

ITEM	ENQ_REF:72-12-4408 DESCRIPTION	UNIT	QUANTITY
1	<u>WATER TREATMENT UNIT FOR GARMAT ALI</u> <u>CAPACITY 2000 M3 / HR :</u> SOC INTEND TO HAVE WATER TREATMENT UNIT FOR HUMAN DOMESTIC SERVICES CAPABLE OF PRODUCING CLARIFIED AND TREATED WATER AT CONTINUOUS FLOW RATE 2000M3/HR EVEN DURING BACKWASH PERIOD. THE SCOPE OF SUPPLY SHALL COVER THE DESIGN , DETAILED ENGINEERING DRAWING , PROCUREMENT OF EQUIPMENT AND MATERIAL , DELIVERY OF THE PACKAGES (CIP BASRAH) AND COMMISSIONING OF THE TREATMENT UNIT. <u>RAW WATER QUALITY :-</u> TURBIDITY : 20 NTU TSS : 22 mg/l CONDUCTIVITY : 2700 us TDS : 5000 mg/l PH : 7 TEMPERATURE : 25 C° RELATIVE HUMIDITY ≤100 % PH -VALUE : 8.3 <u>: PLANT DESCRIPTION</u> : WATER INTAK PUMPS CAPACITY : 1000 m3/hr HEAD : 30 M TYPE : SUBMERSIBLE CASING : GREY CAST IRON IMPELLER : BRONZE	NO.	3
2	SHAFT : STAINLESS STEEL 316 VOL./FRQ./PH. : 380v / 50Hz / 3	NO.	5

	ENCLOSURE : IP55 / CLASS F / TEFC COMPLETE WITH ALL NECESSARY CONNECTING PARTS MOTOR , DISCHARGE HEADER , ISOLATING VALVES , CHECK VALVES , MANOMETER AND ACCESSORIES		
3	RAW WATER TRANSFER PUMPS : OPERATION / STANDBY : 4 + 1 CAPACITY : 520 m3 / hr TYPE : HORIZONTAL END SECTION CENTRFUGAL CASING : GREY CAST IRON IMPELLER : BRONZE SHAFT : STAINLESS STEEL 316 VOL./FRQ./PH. : 380v / 50Hz / 3 ENCLOSURE : IP55 / CLASS F / TEFC COMPLETE WITH ALL NECESSARY CONNECTING PARTS	NO.	2
4	MOTOR ,SUCTION / DISCHARGE HEADERS , ISOLATING VALVES CHECK VALVES , MANOMETER AND ACCESSORIES .	NO.	4
5	FILTRATION CLOTH DISC FILTER TYPE WITH A CUTOFF (10 µ) WITH CONTINUOUS FILTRATION EVEN DURING BACKWASH CAPACITY : 1200 – 1500 M3/HR SLUDGE PUMPS : TYPE : HORIZONTAL END SECTION CENTRFUGAL CASING : GREY CAST IRON IMPELLER : BRONZE SHAFT : STAINLESS STEEL 316 VOL./FRQ./PH. : 380v / 50Hz / 3 ENCLOSURE : IP55 / CLASS F / TEFC COMPLETE WITH ALL NECESSARY CONNECTING PARTS WITH	NO.	5

6	SEDIMENTATION TANKS , MOTOR , SUCTION / DISCHARGE HEADERS , ISOLATING VALVES , CHECK VALVES MANOMETER . AND ACCESSORIES	NO.	2
7	FILTER FEED PUMPS : OPERATION / STANDBY : 4 + 1 CAPACITY : 520 m3 / hr TYPE : HORIZONTAL END SECTION CENTRFUGAL CASING : GREY CAST IRON IMPELLER : BRONZE SHAFT : STAINLESS STEEL 316 VOL./FRQ./PH. : 380v / 50Hz / 3 ENCLOSURE : IP55 / CLASS F / TEFC COMPLETE WITH ALL NECESSARY CONNECTING PARTS MOTOR ,SUCTION / DISCHARGE HEADERS , ISOLATING VALVES . CHECK VALVES , MANOMETER AND ACCESSORIES	NO.	3
8	CLARIFICATION HIGH RATE BALLASTED CLARIFLOCULATOR FLOCCULATION MODULAR TYPE CLARIFIER WITH A MINIMUM FOOT PRINT AND UP FLOW VELOCITY OF 50 M3/M2/HR	NO. NO. NO.	1 2 1
9	SERVICE WATER PUMPS: OPERATION / STANDBY : 2 + 1 TYPE : HORIZONTAL END SECTION CENTRFUGAL CASING : GREY CAST IRON IMPELLER : BRONZE SHAFT : STAINLESS STEEL 316 VOL./FRQ./PH. : 380v / 50Hz / 3 ENCLOSURE : IP55 / CLASS F / TEFC COMPLETE WITH ALL NECESSARY	NO. NO. NO.	1 2 1

10	CONNECTING PARTS WITH TREATED WATER TANK , MOTOR , SUCTION / DISCHARGE HEADERS , ISOLATING VALVES , CHECK VALVES MANOMETER AND ACCESSORIES.		
	CALCIUM HYPOCHLORIDE INJECTION STSTEM:	NO.	2
		NO.	1
		NO.	2
		NO.	2
	ONE COMPLETE CALCIUM HYPOCHLORIDE AND INJECTION IN TWO STAGES , PRE-CHLORINATION ON RAW WATER AND . POST-CHLORINATION ON TREATED WATER	NO.	1
		NO.	1
		LOT.	1
	- REPARATION TANK : PVC - DOSING PUMPS : 1+1 - MIXER : STAINLEES STEEL 316 VOL./FRQ./PH. : 380v / 50Hz / 3 ENCLOSURE : IP55 / CLASS F / TEFC		
11	COMPLETE WITH ALL NECESSARY CONNECTING PARTS MOTOR ,SUCTION / DISCHARGE HEADERS , ISOLATING VALVES CHECK VALVES , MANOMETER AND ACCESSORIES.	SET.	1
		LOT.	1
		LOT.	1
	ALUMINIUM SULPHATE INJECTION SYSTEM:		
	- REPARATION TANK : PVC - DOSING PUMPS : 1+1 - MIXER : STAINLEES STEEL 316 VOL./FRQ./PH. : 380v / 50Hz / 3 ENCLOSURE : IP55 / CLASS F / TEFC		
12	COMPLETE WITH ALL NECESSARY CONNECTING PARTS MOTOR ,SUCTION / DISCHARGE HEADERS , ISOLATING VALVES	NO.	2
		NO.	2
		NO.	2
		NO.	2
		NO.	2

13	CHECK VALVES , MANOMETER AND ACCESSORIES. ELECTRICAL SWITCH GEAR AND MEASURING AND OPERATING EQUIPMENT: - TRANSFORMERS (1) MVA , 6.6 KVA / 0.4 KVA - IN COMERS - BUS COUPLER - TRANSFORMER FEEDER - CHARGER (D.C SYSTEM) - MOTOR CONTOROL CENTRES (MCC) (for low voltage (three - phase) to all motors and the station) - ELECTRICAL CABLES (H.V AND L.V) AND ACCESSOORIES material section manufacturoing , testing and install of equipment will comply with (IEC) pyblication in case of lack any code in (IEC) standerd , (VDE) will be considered as Reference CONTROL AND INSTRUMENTATION PACKAGE: - MAIN CONTROL PANEL FOR ALL MOTORS CONTAINS. (i) Direct on - line (DOL) starting if AC motor power ≤ 15 KW. (ii) star-delta , start -up if AC motor power ≥ 15 KW (iii) soft start -up if AC motor power ≥ 100 KW. (iv) Variable speed drive (VSD) (v) Instrumentation and control devices . - CONTROL CABLES AND ACCESSORIES. - LOCAL CONTROL PANAL FOR ALL MOTORS. Accordance with American national institute (ANSI) . Instrument society of American.(ISA) , international electric (IEC) and Deutschee for Normangee (DIN).	LOT.	1
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PORTABLE AND ON LINE MEASURING INSTRUMENTS:

- TDS METER
- CONDUCTIVITY METER
- PH METER .
- TURBIDITY METER
- RESIDUAL CHLORINE METER

SPARE PARTS FOR TWO YEARS

IMPORTANT CONDITIONS :

EQUIPMENT WARRANTY:

THE MANUFACTURER OR SUPPLIER AGREES TO REPAIR OR REPLACE ANY EQUIPMENT DESIGNED AND SUPPLIED BY THEM WHICH IS FOUND TO BE DEFECTIVE IN MATERIALS OR WORKMANSHIP 547 DAYS FROM THE DATE OF THE LAST SHIPMENT OR 365 DAYS FROM EQUIPMENT START-UP WHICHEVER SHALL BE THE SOONER .

DESIGN APPROVAL:

SOC WILL STUDY THESE DESIGN AND THE FINAL APPROVAL WILL BE HELD IN THE VENDOR COUNTRY BY (8) OF SOC ENGINEERS (10) WORKING DAYS EXCLUDED TRAVELING DAYS . THE VENDOR SHOULD BEAR ALL THE EXPENSES INCLUDING TRAVELING LIVING , EXPENSES, ACCOMMODATION,.....etc

TRAINING :

TRAINING TO (8) SOC PERSONS FOR AT LEAST (7 DAYS) AT

	THE MANUFACTURER HOME COUNTRY . <u>:ORIGIN</u> GERMANY , ITALY , USA , JAPAN , U.K., FRANCE <u>NOTE:</u> *equipments mast be CIP basrah *equipments mast be supply with origin certificate		