

Date: 1st May 2017

ADDENDUM 01 - RESPONSE TO REQUEST FOR CLARIFICATIONS
ITB 116/17 - SUPPLY AND INSTALLATION OF MEDICAL OXYGEN GAS PLANT
TIKRIT EDUCATIONAL HOSPITAL - SALAH-ADDIN GOVERNORATE

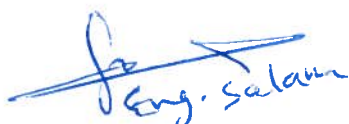
We are pleased to inform all interested potential bidders that the bid submission deadline has been extended to a second site visit has been organized on **Wednesday 10th May 2017 by 1400HOURS.**

No:	Bidders Requests for Clarification	UNDP Response to Bidder's "Request for Clarification"
BoQ Item 1.0	Supply, install, connect, commission and operate Medical liquid Oxygen plant best quality, with purity not less than 99% by method of Air separation and liquefaction process (Cryogenic System) working by initial pressure (10) bar and Capacity (130) m3/hr. Please confirm whether the pressure is (10) bar?	The pressure is 33 bar with capacity 130m ³ /hr
BoQ Item 1.2	Set of filters compatible with Air-compressor capacity, consist of Precision, carbon, ceramic filters and Dryer for total Carbon Dioxide, Moisture and Hydrocarbon removal. Qstn: "Ceramic filters and Dryer for total Carbon Dioxide, Moisture and Hydrocarbon removal" This requirement is not compatible with 10bar and not 33bar. The same is mentioned in item 1.5 of the BoQ. Please clarify?	Working pressure should be 33 bar
BoQ Item 1.5	Purification unit for removal compressed Air from CO2, residual oil and moisture. Unit consists of two towers filling by special resin and electrical heater for activation of towers process assembled on unique base with complete conductivities, valves, all accessories, electric control board, and with pressure & temperature gages. Qstn: "Ceramic filters and Dryer for	Working pressure should be 33 bar

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	total Carbon Dioxide, Moisture and Hydrocarbon removal'' This requirement is not compatible with 10bar and not 33bar of the BoQ. Please clarify?	
BoQ Item 1.8	Oxygen Compression and Cylinder filling Unit with capacity (500) Cylinder per day (Filled with 40 liter per cylinder), minimum pressure 120 bar. Filling base consist of two units with capacity of 10 cylinder per one. Unit consists of complete valves, flexible conductivities for filling cylinders, safety-valves, metal chains to connect cylinders and all required accessories. Qstn: In section 10: compliance technical sheets the Cylinder connections, filling manifold are referring to 2x12 cylinders please clarify?	As mentioned in the BOQs, filling base should consist of two units with 12-cylinder capacity instead of 10 cylinder.
Section 10: Technical data sheets request for clarifications		
	1- Medical Oxygen Plant Please clarify if the system will be working by initial pressure (10) bar or working by compressor (10) bar?	Working pressure should be 33 bar
	General features: Unique Stainless Steel Column with Flange connections and Argon Welding for Accessibility and servicing. Qstn: Please confirm on the separation columns will be stainless as this is medical oxygen?	The column and fitting made from stainless steel but the frame from iron steel
	Air Compressor (4 Stage). Can be operated both by normal power supply Qstn: Does this mean high pressure compressor would be reciprocating type? And in 10bar working pressure 4-stage are not required but only 2 stages are enough please clarify?	33 bar with 4 stages
	Low power consumption, as our Plant design is low Pressure cycle. Qstn confirm if the operation pressure is low pressure?	We clarify the pressure as high efficiency for electric equipment not less than 85%
	Section 10 page 43: The Cooling Water specifications please confirm that there is no water softener required with the plant?	Yes there is no water softener
	Section 10 page 43: Air Compressor	Not less 30 bar

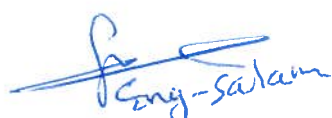
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	Capacity please harmonize the pressure requirement for the plant	
	Section 10 page 43: Cylinder connections, filling manifold. Please confirm whether 2 x 12 Oxygen or 2x10?	Its 2 line with 12 cylinder each = 24 total
	Section 10 page 44: Material of construction: Copper, Brass, Steel etc. Qstn: Please clarify where the copper or brass will be used because you are asking for stainless separation column because it is for medical oxygen?	It's made from Iron sheet steel but the frame from painted iron steel pipes and angle and column from stainless steel.
	Online Oxygen Purity Analyzer Qstn: You Refer to high quality portable online oxygen purity analyzer which type Is required portable or fixed online?	Portable type is required.
	Technical characteristics in SEC NO. 10. The required initial pressure is 10 bar in the BOQ and the UNDP specifications, but in the Technical characteristics the compressor max pressure is 45 bar and operation pressure 30-33 bar, so which initial pressure is required?	The initial pressure abut (30 -33) bar to exist that by using (A.V.R)
	Also, the 45 bar compressor will be reciprocated and water cooled and this will mean KIRLOSKAR Indian compressor, and this compressor capacity which is mentioned in the same sec. 734m3/hr doesn't selected on 55C air intake according to the BOQ requirement but on 35C and this will not able to cover the required delivered air to the separation column to produce 130m3/hr at 55C intake temp, and will able to cover the requirements to produce only 122m3/hr at 35C intake air temp. according to the ratio of the production to the delivered air which is about 1:6 in 30-33 bar working pressure , also this selected compressor required a large cooling tower for cooling it because it's a water cooled , and this also will be in need for a water softener to avoid the blocking of the pipes of its heat exchangers which is	Yes, by using cooling tower and no need for water softener only filtrated water with 33 bar pressure it will operate without problems


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	not mentioned in this BOQ, also, it's required a very much maintenance and spare parts which are not mentioned in the BOQ. Please clarify	
	also that's meaning the required plant should be one of the Indian brands like Universal Boschi, BDM, KVK, SANGI and else. Please confirm?	Yes
	Sec. no. 7 1.2 of the BOQ, this filters are not compatible with the 33 bar working pressure. (in like this plant the working pressure should arrived to 40 bar to get the proper operation and to get the highest designed productivity), and the same parts are mentioned in 1.5 in the same BOQ (if the working pressure 33 bar). please clarify?	The starting presser should be 33 bar
	The offered period for the supply installation and operation 4 months is very short time for the bidder because the production of the equipment's and shipment will take more than this time. Please consider reviewing.	5 months it is OK
	Also specify the amount of the bank guarantee which is required with the bidding to enable us to prepare it when we'll bid our offer 30 th of this month.	We clarify that there is no Bid Security requirement under this ITB.
	would you please advise us in order to participate in ITB 116/17- Supply and Installation Of Medical Oxygen Gas Plant the bid submission address ?	We re-confirm official e-mail address for bid submission: bids.iraq.sc@undp.org

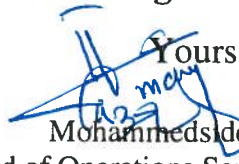

#	Issue on item	Technical request	UNDP Response to Bidder's "Request for Clarification"
1	What type of air compressor you want <i>(air compressor consumes over 80% power and sucks air which is the main raw material to produce Oxygen)</i>	Latest Rotary Atlas Copco air compressor (10 Bar pressure) or oil type old bulky Piston type (40 to 50 Bar pressure) <i>(see compressor comparison attached)</i>	BULKY PISTON
2.	What is the material of construction of the Air separation column, do you want	For Type A best quality, Medical Oxygen & long life is Stainless steel column. (European grade) <i>See A-type buyers guide attached and choose</i>	Stainless steel column

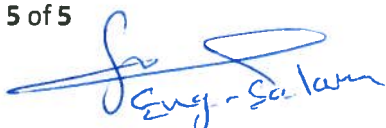

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3.	<i>Do you want Oxygen for medical/ hospital use (in case you want for medical the oxygen has to be pure without any contamination, so You will have to go for A-Type only)</i>	Yes/No	Yes
4.	<i>What is the standard of medical Oxygen pharmacopoeia used in Iraq?</i> (In Iraq it should be American, Kindly confirm)	American or European pharmacopeia	American
4.	<i>What is the Percentage of CO i.e. carbon Monoxide & hydrocarbons allowed in the medical Oxygen?</i> (Note –1000 PPM the patient can go in COMA, hence you cannot use oil piston air compressor)	2 PPm ,10 PPm or 1000 PPM?	2 PPM
5.	<i>What is the power situation in your country? How many times power goes in 24 hours?</i>	Once, twice, three times, 4 times, 5 times or more	4 times
6.	<i>How many hours do you want to operate the plant for?</i> (In case you want operate for 8-16 hours or if there is power tripping you will have to go for quick start system)	(8 to 16 hours per day) or 24 hours * Since there is lot of power cut in Iraq, it is must to have quick start system.	24 hours

This Addendum - I form an integral part of the ITB -116/17.

All other Terms and Conditions in this ITB will remain unchanged.

Yours sincerely,

 Mohammedsiddig Mudawi
 Operations Manager- Head of Operations Service Center



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