

Broward County Port Everglades Department

Attn: Glenn A Wiltshire
Email: GWILTSHIRE@broward.org
Address: 2050 SE 42nd Street Bldg #33
Fort Lauderdale FL 33316
CC: Delacruz, Arnold

June 30th, 2021

**SUBJECT: Quotation for Supplying of Low Profile Super Post Panamax
Container Handling Gantry Cranes for Port Everglades, USA**

Dear Sirs,

Thank you for your trust and support of ZPMC. We are pleased to submit our update quota for the subjected project as follows.

1. Scope of Supply

The design, construction, erection, transportation, testing and commissioning of Low Profile Super Post Panamax Container Handling Gantry Cranes for Broward County's Port Everglades Department.

This quote follows the commercial and technical requirements for the previous three (3) Low Profile Super Post Panamax Container Handling Gantry Cranes ZPMC has supplied to PED.

Quantity of 1~6 Low Profile Super Post Panamax Container Handling Gantry Cranes

2. Specifications

Please further refer to the Specification requirements of PED.

Capacity: 65LT (Under Spreader)
Lift Height: 52.0 meters (Over Rail)/ 18.0 meters (Below Rail)
Rail Gauge: 30.48 meters
Outreach: 66.0 meters
Backreach: 25.0 meters
Hoist Speed: 90 meters/min(with rated load)
180 meters/min (with empty load)
Trolley Speed: 240 meters/min
Gantry Speed: 45 meters/min

3. List of Proposed Suppliers

Below is a list of major component suppliers which used for the price base in our quotation.

This time ZPMC has included two option items in our quote, highlighted in red below. The two items are Gear boxes & gearing and Service crane.

	COMPONENT	PROPOSED SUPPLIER/BRAND
1	Control system and electrical	TMEIC
2	Electric motors	TMEIC
3	Gear boxes and gearing	Falk, ZPMC as Option
4	Air compressor	Ingersoll Rand
5	Air conditioners	Trane
6	Anemometer	Gill WindObserver IS
7	Bearings and seals	SKF/FAG for high speed bearings, others are Chinese brand products
8	Brakes, high-speed, including discs	Pintsch-Bubbenzer, Sire
9	Brakes, gantry motor	Pintsch-Bubbenzer, electromagnetic SB17 MX series, adjustable torque
10	Brakes, non-driven gantry wheel(B)	Pintsch-Bubbenzer
11	Bumpers	Oleo, with marine plating
12	Cable reel, gantry	Cavotec pull and store
13	Cable reel, spreader	Cavotec
14	CCTV Cameras	Orlaco
15	Couplings, with brake disc	by brake supplier
16	Couplings, drum	Malmedie
17	Diesel auxiliary generator set	Cummins / ONAN, EPA Tier 4F
18	Electrical cable, gantry with 12 fibers	Prysmian
19	Electrical cable, spreader	Prysmian
20	Elevator	Alimak
21	Encoders	Huebner Gissen
22	Energy chain: trolley and boom systems	IGUS
23	Hydraulic components	Rexroth, Parker, available in the U.S.
24	Hydraulic cylinders	Rexroth, Parker, Hydropa available in the U.S.
25	Hydraulic power units, for brakes	by brake supplier
26	Intercom	Control International
27	Fuses	Ferraz Shawmut, Busmann, GE
28	Laser (anti-collision system)	SICK
29	Lighting, floodlights	Phoenix
30	Lighting, aviation lights	Phoenix
31	Limit switches, magnetic	Schmersal
32	Limit switches, proximity	Schmersal
33	Limit switches, mechanical	GE, Omron

34	Limit switches, rotary cam	GE
35	Load cells	Brosa
36	Lubricants	Mobil
37	Master Switches	Brieda Dynamic
38	Operator's cabin and consoles	Brieda Dynamic
39	Paint	Hempel, International
40	Service cranes, powered	KoneCranes, ZPMC as Option
41	Spreader cable plugs and sockets	Pyle-National
42	Spreader	Bromma STS45 with SCS and Height Indication System
43	Spreader over-height adaptor (e)	BROMMA
44	Spreader cable shock-absorbing device	Cavotec S06-S1227-500 bollard type damper with 2 springs
45	Trolley rail pads and clips	Gantrex North America, WeldLok series
46	Welding machine	Miller XMT 450 CC/CV 230/460V W/O AUX POWER Stock # 907481
47	Welding machine	Miller XMT 450 CC/CV 230/460V W/O AUX POWER Stock # 907481
48	Wire rope	Kiswire, HYFIL_K8, galvanized and pre-lubricated

(1) Other products are made in China of high quality.

(2) Included i) five (5) Bromma spreaders, ii) three (3) spreader over-height adaptor, iii) three (3) cargo beam, for the base bid.

4. Quote Prices

The update of cranes prices is based on 3 cranes. And we also provide price references for PED from ONE through SIX cranes.

The Optional prices will be at PED's decisions. Along with crane prices, we have some suggests of controlling cost for your consideration too.

Please find below pricing details:

4.1 Chart I- Cost Differences Compares with original 3 cranes.

Item	Description	Calculation US\$ per Crane	Change in Price US\$ per Crane
1	Components-	i) Components pricing is going up vastly from January 2021. This is result of pandemic impact to the global labor/materials etc. market. ii) Plus major and mostly components suppliers have also indicated longer lead time for deliveries.	US\$ 741,300
1.1	Control System	Price in 2021 compare 2018, Raised at 13.69%	US\$ +235,500
1.2	Gear Boxes	Price in 2021 compare 2018, Raised at 29.1%	US\$ +156,000
1.3	Brakes	Price in 2021 compare 2018 Raised at 19.04%	US\$ +70,600
1.4	Cab	Price in 2021 compare 2018 Raised at 17.42%	US\$ +15,800
1.5	Service Crane	Price in 2021 compare 2018 Raised at 110.25%	US\$ +150,800
1.6	Communications	Price in 2021 compare 2018 Raised at 337.50%	US\$ +57,000
1.7	wires	Price in 2021 compare 2018 Raised at 15.55%	US\$ +5,600
1.8	others	Price in 2021 compare 2018	US\$ +50,000
2	Materials-	Due the post-pandemic impact, and medals price raising, steels/coppers products are going up from January and changed weekly. In June, the pricing has stayed at high level. Our suppliers for cables/wires and others are all raising the	US\$ 926,000

		cost.	
2.1	Steel plates	Net procurement cost raised at 35% for steels. Highest time is May 2021, raised at 50%. Raised at 33%	US\$ +400,000
2.2	Electrical installations materials	Due copper material price raise, all related products prices have gone up. Cables and wires etc. are almost doubled in the price. Raised at 148%	US\$ +158,000
2.3	Cables	Prysmian cables for whole crane, or other cable brands have similar price changes. Even compare with 2020, their price doubled. Raised at 95%	US\$ +295,000
2.4	others	Paints, tools etc.	US\$ +73,000
3	Spare Parts		US\$ 126,700
3.1	TMEIC Spares	Compare pricing with last year when order TMEIC parts, it raised US\$380,00 for whole project. If compare with 2018 quote, it almost doubled the price.	US\$ +126,700
4	Labor and USD-RMB Rate		US\$ 120,000
4.1	Exchange rate	The general impact show in our cost is that manufacturing cost is up. USD:RMB in 2018: 6.8 USD:RMB in 2021: 6.4	US\$ +120,000
5	Bonds and Insurances		US\$ 150,000
5.1	Insurances: Professional Liability, General Liability, Builder's Risk(All Risk), Pollution Liability etc	During the execution of original 3 cranes, we came across with limit resource to buy some insurances required by the county, as those are not normally provided. Professional liability is always covered by ZPMC. The insurance market sell this at a very high cost, even it only covers during the 3 months on site. ZPMC cooperating insurance advises that this policy is not so usefully for ZPMC crane business.	US\$ +150,000
		Sub-Total:	US\$ 2,064,000

4.2 Chart II- ZPMC Suggests in Cost Controls

Item	Descriptions	Suggestions	Change in Cost US\$ per Crane
1	Components	The two items suggested below, is in thinking somehow even PED familiar with original components, changes won't give much impact to the maintenance or operations. And procurement of these brands is not very easy as ZPMC parts have been competitions and used on most of our cranes.	US\$ -390,000
1.1	Gear boxes and gearing	In original contract for 3 cranes, it uses Folk. ZPMC highly recommend ZPMC brand. ZPMC gear boxes have been adopted for almost all projects in north America. The gear boxes has a good performance and very little report about repairs in 20 years using life. Folk or Flender has long lead time, and with ZPMC cranes, ZPMC certainly has better control of our own parts and supplies.	US\$ -280,000
1.2	Service Crane	KoneCrane	US\$ -110,000
2	Spare Parts		US\$ -280,000
2.1	Cancel TMEIC spare parts	The TMEIC spare parts has raised over 100% compared when we have the quote in 2018, 40% raised compared with last year. The lead time and deliveries are way too long when ordered and agreed with TMEIC even. As PED already just received new spares from original contract, and these are actual not a small number of spares. So we suggest PED to consider cancel the spares for now, and to order later when need.	US\$ -280,000
2.2	Other spares	ZPMC suggest that PED consider a quota for whole project, and finalize the spares list around 6~8 months from NTP.	
3	Bonds and Insurances		US\$ -150,000s
3.1	Cancel Professional Liability	The professional liability provided by insurance company covers the design	US\$ -150,0000

		liability of ZPMC till substantial handover. But actually it is covered by ZPMC under the contract. The insurance company require ZPMC to bear such responsibility.	
		Sub-Total:	US\$ -820,0000

4.3 Chart III- Quotations for Low Profile Super Post Panamax Container Handling Gantry Cranes to PED

Item	Descriptions	Price (US\$)	
		Per crane	For respective cranes
Three (3) Cranes	A1 Based on original contract requirements and follows the executions of original 3 cranes.	US\$ 15,680,000	US\$ 47,040,000
	A2 Based A1, and taken Chart II suggestions.	US\$ 14,860,000	US\$ 44,580,000
One (1) Crane	B1 Based on A1/original contract requirements and follows the executions of original crane. Split the cost for 3 cranes.	US\$ 15,800,000	US\$ 15,800,000
One (1) Crane	B2 Based B1, order by June 2022.	US\$ 16,590,000	US\$ 16,590,000
One (1) Crane	B3 Based B1, order by June 2023.	US\$ 17,380,000	US\$ 17,380,000

Remarks:

- a) The above quoted price is based on above item 3. *List of Proposed Suppliers.*
- b) The above price includes ZERO taxes and duties applicable in the USA.
- c) All cost for unloading the cranes to Buyer's terminal shall be borne by the Seller. The dockage, wharfage, stevedoring, port charge , berth fee or hire and any other cost or fee charged by the local port authority or the terminal shall be exempted from the Seller's cost or born by the buyer during the period mutually agreed for Seller's or seller's rental transportation vessel carrying the cranes under this contract.

5. ZPMC Proposed Payment Schedule

Below payment schedule follows the original contract.

1	5%	Preliminary design submitted and reviewed, place order to sub suppliers
2	10%	Design completion, i.e. main structural and mechanical design completed
3	15%	Fabrication preparation completed and start manufacturing on CX base
4	20%	Assembly and Erection on CX base
		Withhold Payment 50%
5	15%	Loading completed of three cranes, ready for shipping
6	15%	Safely arrived Port Everglades and offloaded on dock
7	5%	Substantial completion of crane 1
8	5%	Substantial completion of crane 2
9	5%	Substantial completion of crane 3
10	5%	Final Completion
*	100%	Ten percent (10%) of all monies earned by Contractor for each crane, shall be retained by County until Final Completion and acceptance of each crane by County in accordance with this Agreement, except that after fifty percent (50%) of the Work has been completed, the Contract Administrator shall reduce the retainage to five percent (5%) of all monies previously earned and all monies earned thereafter, and after ninety percent (90%) of the Work has been completed, the Contract Administrator may reduce the retainage to two and one-half percent (2½%) of all monies previously earned, and all monies earned thereafter. Any reduction in retainage below five percent (5%) shall be at the sole discretion of County's Contract Administrator, shall be recommended by Consultant. Contractor shall have no entitlement to a reduction. Any interest earned on retainage shall accrue to the benefit of County.

6. Warranty

Warranty terms will follow the original contract requirement.

Thirty-six (36) months from the date of Provisional Acceptance Certificate in respect of each Deliverable.

7. Delivery Time

ZPMC propose 30 months from the date of NTP.

- i) The original contract for 3 cranes took 38 months from NTP to substantial handover for all 3 cranes. The extension of 6+6+2 months for design/manufacturing/pandemic was given to 3 cranes project.
- ii) Manufacturing time saving: New orders with same requirements of cranes technical shall save us timing in design and the learnt lessons/experiences can be taken into manufacturing as well.
- iii) Compare with ZPMC other project of low profile cranes for Boston, which follows PED original cranes. The project took 32 months to complete. Boston project has learnt from PED cranes step by step. But the complex and difficulties in manufacturing did not cut down whole length of learning curve.
- iv) Design time saving: The procurement and deliveries of components also need to be counted. The design period can be shortened but it's not zero. The drawings need updating and drawing releasing shall take time. And deliveries of components for PED is longer than normal cranes, so this time shall be also counted into design phase time.
- v) Pandemic Impact: The labors are tighten after pandemic, compared 2018/2019 with 2020 and 2021. In coming year, the situation is expected to be better, but still not reach 2018/2019 status.

Consider above circumstances, ZPMC production has looked at our factory capacity for Everglades cranes, we propose 30 months for 3 cranes.

8. Quote Validity

This quotation is valid till 31st August, 2021.

If you have any questions or are in need of any further information, please feel free to contact us.
Yours sincerely,



Ms. Alle Zou (Zou Xianhui)
Regional Manager of North America
Port Machinery Management Department
Shanghai Zhenhua Heavy Industries Co., Ltd. (ZPMC)