirement.	02 Tons	
XXI.	Excess ladder railing from deck to compensation tower to be checked, repaired / replaced as per requirement.	40 meters	

XXII.	Alignment to be carried out of jib & compensation.	01 job	Not required	
XXIII.	Main bottom bearing hinges bracket's to be renewed.	04 Nos.		
	Bore to be machined (Line Bore)	02 Nos.	Not required	
	Pin to be made as per bore size.	02 Nos.		
XXIV.	Main top hinge bracket's to be fabricated.	04 Nos.		
	Bore to be machined (Line Bore)	02 Nos.	Not required	
	Pin to be made as per bore size.	02 Nos.		
XXV.	Complete jib, compensation tower, floor plate, excess ladder etc to be sand blasted / grit blasted / hydro blast surface to be achieved S.A 2.5.  Epoxy marine paint to be applied as per existing shade and scheme.	01 job	Paint to be provided by KPT	
XXVI.	For installation of jib and compensation tower 04 Nos. Crawlers' / mobile cranes along with lifting equipment (Wire sling, shackles, bucket etc.) to be arranged by the prospective bidder. The other associated any equipment / tool / support etc if to be required the same will be arranged by the contractor. All the required tools and crane etc, to be at par of the Jib / Tower tonnage / capacity to be handed. The whole job will be monitored through experienced team of Engineers / Supervisors, Riggers etc. till satisfactorily completion. Prior to installation an Engineering plan to be designated on Auto Cad and to be submitted for joint discussion / approval.	01 Job	Not required	
XXVI I.	Upon competition of work required load test to be carried out in the presence of KPT Official.	01 Job		
	Sub total Material Cost			Rs.
	18 % GST on Material			Rs.
	Sub total Labor Cost			Rs.
	15% SST on services			Rs.
	Total Including GST & SST (A)			Rs.

S. No.	Description	Qty	Material Charges	Labour Charges
			(Where applicable)	(Where applicable)
<u>B</u>	ELECTRICAL WORKS.		<u>арріїодоїс)</u>	иррпоцыю)
i.	The Following AC/DC Motors to be overhauled	01 Job		
	as per following scope of works			
	a) 02 Nos. Indication Motors AC 86KW			
	b) 04 Nos. Starter motors AC of winches 440 V, 17 KW			
	c) 02 Nos. compound generators DC 38			
	d) 02 Nos. Shunt Generators DC 48 KW			
	e) 02 Nos. Slewing motors DC 15 KW			
	f) 02 Nos. Main Hoist Motors DC 38 KW			
	g) 01 No. Auxiliary Hoist Motors DC 38 KW			
	h) 10 Nos. Thrust Motors AC 38 KW i) 02 Nos. FWD winch Motors AC 10KW			
	i) 02 Nos. FWD winch Motors AC 10KW j) 02 Nos. AFT winch Motors AC 10 KW			
	k) 01 No. Luffing motor DC 45 KW			
	I) 02 Nos. Blower motor AC 440 V			
	m) 02 Nos. Blast pump motor 15 KW			
	n) 01 No. Compressor motor 440 V 7.5 KW o) 03 Nos. Fresh water motor 2.2 KW			
	o) 03 Nos. Fresh water motor 2.2 KW p) 01 No. Stand by lube oil motor 3 KW			
	q) 01 No. Fuel oil transfer motor 1.1 KW			
	r) 06 Nos. Navigation light 220 V marine			
	type			
	s) 01 No. Red light with fitting 220 v marine			
	type The Following AC/DC alternator to be			
	overhauled as per following scope of works			
	a) 02 Nos. Main Alternators (P&S) 460 KW			
	b) 01 No. Auxiliary Alternator 132 KW			
	Scope of work			
	a) Disassembly: (i) Remove the motor from foundation. (ii) take parts of the motors			
	components including the starter, rotor,			
	bearing and winding			
	b) Cleaning: Thoroughly clean the motor			
	components removing dirt grain & old			
	lubricant c) Inspection: visually inspect the			
	components for damage, wear or			
	corrosion; check the any sign of over			
	heating, electrical arcing on other			
	damage.			
	d) Repair / Replaced: Repair or replaced the damage parts such as bearing			
	windings, starter on rotors cores,			
	commutators or slip ring, replaced any			
	damage parts.			
	e) Reassemble the motor: Reassemble			
	the components in the correct order.  f) <b>Testing</b> : Perform electrical and			
	mechanical test to ensure the motor			
	functioning properly.			
	g) Painting / coating: Apply a new coat of			
	paint or varnish to protect the motor from			
	corrosion.			Page:6 /10

	(Revised B.O.Q –Ref. Maj Refit –Renewal Electro Mech Crane Component Etc. FC HATHI) dt. 18-02-2025 FOR FINANCIAL BID			
	<ul> <li>h) Re-installation: Motor to be re-installed with following.</li> <li>Checking and adjusting the motors alignment and balance.</li> <li>Motor nut bolts, seal gasket if any to be checked.</li> <li>Motors switch and starter to be checked.</li> <li>Performing a dynamics balance of the motor</li> </ul>			
II.	ELECTRICAL PANEL WORKS			
	Main & (Auxiliary panel) to be serviced. The following parts to be checked repair/ replaced. Note: repaired / replaced quote to quoted separately.  a) 06 Nos. Main contractors V 220 DC			
	b) 78 Nos. Auxiliary contractors V 220 DC			
	<ul><li>c) 06 Nos. 63 Amp, 04 Nos. 32 Amp, 09 Nos. 06 Amp, 03 Nos. 20 Amp, 30 Nos. 10 Amp</li></ul>			
	d) 08 Nos. timer switches, 02 Nos. blast pump switches, 04 Nos. winches switches, 01 Nos. selector rotary switch.			
	e) 30 Nos. Bottle type fuses (02 & 04 Amp).	01 Job		
	f) 11 Nos. Ammeter, 03 Nos. Power meters, 03 Nos. frequency meters, 03 Nos. Volt meter			
	g) 08 Nos. Break thrusters V 200			
	h) 10 Nos. Break Liners 07 Nos. Limit switches, 220 V DC			
	<ul> <li>i) Carbon holder and the rocker Aram to be washed in Nitric acid &amp; CTC</li> </ul>			
	<ul> <li>j) Crane &amp; Engine Room Panel internal wiring / cables to be checked and replaced.</li> </ul>			
	Sub total Material Cost		l	Rs.
	18 % GST on Material			Rs.
	Sub total Labor Cost			Rs.
	15% SST on services			Rs.
	Total Including GST & SST (B)			Rs.

S. No.	Description	Qty	Material Charges (Where applicable)	Labour Charges (Where applicable
<u>C</u>	MACHINERY WORKS:			·
I.	The following MS perforated / damaged pipe lines to be renewed as per existing schedule.  a) Sea water pipe, MS dia 2-1/2 Inches Length 75 meters.  b) Sea water pipe 2" dia length 70 meters.  c) Sea water pipe 8" dia length 40 meters.  d) Sea water pipe MS 6" dia length 70 meters.  e) Lube oil / fuel oil MS 1-1/2 dia length 100 meters  f) Bilges pipe MS 2" dia length 30 meter.  g) Air vent, dia 1" & fire hydrant MS 2" dia length 30 meters.  h) All fabricated welded pipes to be tested and re-installed with gasket and nut	01 Job		
II.	bolts.  Main engine (Port side) MAN (30/45) to be completely overhauled with all attached equipment i.e. Turbo Charger, pumps, pressure gauges, exhaust temperature, lube oil cooler, fresh water cooler, all safeties and alternator Parts to be provided by firm.	01 Job		
III.	Auxiliary Engine (MAN 2876 LE01) top Overhauling to be carried out Parts will be provided by firm.	01 Job		
IV.	The following pumps to be overhauled as per requirement. a) 01 No Blast pump b) 02 Nos. Bilges pump c) 01 No GS d) 01 No fuel pump	05 Nos.		
	Sub total Material Cost			Rs.
	18 % GST on Material			Rs.
	Sub total Labor Cost			Rs.
	15% SST on services			Rs.
	Total Including GST & SST (C)			Rs.

S. No.		Description	Qty	Material Charges (Where applicable	Labour Charges (Where applicable)
<u>D</u>	WII	NCHES 04 Nos.		,	
	a)	All 04 nos. winch brake lining to be repaired.	08		
	b)	All 04 nos. brake lining bracket to be checked, repaired/ replaced.	80		
	c)	All 04 nos. brake lining surface to be polished.	08		
	d)	All 04 nos. gispy to be adjusted according to anchor chain.	04		
	e)	All 04 nos. gispy stopper guide to be checked repaired. Replaced according to anchor chain (repair/ replaced quote to be carried out.	04		
	f)	Any in way removal, repair to be carried out.	-		
	g)	Fwd Stbd winch gear box bearing to be checked	01 Job		
	h)	Luffing slewing roller greasing line and greasing nipples to be replaced / repaired.	01 Job		
	i)	Load testing of the crane to be conducted for smooth & safe operation in all respect.	-		
	j)	Old steel wire need to be inspected for reused if defective need to be replaced with approved wire from LRS/BV classified society, wire to be supplied by the firm.	-		
	Sul	o total Material Cost			Rs.
	18	% GST on Material			Rs.
	Sul	total Labor Cost			Rs.
	15% SST on services				Rs.
	Tot	al Including GST & SST (D)			Rs.

#### (Revised B.O.Q -Ref. Maj Refit -Renewal Electro Mech Crane Component Etc FC HATHI) dt. 18-02-2025 FOR FINANCIAL BID

S. No.	Description	Qty	Material Charges (Where applicable)	Labour Charges (Where applicable)
<u>E</u>	AIR RESERVIOR			
	<ul> <li>a) Both air reservoir to be dismantled serviced / pressure tested at 120 kg / cm.</li> <li>b) Air reservoir valve head to be dismantled all leaky valves to be checked repaired including safety &amp; other associated valves.</li> <li>c) Associated pipe line to be checked and leakage to be rectified.</li> </ul>	02		
	Sub total Material Cost			Rs.
	18 % GST on Material	·	·	Rs.
	Sub total Labor Cost			Rs.
	15% SST on services			Rs.
	Total Including GST & SST (E)	<u></u>		Rs.
	GRAND TOTAL OF (A+B+C+D+E+)			Rs.

<b>IN WORDS (RUPEES:</b>	•

#### NOTE:

- •(All the Drawings as and where applicable / required will be provided by Manora Workshop-KPT upon request by the firm).
- Contract may be awarded item wise to the lowest responsive bidders, provided it aligns with the overall objectives of cost efficiency and operational compability.

## **STATEMENT OF TENDERER:**

DATED

1.	The price quoted is for the <u>REFURBISHMENT / MAJOR REFIT INCLUDING RENEWAL OF</u> ELECTRO MECHANICAL CRANE'S COMPONENT AND STEEL STRUCTURE, SHEAVES,		
	GEARS, SHAFTS TRUENESS WITH ALIGNMENT OPEN GEARS CHECKING AND REPAIR		
	AND SAFE TRANSPORTATION FOR REFITTING / INSTALLATION AND COMMISSIONING		
	ETC OF FC-HATHI as per KPT's tendered Scope of Work & requirements complete in all		
	respect inclusive of Taxes in force at present.		
2.	The above mentioned work will be carried out as per KPT's Tendered Scope of Work complete in		
	all respect under the supervision / control of KPT's nominated Project Officer in good and sound		
	conditions. The Work Completion Certificate duly signed by the Project Officer KPT / Incharge		
	user section would be submitted with the bill for payment in quadruplicate duly pre -receipted.		
3.	Transportations from Craft to work place, to Craft are firm's responsibility.		
4.	Tools, lifting equipment, welding machine, welding electrode, gas cutting equipment and gas cylinder		
	is firm's responsibility during the aforementioned repair work.		
5.	Safety and safety equipments are firm's responsibility during repair.		
6.	Any unforeseen work during repair is firm responsibility.		
7.	Upon completion of repair work the satisfactory test trial in the presence of ship Engineer / staff is firm		
0	responsibility.		
8.	Validity Period: Our offer is valid for acceptance for a period of 90 Days w.e.f. the date of tender		
	opening and further extension if required may be granted on request.		
9.	<b>Delivery / Completion Period</b> : from the date of award of confirmed Work Order		
	by KPT to the firm.		
10.	<u>Terms of Payment</u> : 100% payment against Delivery, completion and satisfactory test / trials of		
	Work.		
11.	<b>Guarantee</b> : <b>12 Month</b> Guarantee /Warranty w.e.f. date of delivery, completion and satisfactory		
	test / trials of subject work.		

NAME & ADDRESS OF TENDERER	
	SIGNATURE OF TENDERER
	 Page:1

Page:10/10