TENDER BOOK FOR PUMPING UNIT C 640D – 256 – 144

INFORMATION LIST FOR MECHANICAL PARTS

A) the pumping unit base :
- base being placed on concrete foundation method.
- unit erection and unit to well location method.
- weight of base.

B) gear reducer:
- housing metal.
- gear reducer being placed on base method .
- number of reduction steps.
- gear shaft metal.
- gears metal.
- hardness of surface teeth gears.
- capacity of brake system for braking.
- weight of gear reducer.
- efficiency.
- type of gears teeth.
- diameter of inlet shaft.
- diameter of main shaft.
- transmission type from the electric motor to the Gear reducer
- install electrical method.
- install and length v-belts.
- diameter of sheaves for electrical motor.
- shave placed on motor shaft method.
- width of shave.
- sheaves metal.
- number of belts and cross sectional tube.

C) gear reducer shave (fly wheel):
-diameter.
- metal.
- number of belt grooves.
- fly wheel placed method on gear reducer.

D) samson post
- designed dimensions.
- install samson post on base method.

E) pitman's:
- gross section.
- weight.
- pitman ends into crank pins method.
- attach pitman's to equalizer method.

F) beam:
- cross section
- weight
- assemble tall bearing to beam method.
- assemble to samson post method.
- metal

G) horse head:
- weight.
- install horse head to beam method.
- erection horse head method.
- type of moving away the horse head during repairing the Well.
- adjust horse head method.

H) crank:
- metal.
- weight, dimension.
- install crank on the main shaft of the gear box method.
- install crank and crank pin method.

PUMPING UNIT C 640D – 256 - 144

item	description of the unit	qty
1	A- PUMPING UNITS COMPLETE TYPE: 640D – 256 – 144" counter weights rotating on cranks, complete with foundation skid, foundation elements (bolts, nuts, foundation anchor, beams) gear reducer support, pipe oil gauge indicating oil level, double reduction gear reducer with herring bone gears, helical gears, sampson post, walking beam, cranks, pitman equalizer, pitman arms, crank pin bearings center bearing, equalizer bearing, horse head with swinging device move left for right, shift table horse head by one shaft and worm gear without crane . carrier bar bridle polished rod clamps (1 1/2") .counter weights, brake system, Two ladders one for each side mounted on the sampson post with a balcony fixed up and divided in to two sections, electrical motor, electrical control panel, electrical motor base, v- belt, without belt guard, etc.... the pumping unit should be according to A.P.I 11 e and of the standard program of the manufacturer who is authorized to use the official A.P.I monogram for both the pumping unit structure and reducer .	7 set

TECHNICAL FEATURE
- peak torque rating: 640000 in-lb
- structure capacity: 25600 lb.
-stroke length max. : 144 in.
-gear ratio ... (1/29-1/39)
-polished rod double strokes (3 — 4 — 5 – 6) r.p.m (without secondrery redcution)
- suitable effective counter balance.
- strokes length:
five (5) strokes in cranks length: min. 60"...max. 144" with three strokes between it.
- semi-automatically counter balancing.

2 – ELECTRICAL MOTOR
three phase asynchronous induction motor squired cage rotor according I.E.C. as following specifications:

3. nominal synchronous speed, (750 – 760) R.P.M
4. nominal frequency 50 HZ
5. degree of protection I P 54
6. ambient temperature (- 15 , + 50) c° at less
7. humidity: in winter 70 %, in summer 20 %
8. altitude: 1000 m o.s.l
9. continuous duty / S.I /
10. installation: horizontal fixed to base by four screws
11. insulation class not less than class / f /
12. permissible starts per hour not less than five times per hour
13. the offer must be contain the following specification:
    - nominal power factor
    - nominal efficiency
    - starting torque / nominal torque
    - maximum torque / nominal torque

3 -ELECTRICAL CONTROL PANEL :

3- 1 - the control panel should be constructed from stainless – steel thickness not less than 1.5 MM with two successive doors / inner and outer /. dust and damp proof, degree of protection IP 55 or better. the outer door should be closed with uniform lock.suitable cable gland for incoming and outgoing cables should be located on the panel bottom.

3- 2 - on the inner door of the panel should be installed:
- alarm lighting indicator / operation and trip /
- star stop push - buttons
- hand / off / auto switch
- voltmeter with positions switch
- ammeter for each phase
- power factor meter
- (3 phase + n) socket / 25 / A with suitable magnetic thermal circuit breaker

3- 3 - the panel should include:
- 3 phase main magnetic thermal circuit breaker nominal ampere suitable nominal motor amperes 250 A at less
- 3 phase main contactor suitable to start and operate pumping electrical motor. 380 voltage - 50 hz. operating coil voltage 220 or 380 v with possibility for replacement
- over loud protection
- over voltage protection
- under voltage protection
- phase disconnection protection
- on delay time relay set (0 - 6) min. for after set time automatically starting.
- capacitor to improve power factor to 0.8 at less with suitable magnetic thermal Circuit breaker

NOTES:

1- the offered equipment should be new, not renewed

4 - instrumentation and electrical diagrams for control panel with data sheet of each instrument or apparatus offered showing (type / model / manufacture) acc. IEC and acc electrical motor outside condition

5- the bidder should submit all the necessary equipment and tools for operation and maintenance

6- specify origin and manufacturer for equipment.

7- submit the arrangement of technical offer according to our tender.

8- submit (3) original copies of foundation.

9 – submit origin country certificate at delivery .