

**MINISTRY OF OIL
MIDLAND REFINERIES CO. (G.CO.)
(DAURA REFINERY)**

ADVERTISEMENT

**MIDLAND REFINERIES CO. ANNOUNCES FOR PURCHASING THE MATERIALS AS STATED
BELLOW:-**

REQ.NO.	DESCRIPTION	QTY.	PRICE/ ID DINAR
N.F 4501/2011	FUEL CONSUMPTION FLOW METERS	6 ITEMS	100000

NOTE:

1. THE REQ. TO BE SOLD IN IRAQI DINAR, UN RETURNABLE.
2. WE PREFER PRICES IN US DOLLAR AND CIP BAGHDAD (DAURA REFINERY) AND NOT ACCEPTABLE BY LOCAL CURRENCY FOR FOREIGN REQ.
3. CLOSED (TECHNICAL & COMMERCIAL) OFFERS TO BE SUBMITTED SEPARATELY
4. THE OFFERS MUST BE SUBMITTED BY (DHL) & ALL THE OFFERS THAT SEND BY E-MAIL WILL BE REFUSED.
5. ALL DOCUMENTS (PROFILE) AND SIMILAR CONTRACTS WHICH THEY ACHIEVED ISSUED BY GOVERNMENTAL CONTRACTS MUST BE SUBMITTED BEFORE PURCHASING THE REQ. OR ENCLOSE WITH THE TECHNICAL OFFER OTHERWISE THE OFFER WILL BE REFUSED
6. TERMS OF PAYMENT IS L/C TO BE PAID 100% AFTER THE RECEIPT OF GOODS IN BAGHDAD COMPLETE AND AS ORDER.
7. AN UNCONDITIONAL PERFORMANCE BOND OF 5% OF TOTAL AMOUNT OF THE L/C TO BE SUBMITTED BEFORE OPENING OF THE L/C IN FAVOUR OF (MIDLAND REFINERIES CO.) TO BE RELEASED AFTER THE RECEIPT OF GOODS COMPLETE AND AS ORDERED.
8. THE TOTAL VALUE DELAY PENALTY SHOULD BE APPLIED AND NOT EXCEED 10%
9. 3% FROM TOTAL VALUE OF THE PURCHASE ORDER FOR IRAQI COMPANIES ALSO IN CASE THE PAYMENT OF PAYABLE IN IRAQI DINAR TO BE DEDUCTED AS TAXES AND RETURN THROUGH TAXES OFFICE
10. 0.002 FROM TOTAL VALUE OF L/C TO BE DEDUCTED AS STAMP CHARGE.
11. THE BID BOND SHOULD BE SUBMITTED 1% FROM THE TOTAL VALUE OF YOUR OFFER (COMMERCIAL OFFER) AS LETTER OF GUARANTEE OR CERTIFIED CHEQUE OR BANK GUARANTEE ISSUED FROM (TRADE BANK OF IRAQ, DAR ESSALAAM INVESTMENT , ALA ATIMAN , BYBLOS, ISLAMIC BILAD , MIDDLE EAST ASHUR INTERNATIONAL BANK FOR INVESTMENT) RELEASED IMMEDIATELY IN CASE THE REQUEST IS NOT AWARDED TO THE COMPANY.
- THE CHEQ AND THE BANK GUARANTEE THAT ISSUEED FROM WARKA BANK NOT CCEPTABLE
12. THE COMPANY MUST SUBMIT ACOVENANT ENCLOSED WITH THE TECHNICAL OFFER THAT THEY HAVE SUBMITTED ABID BOND WITH COMMERCIAL OFFER AND (WITHOUT STATING THE AMOUNT OF THE BID BOND) OTHERWISE THE OFFER SHOULD BE NEGLECTED
13. ORIGIN CERTIFICATE & COMMERCIAL INVOICES SHOULD BE APPROVED BY IRAQI EMBASSY
14. **CLOSING DATE IS- 23/1/2011 TILL (1) O, CLOCK (AFTER NOON)**

NOTE:- YOU CANFIND THE CONDITIONS OF SUBMITTING OFFER ON

WEBSITE : www.oil.gov.iq OR www.dauramrc.com

**D.Y. AL-KASHAB
G.MANAGER**

REQ.NO.: N.F / 4501 /2011

Fuel Consumption Flow meters / (N)

Scope of supply:-It is required to supply electronic flow meters to measure the consumption fuel (Gases & Liquids) by boilers, furnaces, generators and flairs.

It must be done by Ex-d flow meters offered the Net and thermally compensated volumes to (15, 20) C° and a pressure of 1.01325 bar.

The total quantity are 18 (eighteen) Flow meters.

The equipments should supply under these conditions:-

- 1 – The equipments must be according to *API Ch 5 Sec. (6) , Ch (5),Ch (21) & ISO (9001)* standards in Design, Installation, Maintenance, Operation, Construction, Verification & Calibration and Uncertainty limits.
- 2 – Third party inspection certificate should be provided from *SGS group (European office)* for Overall Check and Approval for Designs , Check & Calibration of equipments for (FAT) test, the results should be stamped by SGS.
- 3 – One year *guarantee* for safe operation from accepted commissioning not from delivery.
- 4 – Practical training course for four engineers / technicians *in the factory* for 2- weeks Include (Erection , Commissioning , Operation , Installing , Maintenance both (Electrical & Mechanical part), Calibration, and Flow Computer Configuration, the training Course program items must be approved by MRC authority.
- 5 – The training course must be *accomplished before* equipments delivery and must cover all activities mentioned in item 4 above and cover all expenses.
- 6 – *One set* of hand tool recommended for start-up & maintenance.
- 7 – The flow meters should be operating continuously for 24 hr / day, 7 days / week.
- 8 – 3 sets of documents *in English* for Designs and Calculations , Materials specifications lists , Instructions and Procedures of (Commissioning , Operation, Measurements, Maintenance & Calibration) refer to (API Ch. 5 , 6 , 7 , 8 , 12).
- 9 – All equipments should have Certificate of origin *issued*, origins are Germany , Switzerland , USA .
- 10 – Environment conditions : *Ambient temperature* is between (-10 to 60) C° and *humidity* range of (12 to 90) % and effect of dust & rain , electro-magnetic interface , vibration , barometric pressure range = (26 – 30) inch Hg
- 11 – The system of units is *Metric System (SI)* , ANSI Traceability.
- 12 – Packages containing materials should be marked with the appropriate item numbers indicated in the offer, this packing must be according to the nature of the goods and the means of transportation in conformity with internationally accepted forms and standards.
- 13 – Total uncertainty within ± 0.25 % both in *Design & Approval*.
- 14 – Each flow meter must be *provided and displayed* these activities
 - a – *Observed volume*
 - b – *Net volume* (thermally compensated) the base temperature is 15 C°.
 - c – *An instant flow rate*.
- 15 – Any necessary devices should be provided to keep the backpressure *sufficient*, the backpressure should be adequate to keep the flow meter operate with *recommendation conditions* (keeping the pipeline *full always*) this point must taken in consideration .
- 16 – The responsibility of *Commissioning, Certificated issues, SAT* are on the supplier (Site Acceptance Test) must be done by supplier, providing all necessary belongs equipments, tools and working team.
- 17 – All devices and equipments should provide individual parts.
- 18 – All the signals (data) must be *transferred* to control room to the flow computers and desktop computer.
- 19 – Each control room should *provided* with (1) Nos. of industrial type desktop computers , (there are three control rooms) using to monitor the system status, with the application software , with the following specifications , TFT LCD monitor 20 " , installed soft ware package for flow meters management system (with backup copy CD) , the three control rooms already exist and it is decided to put one desk top in each room.
- 20 – Spare parts recommended for 2 years *fixed in a list* should be supplied with the materials and cover all types of flow meters .

- 21 – The Spare parts list shall contains *in addition with item 19 above* at least 5 nos. of power supply card , 5 nos. of signal processing card , 5 nos. of display part .
- 22 – UPS units for the systems should be provided (three units), it must be *sufficient for operating the system for half hour at least for computers and flow meters* in case of trip.
- 23 – Offered devices must have *no affect* for power failure.
- 24 – 1500 m of signal cable and 1500 m of power cable *should provided* to connect and operate the flow meters , the cables must be armored and shielded .
- 25 – MRC will keep 5% of the all total amounts of material request till the end of the guarantee period and 2.5 % against commissioning .
- 26 – All junction boxes and glands should be supplied and should be Ex-d.
- 27– Each flow meter should equip with strainer including:-
- Differential pressure gauge and isolating valves.
 - Suitable mesh according to the (product and sediment rate).
 - Air release install on the strainer head.
- 28 – The supplier should fix the best method of re-calibration of supplied flow meters.
- 29– Approximating condition, the display should have the ability to show five digits after float enabling high accuracy in calculations of (Ctl , density) and one digit after float for volumes .
- 30 – The computer in the control room must display the following information for each the flow meters that operate with (4 to 5) flow meter that connected to these control room (in the same window in the same time) :-
- Observed volume
 - Net volume corrected to temperature
 - Mass, Density, Measured Temperature, Flow rate, Alarm messages.
- 31 – The supplier should ensure the availability of spare parts for the next 5 years.
- 32– Each group of flow meters (5 meters max.) should be connected to flow computer in the control room and displayed each relevant data of the flow meters .
- 33 – The responsibility of installing will be done by MRC technical team (after accomplished the training course) under supervision of supplier side.

Table of flow meters (Individual parts)

Item	Specification	Qty.
1	<p>Product : (HN & LN) Pipe size : 1.5" vertical installation Flow direction towards up F.R.R. : (0.1 to 1.5) m³/hr Op.Temp : (30 to 85) C° Op. pressure : (9 – 10) bar Differential pressure : 0.5 bar Sp. Gr. : (0.65 to 0.75) Used for units (1 , 2 , 3) Fueling (liquid phase) to the furnaces With strainer and air release</p>	4
2	<p>Product : Off Gas mixture of (C1,C2,C3,C4 , H2 , H2s) Pipe size : 4" horizontal installation F.R.R. : (100 to 500) Nm³/hr Op.Temp : (30 to 65) C° Op. pressure : (0.1 to 2.5) bar Differential pressure : 0.05 bar Density : 3.4 Kg/m³ Used for units (1 , 2 , 3) Fuel (gas phase) to the flair</p>	4
3	<p>Product : Off Gas mixture of (C1,C2,C3,C4 , H2 , H2S) Pipe size : 4" horizontal installation F.R.R. : (30 to 350) Nm³/hr Op.Temp : (30 to 65) C° Op. pressure : (0.1 to 2.5) bar Differential pressure : 0.05 bar Density : 3.4 Kg/m³ Used for units (1 , 2 , 3) Fuel (gas phase) to the furnaces These flow meters should be blind head type (equipped with a separate remote display) mounted on the wall</p>	4
4	<p>Product : Gas Oil Pipe size : 1.5 "horizontal installation F.R.R. : (2 to 20) m³/hr Op.Temp : (10 to 65) C° Op. pressure : (2 to 3) bar Differential pressure : 0.3 bar For units (1 , 3) Fuel (liquid phase) to the Boiler & Generator. Water & Sediment V%: 0.05 ASH Max% 0.01 weight These flow meters should be blind head type (equipped with a separate display) mounted on the wall (remote) With strainer and air release</p>	3
5	<p>Product : Gas Oil Pipe size : 1.5" horizontal installation F.R.R. : (1 to 10) m³/hr Op.Temp : (10 to 65) C° Water & Sediment V%: 0.05 ASH Max% 0.01 weight Op. pressure : (2 to 3) bar Differential pressure : 0.3 bar For unit (2) Fuel (liquid phase) to the Boiler These flow meters should be blind head type (equipped with a separate remote display) mounted on the wall With strainer and air release</p>	1
6	<p>Product : Gas Oil F.R.R. : (1 to 10) m³/hr Op.Temp : (10 to 65) C° Water & Sediment V%: 0.05 ASH Max% 0.01 weight p. pressure : (2 to 3) bar Differential pressure : 0.3 bar For unit (2) Fuel (liquid) to the Generator With strainer and air release</p>	2

F.R.R. =Flow rate range
Op. Temp. = Operating Temperature
Op. Pressure = Operating Pressure
HN = Heavy Naphtha
LN = Light Naphtha
Liquid = Liquid phase
Gas = Gas phase

Naphtha specification

Specific gravity @15C° : 0.675
Sulfur content (%w) : 0.1
Lead content (p.p.b) : 80
R.V.P. (Kg/Cm²) @37.8C° (max) = 0.95

Gas Oil specification

Specific gravity @15.6C° : 0.8333
Viscosity Cst @40C° : 4.68
Sulfur content (%w) : 1.1

* These parameters may cause corrosion so it is must taken in consideration

Addresses:-

- 1 – Smith Meter FMC. www.smithmeter.com
- 2 – Endress & Hauser www.endress.com
- 3 – Rheonik www.rheonik.com