E-mail

From: truebell <truebell@del2.vsnl.net.in>
To: <al-najah@mail.uruklink.net>
Sent: رمضان/١٤٢٢ ٠٤:٠٣ ص/21
Subject: Fw: Forklift offer. - URGENT

عرض الاخ نزار
للامضاء الشركة
لم يحدد لنفاذ تاريخ الفلوة

DEAR ABU SAFWAN,

The forklifts offer is ready as desired by you.(**KOMATSU)**

our price are on CIF basis.these are nett prices. Nothing is added on this price.

FORKLIFTS : FD 50 AT - 7 / 3.0 MFV, 1220F

1. **With 3 sets of Spare Tires (F & R) with Rims US $ 59857.00 FOR EACH.**
2. **Spare Parts for 2 years US $ 10,143.00**

- Delivery 90 - 100 days after purchase order sheet
- Cargo ready any japanese port
- Payment term 100% Irrevocable L/C at sight

Recommended Spare Parts for 2 Years

	Part Number	Part Name	Qty	Unit Price	Amount in US $
1	6732-11-3230	INJECTOR NOZZLES	1	275.00	275.00
2	6736-61-1201	WATER PUMP ASSY	1	180.25	180.25
3	3EB-01-31540	ENGINE CUSHION	1	21.25	21.25
4	6732-81-3510	V-BELT	2	114.00	228.00
5	6734-71-6120	CARTRIDGE	6	32.60	195.60
6	6735-51-5141	CARTRIDGE	12	31.20	374.40
7	600-182-1300	AIR ELEMENT ASSY	2	183.15	366.30
8	3EC-37-32110	ACC CABLE	1	56.75	56.75
9	3EC-04-32410	HOSE	1	69.35	69.35
10	3EC-04-32420	HOSE	1	52.50	52.50
11	ND028510-0500	HOLDER ASS'Y	1	94.00	94.00
12	ND949100-1930	BEARING	1	18.90	18.90
13	ND949100-1750	BEARING	1	13.90	13.90
14	ND028099-3270	KIT	1	88.25	88.25
15	ND949100-3361	BEARING KIT	1	29.60	29.60
16	ND949100-2790	BALL BEARING	1	23.00	23.00
17	ND126000-2310	REGULATOR	1	321.00	321.00
18	ND021580-5060	RECTIFIER	1	237.81	237.81
19	ND153400-2410	M/SWITCH	1	70.45	70.45
20	3EC-55-12380	BULB	1	9.90	9.90
21	08105-12420	BULB	1	7.70	7.70

23	3SB-55-55540	BULB	1	7.10	7.10
24	3SB-55-55560	BULB	1	6.60	6.60
25	37B-1EJ-2010	FUSE	1	1.53	1.53
26	37B-1EJ-2020	FUSE	1	1.53	1.53
27	3EC-13-05030	SEAL KIT	1	205.00	205.00
28	37C-1AF-3011	HOSE	1	24.25	24.25
29	37C-1AF-3020	HOSE	1	24.25	24.25
30	37C-1AF-3030	HOSE	1	83.20	83.20
31	06002-30216	BEARING	1	97.50	97.50
32	300-22-31360	ROLLER BEARING	1	75.50	75.50
33	06000-30209	BEARING	1	33.25	33.25
34	01010-82255	BOLT	1	7.25	7.25
35	3EC-24-11320	BOLT	1	12.75	12.75
36	34B-21-14151	NUT	1	5.65	5.65
37	3EC-21-15140	SEAL	1	17.80	17.80
38	3EC-21-36250	SEAL	1	17.80	17.80
39	07012-00110	OIL SEAL	1	19.25	19.25
40	3EC-24-05020	BEARING KIT	2	204.25	408.50
41	3EC-41-11731	BUSHING	1	20.30	20.30
42	3ED-71-41760	BEARING	1	210.75	210.75
43	3ED-71-45441	CHAIN WHEEL	1	412.00	412.00
44	3EC-63-05030	LIFT CYLINDER KIT	4	215.00	860.00
45	3EC-64-05030	TILT CYLINDER KIT	4	66.80	267.20
46	NP23353-05155	CYLINDER KIT	2	146.00	292.00
47	3EC-66-17720	STRAINER	6	85.00	510.00
48	3ED-66-11330	CARTRIDGE	6	76.50	459.00
49	07123-00220	HOSE	1	148.75	148.75
50	3EC-66-34570	HOSE	1	104.00	104.00
51	3EC-66-34580	HOSE	1	117.00	117.00
52	07260-20980	HOSE	1	48.00	48.00
53	3EB-66-34251	HOSE	1	20.50	20.50
54	600-861-3410	ALTERNATOR	1	507.65	507.65
55	600-863-4110	STARTER	1	1005.00	1005.00
56	37B-1EA-3040	HEADLAMP ASSY	1	81.50	81.50
57	3EC-30-00040	REPAIR KIT	3	165.00	495.00
58	MY212-8123-00	CYLINDER KIT	2	98.50	197.00
59	3EC-30-21370	CABLE ASS'Y	1	129.70	129.70
60	3EC-30-31540	CABLE ASS'Y	1	129.70	129.70
61	3EC-30-31110	WHEEL CYLINDER	1	349.00	349.00
				TOTAL	10143.00

PLEASE LET ME KNOW HOW TO PROCEED FURTHER. SUPPLIER SHALL BE FROM OUTSIDE INDIA.

WITH MANY THANX,

MUKESH

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971-4-397 1476 FAX : 971-4-397 3845

٢٠٠١/٣/١٨

السادة / شركة البشائر التجارية المحترمون

م / الطلبية ٢٠٠٠/٣٣٧

تحية طيبة...

إشارة للطلبية المرقمة أعلاه، وبالإشارة لرسالتكم العدد ق٢/٥٩٧ بتاريخ ٢٠٠١/٢/١٢
يسرنا تقديم عرضنا كما في ادناه :

Si. No.	*Description*	*Packing Unit*	*Euro Price / Piece*	*Total*
1	PM Core Siemens B65646-A-R 27 without Air Gap	30 Pair	47.6	1428
	Coil Former B65647 B 1014 T1	30 Pc.	10.2	306
	Fixing Clip without Base Plate B65647 A 2000	30 Pc.	5.1	153
2	PM Core with 2.0 mm Air Gap B65646 A 250 A27	30 Pair	54.4	1632
	Coil Former B65647 B 1014 T1	30 Pc.	10.2	306
	Fixing Clip with Base Plate B65685 A 2000	30 Pc.	5.1	153
3	PM Core set B65684 A R27	20 Pair	81.6	1632
	Coil Former B65685 B1016 T1	20 Pc.	13.6	272
	Fixing Clip with Baase Plate B65685 A 2000	20 Pc.	10.2	204
4	PM Core with 1.5 mm Air Gap B65684 A 630 A27	10 Pair	175.1	1751
	Coil Former B65687 B 1018	10 Pc.	18.7	187
	Fixing Clip with Base B65687 A 2000	10 Pc.	13.6	136
5	Switching Transistor 2N5672	10 Pc.	Regret	0
6	High Frequency Diodes BYW 78 100M	10 Pc.	51	510
7	Relay coil 12 VDC, 3NO/1NC Contacts 6 Amp. D.C	20 Pc.	25.5	510
8	PWM IC 3526 Linear Technology / Motorola	20 Pc.	93.5	1870
9	Drive IC 429 Telecom Semi	20 Pc.	Regret	0
10	Electrolytic Cap. "RIFA" 1000 µF 470 µF	1000 Pcs.	15.3	15300
11	Metalized Polypropylene Cop. 10 µF VDC= 800V "RIFA"	10 Pc.	Regret	0
	GRAND TOTAL IN EURO			***26350***

- فترة التجهيز : ٢٢ أسبوع اعتباراً من تاريخ الإشعار بالوديعة.
- نفاذية العرض : العرض ساري المفعول لغاية ٢٠٠١/٤/١٩

ملاحظة : أعلمتنا الجهة المجهزة بان التسلسل ١ لغاية ٨ يجب أن تكون الكمية ضعف المؤشر اعلاه كحد أدنى لقبول التجهيز.

أملين إعلامنا رأيكم بالسرعة الممكنة وقبل تاريخ نفاذية العرض.

For Technology Trading S.A

Authorized Signatory

From: bsl <bsl@bol.net.in>
To: <al-najah@uruklink.net>
Sent: Saturday, March 03, 2001 01:21 م
Subject: hunt technologies ltd.

March 3, 2001

MR. MUNTASIR AWNI

Dear Mr. Awni,

During your last visit, you indicated a requirement of some Siemens parts and other components. Shyam Telecom has obtained offers and the prices are indicated below:-

Sl. No.	Description	Packing unit	Euro price/piece	Total
1.	PM Core Siemens B65646-A-R	30 Pair	28	
	27 without Air Gap .	30 Pc.	6	
	Coil Former B65647B 1014 T1	30 Pc	3	
	Fixing Clip with base plate B65647 A 2000			
2.	PM Core with 2.0mm Air Gap B65646 A 250 A27	30 Pair.	32	
		30 Pc.	6	
	Coil Former B65647B 1014 T1	30 Pc.	3	
	Fixing Clip with base plate B65685 A 2000			

total

3.	PM Core set B65684 A R 27	20 Pair	48	
	Coil Former	20 Pc.	8	
	B65685 B 1016 T1	20 Pc.	6	
	Fixing Clip with base plate			
	B65685 A 2000			
4.	PM Core with 1.5mm Air Gap	10 Pair	103	
	B65684 A 630 A27	10 Pc.	11	
	Coil Former	10 Pc.	8	
	B65687 B 1018 T1			
	Fixing Clip with base plate			
	B65687 A 2000			
5.	Switching Transistor 2N5672	10 Pc.	Regret	
6.	High Frequency Diodes BYW	10 Pc.	30	
	78 100M			
7.	Relay Coil 12 VDC, 3NO/1NC	20 Pc.	15	
	Contacts 6 Amp.D.C			
8.	PWM IC 3526 Linear Technology/Motorola	20 Pc.	55	
9.	Drive IC 429 Telecom Semi	20 Pc.	Regret	
10.	Electrolytic Cap. 'RIFA' 1000µF	1000 Pcs.	9	
	470 µF	1000 Pcs.	7	
11.	Metalized Polypropylene Cap. 10 µF	10 Pc.	Regret	
	VDC=800V 'RIFA'			
			Grant Total	

Other Terms and Conditions:

1. Prices are on CIF Amman basis.

2. Delivery of Siemens parts within 18 weeks and 'RIFA' parts within 14 weeks from the date of receipt of technically and commercially clear order.

3. Minimum order value of Siemens parts should be Euro 10,000.

Looking forward to hear from you soon on the subject.

Regards,

P. K. GUHA THAKURTA

بسم الله الرحمن الرحيم

شركة البشائر التجارية المحدودة

AL - BASHAIR TRADING

العدد : ٥٩٧ / ٢٩
التاريخ : ٢٠٠١/٢/١٢
الموافق :

Ref No..
Data .

على الفور

الى / شركة T.T

م/ تقديم عرض

نشيركم لطلبيتنا المرقمة ٢٠٠٠/٣٣٧ .

نلتمس بالاطلاع ، اعلامنا عن موقف شركتكم من تقديم عرض بها وذلك لمضي فترة طويلة عليها لاسيما وان الموضوع يعتبر تكليف لشركتكم آملين استلام اجابتكم خلال فترة اقصاها (٧) أيام من تاريخه اعلاه لاهمية ومستعجلية الموضوع ، اعلامنا ..

مع التقدير .

منير [illegible]
المدير المفوض

/ ٢ / ٢٠٠١

(١-١)

Sadoon St. Al - Ani Building , 1S t. Floor
Tel. 7170768 - 7182185 Baghdad - Iraq
Fax. 8867700
Telex. 213545 Box : 3532

شارع السعدون - عمارة العاني - الطابق الاول
هاتف : ٧١٧٠٢٦٨ - ٧١٨٢١٨٥ بغداد العراق
فاكس : ٨٨٦٧٧٠٠
تلكس : ٢١٣٥٤٥ ص . ب ٣٥٣٢

	QTY
1- PM CORE SIEMENS B65646-A-R27,WITH OUT AIR GAP	3 PAIRS
COIL -FORMER B65647-B1014-T1	9
FIXING CLIP WITH BASE PLATE B65647-A2000	8
2- PM CORE SIEMENS B65646-A-R27,WITH 1.8MM GAP OR ANY CLOSE VALUE	6 PAIRS
COIL-FORMER B65647-B1014-T1	10
FIXING CLIP WITH BASE PLATE B65647-A2000	10
3- PM CORE SET B65684-A-R27	9 PAIRS
COIL FORMER B65685-B1016-T1	10
FIXING CLIP WITH BASE PLATE B65685 A2000	10
4- PM CORE B65686-A-R27 WITH 1.8mm AIR GAP OR ANY VALUE AROUND	2 PAIRS
COIL FORMER B65687-A1018-T1	4
FIXING CLIP WITH BASE PLATE B65687-A2000	4
5- SWITCHING TRANSISTOR 2N5672	10
6- HIGH FREQUENCY DIODES BYW78 100M OR ANY WITH SIMILAR AROUND VRRM=100V IaV=20A trr < 100nS	10
7- RELAYS COIL 12VDC ,3NO/1NC CONTACTS 6 AMP D.C	20
8- PWM IC 3526 } Linear Technology/motorolla	20
9- DRIVE IC 429 } Telecom Semi	20
10- ELECTROLYTIC CAP. ESR < 0.3 ohm ESL < 12 nH	
1000uF 63V D.C PEG123MH 4100 RIFA	8
470uF 63V D.C PEG123 MD 3470 RIFA	12
11- METALLIZED POLYPROPYLENE CAP. 10uF VDC=800V PHH4810E8100K RIFA ,HIGH CURRENT PULSE CAPABILITY	10

Siemens

RiFa

Sent by E-Mail
on 15.02-2001

15/02/2001

TO : MR. GC
FM : MR. MUNTASIR AWNI

SUB. : INQ. NO. 337/2000

DEAR GC,

KINDLY SUBMIT AN OFFER FOR THE FOLLOWING INQUIRY AT THE EARLIEST (YOU CAN DEPEND ON SHYAM COMPANY THROUGH MR. SHIV) :- This tender is only for our Company.

ITEM	*DESCRIPTION*	*QTY.*	
1	PM CORE SIEMENS B65646-A-R27, WITH OUT AIR GAP COIL – FORMER B65647-B1014-T1 FIXING CLIP WITH BASE PLATE B65647-A2000	3 PAIRS 8 8	SIEMENS
2	PM CORE SIEMENS B65646-A-R27, WITH 1.8MM GAP OR ANY CLOSE VALUE COIL – FORMER B65647-B1014-T1 FIXING CLIP WITH BASE PLATE B65647-A2000	6 PAIRS 10 10	
3	PM CORE SET B65684-A-R27 COIL FORMER B65685-B1016-T1 FIXING CLIP WITH BASE PLATE B65685 A2000	9 PAIRS 10 10	
4	PM CORE B65686-A-R27 WITH 1.8MM AIR GAP OR ANY VALUE AROUND COIL FORMER B65687-A1018-T1 FIXING CLIP WITH BASE PLATE B65687-A2000	2 PAIRS 4 4	
5	SWITCHING TRANSISTOR 2N5672	10	
6	HIGH FREQUENCY DIODES BYW78 100M OR ANY WITH SPECS. AROUND VRRM = 100V IaV=20A trr < 100nS	10	
7	RELAYS COIL 12VDC, 3NO/1NC CONTACTS 6 AMP D.C	20	
8	PWM IC 3526 } LINEAR TECHNOLOGY / MOTOROLLA	20	
9	DRIVE IC 429 } TELECOM SEMI	20	
10	ELECTROLYTIC CAP. ESR < 0.3 ohm ESL < 12 nH 1000uF 63V D.C PEG123MH 4100 RIFA 470uF 63V D.C PEG123 MD 3470 RIFA	 8 12	RIFA
11	METALLIZED POLYPROPYLENE CAP. 10uF VDC=800V PHH481OE8100K RIFA, HIGH CURRENT PULSE CAPABILITY	10	

WITH BEST REGARDS,

15/02/2001

TO : MR. GC
FM : MR. MUNTASIR AWNI

SUB. : INQ. NO. 337/2000

DEAR GC,

KINDLY SUBMIT AN OFFER FOR THE FOLLOWING INQUIRY AT THE EARLIEST (YOU CAN DEPEND ON SHYAM COMPANY THROUGH MR. SHIV) :- [THIS TENDER IS ONLY FOR OUR COMPANY].

ITEM	***DESCRIPTION***	***QTY.***	
1	PM CORE SIEMENS B65646-A-R27, WITH OUT AIR GAP COIL – FORMER B65647-B1014-T1 FIXING CLIP WITH BASE PLATE B65647-A2000	3 PAIRS 8 8	SIEMENS
2	PM CORE SIEMENS B65646-A-R27, WITH 1.8MM GAP OR ANY CLOSE VALUE COIL – FORMER B65647-B1014-T1 FIXING CLIP WITH BASE PLATE B65647-A2000	6 PAIRS 10 10	
3	PM CORE SET B65684-A-R27 COIL FORMER B65685-B1016-T1 FIXING CLIP WITH BASE PLATE B65685 A2000	9 PAIRS 10 10	
4	PM CORE B65686-A-R27 WITH 1.8MM AIR GAP OR ANY VALUE AROUND COIL FORMER B65687-A1018-T1 FIXING CLIP WITH BASE PLATE B65687-A2000	2 PAIRS 4 4	
5	SWITCHING TRANSISTOR 2N5672	10	
6	HIGH FREQUENCY DIODES BYW78 100M OR ANY WITH SPECS. AROUND VRRM = 100V IaV=20A trr < 100nS	10	
7	RELAYS COIL 12VDC, 3NO/1NC CONTACTS 6 AMP D.C	20	
8	PWM IC 3526 } LINEAR TECHNOLOGY / MOTOROLLA	20	
9	DRIVE IC 429 } TELECOM SEMI	20	
10	ELECTROLYTIC CAP. ESR < 0.3 ohm ESL < 12 nH 1000uF 63V D.C PEG123MH 4100 RIFA 470uF 63V D.C PEG123 MD 3470 RIFA	 8 12	RIFA
11	METALLIZED POLYPROPYLENE CAP. 10uF VDC=800V PHH481OE8100K RIFA, HIGH CURRENT PULSE CAPABILITY	10	

WITH BEST REGARDS,

Technology Trading S.A
AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971-4-397 1476 FAX : 971-4-397 3845

Ref : TT/ALBA/2001/004

22.01.2001

To: ***Al-Bashair Trading Company Ltd.,***
Baghdad-Iraq.

Kind Attention: **MR. MUNEER AWA'AD**
Sub: **Offer For Steel Sheet**
30 Cr Mo V9

Dear Sir,

In reference to the above mentioned subject, we would like to submit our offer as below:

Item	: Steel Sheet 30 Cr Mo V9 Din 1.7707.
Dimensions	: 1250 x 1750 x 4 mm.
Origin	: Eastern Europe.
Price	: 320 USD / Sheet, C&F Baghdad.
Qty.	: 650 Sheet.
Total Price	: 208,000 USD / Sheet, C&F Baghdad.
Payment	: Cash.
Delivery	: 90 Days from the date of deposit.

- ***CHEMICAL COMPOSITION:***

- C	0.26 – 0.34%
- Mn	0.40 – 0.70%
- S	0.03 Max.%
- Mo	0.15 – 0.25%
- Si	≤ 0.40%
- P	0.035 Min.%
- Cr	2.30 – 2.70%
- V	0.10 – 0.20%

* قدم العرض الى استاذ منير مباشرة
بتاريخ ٢٢/١/٢٠٠١

- ***MECHANICAL PROPERTIES:***

- **AFTER TREATMENT:**
  - Tensile Strength : 1250 –1450 N/MM^2
  - Yield Strength : 1050 N/MM^2
  - Elongation : 9% Min.
  - Reduction of Area : 35% Min.
  - Impact Value : 25 Joule
  - HB (Breinel).

- **BEFORE TREATMENT:**
  - Tensile Strength : 834 – 981 N/MM^2
  - Yield Strength : 637 Min. N/MM^2
  - Elongation : 14%.
  - Reduction of Area :
  - Impact Value : 59 J/Cm^2 Min.
  - HB (Breinel) : 253 – 300 HB.

With Best Regards,
For Technology Trading S.A

Authorized Signatory

LUCK

بسم الله الرحمن الرحيم

الى الاخ ابو ياسر .

السلام عليكم ورحمة الله وبركاته .

فيما يتعلق بالالواح : -

١. الموافقة نظرياً والتأكيد نفسه وطريقة الاختبار

٢.

MT / SHEETS		USD / MT	USD
49	650	28060,-	137.500,-

٣. Tolerance of the total Quantity : -

SHEETS (+7 / -0 %)

٤. دفع (٥٠٪) من قيمة الصفقة عند التعاقد، ٢٠٪ قبل الشحن، ٣٠٪ بعد الشحن بسبعة أيام أو اعتماد قابل للتحويل .

٥. فترة التسليم : ٨ اسابيع اقصاه من تاريخ استلام المبلغ .

٦. الاسعار بدون نقل . (لاحقاً)

٧. ارسال عنوان المشتري في سوريا الكامل

٨. زمن الشحن خلال فترة اقصاه اسبوعين (برّي)

٩. ملاحظة الوزن ٤٩ طن هو وزن اجمالي وتدخل ضمنه نسبة الزيادة في قدر الالواح وليس الوزن الصافي لقدر الالواح (٦٥٠) حيث أن الصافي هو (٤٥ طن) ولكن هناك تلف ولكن مع ذلك لايضر لانه مع ذلك هو بحدود (٧٦) كغم للطبقة الواحدة في حال ان نحسب ٤٩ طن .

الخوش الثاني

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Ref.: TT/ALBA/2000/003 23.01.2000

TO;

AL-BASHAIR TRADING COMPANY LTD.,
BAGHDAD.

SUB.: OFFER FOR ENQ. NO. 907/99

DEAR SIR,

IN REFERENCE TO ABOVE MENTIONED SUBJECT, WE WOULD LIKE TO SUBMIT OUR TECHNO-COMMERCIAL OFFER ENCLOSED WITH GENERAL SPECIFICATIONS & BRIEF DESCRIPTION FOR SINGLE AXIS CNC TUBE BENDING MACHINE AS THE ATTACHMENT SHEETS.

HOPING YOU WILL FIND THE SAME IN ORDER.

WITH BEST REGARDS,
FOR TECHNOLOGY TRADING S.A

(AUTHORIZED SIGNATORY)

General Specification For Single Axis CNC Tube Bending Machine

Max. Capacity	: 114 mm OD x 5 mm thick Ferrous tubes UTS 45 Kg/MM2
Min Capacity	: 25 mm (this can further be reduced with the use of special tooling / attachements.)
Max. bend radius (CRL)	: 500 mm
Min. bend radius (CRL)	: 1.5 mm
Length over mandrel standard	: 2 meters (Extra length can be provided if required at extra cost)
Bend Angle range	: 5-180°
Bending Direction	: Clockwise (Anticlockwise on request)
Bending Speed	: 12 Degree / sec.
Indicative Production Rate (Exclusive of handling)	: 60 Nos. 90° bends / hr
Repetitive Bend Accuracy	: ± 0.25°
Controls	: Single Axis CNC with monitor & Keyboard
Memory capacity (Additional capacity on the option)	: 600 Bends
Motor Capacity	: 20 HP
Approx. weight	: 4.5 tons

For a brief description of the machine, please refer to the enclosed write up.

Price of the single Axis CNC Tube Bending Machine with CNC Control Unit, Hydraulic clamping pressure die and mandrel with drawl system with hydraulic power pack but without hydraulic oil and tool set.	USD 66,040.00 each
Extra Price for additional mandrel length	USD 1,440.00 per Meter

Note:

1. For your information, one set of tools consists of bending die, clamping block, wiper die and mandrel.
2. Special tooling if required for particular radial shall be quoted extra.
3. Complete instructions with drawings shall be supplied for carrying out erection of equipment.
4. Training a cadre of 2 persons for 14 days (programming and maintaining).

COMMERCIAL CONDITIONS

Price	:	C&F Baghdad
Delivery	:	4 Months
Payment	:	100% Cash
Validity	:	60 days

Encl.: Brief description of Machine (2 Pages)

SINGLE AXIS CNC TUBE BENDING MACHINE

BRIEF DESCRIPTION:

Mechanical: Our single axis CNC hydraulic tube bender consists of a heavy duty fabricated frame. The lower body of it carries a horizontally mounted hydraulic cylinder which is coupled to a rack, which in turn meshes with a gear. This gear is mounted at the bottom end of a vertically mounted shaft. This shaft is housed in a rigid steel housing and guided with taper roller bearings. The top end of the shaft carries a base which accommodates the bend former. The outward movement of the hydraulic cylinder rotates the gear in clockwise direction and thus also the bend former. This hydraulic cylinder gives the required power/torque to bend the tube.

Coupled to the main shaft is a bend arm assembly which also carries the clamping arrangement for clamping the tube while bending. This bend arm, clamping arrangement, pressure die and mandrel withdrawal arrangement are assembled to the main frame of the machine.

Clamping Arrangement: The clamping block consists of 2 halves of which one is mounted on the bend former and the other on the clamping arrangement on the bend arm. The clamping block half mounted on the clamping arrangement is capable of to and fro movement to clamp/ declamp the tube with the help of a hydraulic cylinder housed in the bend arm. The clamping block is coupled to the hydraulic clamping cylinder either directly or to toggle mechanism depending upon the machine model. The to and fro moving clamp slide is guided in a square guide. This slide carries the serration on it so that the clamp block can be shifted near or away from the bend axis of the machine depending upon the diameter of the former. In addition, a lead screw is provided for fine setting of the clamping block position.

Pressure Die and Wiper Slide: Like the clamp slide, the pressure die is also guided in a square guide and driven by a hydraulic cylinder coupled directly or through the toggle mechanism. The position of the pressure die is also settable with the help of a threaded shaft. A wiper cross slide is fitted at right angles to the pressure die slide which is capable of moving along with the tube during bending and gives a boosted effect to reduce thinning.

Mandrel Assembly: The mandrel cylinder is mounted at the rear end of the machine on a slide to enable shifting of the axis of the mandrel to various positions depending on the diameter of the bend formers. The mandrel is required during bending of thin walled tubes to prevent collapse. While the mandrel is used, due to tendency of the tube to collapse onto the mandrel, the tube tends to be gripped by the mandrel and removal of the tube manually from the machine after bending becomes a difficult task. The hydraulic mandrel extractor is therefore provided so that extraction of the mandrel from the tube is done hydraulically and automatically before the tube is declamped, thus eliminating operator's fatigue.

Technology T. Scang Luxembourg TT

Angle Setting System: Our Single Axis CNC hydraulic tube benders are provided with a 8 bit CMOS microprocessor based CRT bend controller. The system enables the user to programme 12 bend angles per programme upto a maximum of 50 programmes. The system consist of a CPU card, keyboard, VDU (Video Display Unit) a regulated power supply and a rotary digital encoder.

The digital encoder is fitted onto the main shaft at the base of the bend former and gives an open loop angle feed back to the controller. The actual angle is displayed on the CRT monitor. The keyboard provided enables the operator to programme and operate the machine in Manual/Auto mode. The VDU gives visual indication of the various parameters set, bend angle in progress, status of the limit switches and the solenoid valves being actuated during operation.

Angle of Bend Indicator: An engraved linear scale marked in degrees rivetted onto the body of the machine along its length shows the angle of bend that is being bent during the working of the machine. An indicator moves over the scale for easy visual indication. This scale can be used to cross check the display panel of the electronic control before starting the production.

HOW THE MACHINE WORKS:

The operator inserts the tube to be bent into the clamping block and then presses the push button for auto bending. The following sequence of operations take place:

1). The clamping cylinder operates and clamps the tube with a firm grip.

2) When full clamping pressure is exerted, the mandrel gets inserted into the tube following which the pressure die travels and applies pressure on the tube.

3) Now the bend cylinder operates and rotates the bend former in the clockwise or anti clockwise direction depending on bending direction.

4) When the tube is bent to the required setting, the rotation stops, the mandrel is withdrawn automatically, clamp is declamped and the pressure die is reset.

5) A dwell time is provided to enable the operator pull the tube forward manually to ensure that the bent tube does not interfere with the bend former during its reverse motion.

6) After the time lapse, the bend former now reverses automatically and stops at the zero position.

As is seen from the above sequence, the operator has only to place the tube at the right location and operate the push button. The rest of the operations are all done semi-automatically enabling the operator to take out a high rate of production.

Technology & Science Luxembourg 17

The built in Single Axis CNC controller provided with the machine enables the operator to operate all the systems manually like inching the bend former, clamping, mandrel, pressure die etc. by pressing the respective push button. The machine will be switched over to automatic system only when the Auto mode push button is pressed. The complete system is provided with electrical inter locks and over loads in addition to the hydraulic sequencing circuitry.

أوليات الطلبية 12/2000

تمت بـ ـــالتقابل الأرخه ٢٠٠٠/٧٢١

بالتسلسل

TT/ALBA/2000/008

بسم الله الرحمن الرحيم

Al-Zemam
General Trading

ZGT

الزمام
تجارة عامة

العدد :٥/٢٤٨

التاريخ:٣٠/١/٢٠٠٠

إلى / شركة .T.T.S.A المحترمون

م/ المفاتحة ١٢ / ٢٠٠٠

تحية طيبة

يسرنا أن نقدم عرض بالمفاتحة المرقمة ١٢ / ٢٠٠٠ وللقوائم (أ ، ب ، د ، هـ) واصل بغداد وكما مبين في القوائم المرفقة طي كتابنا هذا ونحن على استعداد للتفاوض حول المواصفات الفنية والتجارية وحسب طلبكم والشروط التجارية كما يلي :

المنشأ : ألمانيا ، والفقرة (D-5) فقط تايوانية المنشأ.

الأسعار : مرفقة طيا واصل بغداد .

المواصفات : تقدم إليكم لاحقا وخلال فترة أسبوع من تاريخه أعلاه.

طريقة الدفع : حسب الاتفاق بين الطرفين.

فترة التجهيز : خلال ٨ أشهر من تاريخ فتح الاعتماد.

فترة نفاذية العرض : ١٥/ ٣ / ٢٠٠٠ .

أملين أن ينال العرض موافقتكم مع وافر الشكر والتقدير.

<u>المرفقات</u> :

-جداول عدد (٤) الخاصة بنوع المكائن والأسعار وحسب القوائم (A, B, D , E) واصل بغداد .

-مواصفات فنية بعدد (٢) صفحة خاصة بالماكنة التايوانية.

٣٠/١/٢٠

مدير المكتب

مهند خلف محمد

Head Office :
Iraq - Baghdad
Al-Karrada - Sec. 905 St. 27 House 3
Telefax : 7768187

Branch Office :
P.O.Box : 940193 Amman 11194 Jordan
Telefax : 009626 - 5685280
Mobile : 00962 - 79562469

اسعار وأنواع المكائن الخاصة بالقائمة (أ) واصل بغداد

LIST A

No.	Type of M/C	Page	Qty	Origin & type (GERMANY)	Unit Price C & F Baghdad	TOTAL PRICE USD
1	Lath (125 × 350)	1/1	2	Universa 450L	6000	12000
2	Lath (200 × 500)	1/2	3	Basic Standard	9000	27000
3	Lath (350 × 1000)	1/3	1	Basic180 Super	14000	14000
4	CNC Lath (300 × 750)	1/4	1	trolcut 430	35000	35000
5	Lath (125× 350)	1/5	2	Universa 450L	6000	12000
6	CNC Lath W. Bar Feeder (30 × 350)	1/6	1			
7	Lath (250 × 750)	1/7	1	Basic 150 Super	10500	10500
8	CNC Lath (200 × 500)	1/8	2	NUM 250 OR NUM 430	29500 44500	59000 89000

الأسعار وأنواع المكائن الخاصة بالقائمة (ب) واصل بغداد

LIST B

No.	Type of M/C	Page	Qty	Origin & type GERMANY	Unit Price C & F Baghdad	TOTAL PRICE USD
1	CNC Vertical M M/C	2/1	1	WF 4CNC	61000	61000
2	Digital V.M M/C	2/2	1	MF5V	24000	24000
3	Digital H.M M/C	2/3	1	BO 110	120 000	120 000
4	Digital H.M M/C	2/4	1	BO 110	120 000	120 000
5	Precision V.M	2/5	1	WF5	34900	34900
6	CNC precision Univer. M.B M/C	2/6	2	VBZ 800	95500	191000

الأسعار وأنواع المكائن الخاصة بالقائمة (د) واصل بغداد

LIST D

No.	Type of M/C	Qty	Origin & type	Unit Price C&F Baghdad	Total price USD
1.	Cylindrical universal grinding (external & internal)	2	multi grind	28000	56000
2.	Universal cylindrical grinding	2	RSM 500	26500	53000
3.	Digit. precision surface grinder	1	HFS 4080 V	57500	57500
4.	Digit. High precision surface grinding machine	2	HFS 3060 V	46000	92000
5.	Precision Centreless circular grinding	1	Model: STC-20	61200	61200
6.	Optical profile grinding machine	1			
7.	Thread grinding	1			

الأسعار وأنواع المكائن الخاصة بالقائمة (هـ) واصل بغداد

LIST E

No.	Type of M/C	Qty	Origin & type GERMANY	Unit Price C&F Baghdad USD
1.	C.N.C Electric discharge wire cutting	1	EDM 460/60 CNC	85600
2.	C.N.C electric discharge wire cutting	1	EDM S26 CNC Or EDM DE200CNC	45600 91500
3.	Spark erosion (digital)	1	340 / 60 P	42500

D: 5

PRICE & SPECIFICATION

DESCRIPTION	QTY	UNIT Price C & F Baghdad

SUPERTEC PRECISION CENTERLESS GRINDING MACHINE

Model: STC-20	1 UNIT	USD 61200

x 1.35

1.Grinding wheel with Flange
2.Regulating wheel with Flange
3.Wheel Extractor
4.Tool box with adjusting tools
5.Diamond dresser
6.levelling screws with block
7.Balancing arbor
8.STD.thrufeed work rest w/blade

SPECIAL ACCESSORIES:

1.Spare wheel Flange	1 SET	USD 742.00
2.Infeed work rest	1 SET	USD 378.00
3.Infeed blade	1 PC	USD 364.00
4.Special Thrufeed work rest	1 SET	USD 931.00
5.Thrufeed blade	1 PC	USD 324.00
6.Input Rail & Output	1 SET	USD 580.00
7.Balancing stand	1 PC	USD 324.00
8.Long Thrufeed guide (6 ft)	1 SET	USD 1080.00
9.Electric Eject Attachment	1 SET	USD 783.00
10.Magnetic separator (40L/min)	1 SET	USD 1134.00
11.Spare Grinding wheel	1 SET	USD 931.00

TECHNICAL SPECIFICATIONS

Description / Model			STC-20
Grinding Capacity	Work diameter (with Standard workrest)		1-50
	Work diameter (with Special workrest)		50-100
Grinding Wheel	Wheel size (Dia x width x bore)		508*205*305
	Spindle speeds		1070rpm
	Dressing increment	Per graduation	0.01
		Per revolution	16
Regulating Wheel	Wheel size (Dia x width x bore)		305*216*127
	Spindle speeds (10 steps)		13-358
	Handwheel	Per graduation	0.04
		Per revolution	4
	Swiveling angle		15
	Inditing angle		15
	Dressing increment	Per graduation	0.02
		Per revolution	1.6
	Rapid feeding of Saddle Handwheel	Per graduation	0.05
		Per revolution	6
	Micro feeding of Saddle Handwheel	Per graduation	0.021
		Per revolution	0.15
Motors	Grinding wheel motor		20 HP
	Hydraulic motor		2 HP
Weight	Net(Approx.)		2000KG
	Gross (Approx.)		3313 KG
Packing	Length x width x Height		2240*2085*1863
Floor area	Length x width		1210*1600

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971-4-397 1476 FAX : 971-4-397 3845

13.11.2000

To: Offers Checking Committee
Baghdad.

Sub: Enq. No. 1/2000
Al-Tariq General Company

Dear Sirs,

With reference to the above mentioned subject, kindly find below our final prices for the same.

Sl. No.	Description	Qty. In (Ton)	Unit Price In USD	Total Price In USD
1.	DDVP, Nogoz Technical	18	4,485	80,730
2.	Diazinon, Technical	22	15,535	341,770
3.	Sumicidin, Technical (Fenvalerate)	26	12,220	317,720
4.	Diclofop, Methyl	3		0
5.	Isophorone	14		0
6.	Tensifox B 7453	4.5	5,070	22,815
7.	Malathion, Technical	65	2,925	190,125
8.	Cypermethrin, Technical	0.75	16,250	12,188
9.	Carbaryl	2		0
10.	Deltamethrin (decis)	0.25	405,600	101,400
11.	Glyphosate, Isopropyl amine salt	39.5	9,165	362,018
12.	Berol	7	5,291	37,037
13.	Chlorpyrifos, Methyl	2.5	26,845	67,113
14.	Paraquat Dichloride	1		0
15.	Octanol	0.5	5,122	2,561
16.	Methyl Carbitol (Diethylene glycol monomethyl ether)	0.2	6,345	1,269
	Total Price In USD			**1,536,744.50**

Delivery: 5 1/2 to 6 months.
Material Origin: India & Australia

Hoping you will find the same in order

With Best Regards,
For Technology Trading S.A

Authorized Signatory

Technology Trading S.A. LUXEMBOURG

قدمت للجنة المركزية
١٢/١١/٢٠٠٠

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Ref. No. : TT/ALBA/2000/28

Date : 27.05.2000

To:
Al-Tariq General Company
Falluija-IRAQ.

Ref.: Offer for Enq. No. 342/2000
Due the closing Date : 01.06.2000

Sub.: Chemicals

Dear Sirs,

In reference to the above mentioned subject, we would like to submit our offer as per your specifications stated in the tender.

Commercial terms & conditions

Total Cost : USD 2845403

Payment : Cash

Delivery : 5 1/2 - 6 months partial shipment allowed.

Validity : 30.06.2000

Hopping you will find the same in order.

Awaiting your favorable reply soon.

With Best Regards,
For Technology Trading S.A.,

Authorized Signatory

COMMERCIAL OFFER

Enq. No. 342/2000
Closing Date : 01.06.2000

Sl. No.	Description	Qty.	Unit Price In USD/Ton	Total Price In USD
1.	DDVP, Technical	18	5389	97002
2.	Diazinon, Technical	22	17089	375958
3.	Sumicidin, Technical	26	12903	335478
4.	Diclofop, Methyl	3	Not Offered	Not Offered
5.	Permethrin, Technical	0.25	38591	9647.75
6.	Propanil, Technical	94	7326	688644
7.	Isophorone	14 ~~55~~	Not Offered	Not Offered
8.	Tensifox B 7453	4.5 ~~5.5~~	5546	30503
9.	Tensifox B 7438	3.5	5544	19404
10	Berol 947	1	5291	5291
11	Berol 94 B	0.5	5291	2645.50
12	Xn 6	20.5	5635.50	115527.75
13	Xn 10	7	5635.50	39448.50
14	Malathion, Technical	~~65+50~~	3919.50	~~195975~~
15	Cypermethrin, Technical	0.5 ~~50.5~~	24375	12187.50
16	Trifluralin	5	11401	57005
17.	Carbaryl	5	Not Offered	Not Offered
18	2, 4-D Amine	5	3367	16835
19	Deltamethrin	1	405600	405600
20	Glyphosate, Technical	39.5	9165	362017.50
21	Terweet	7	Not Offered	Not Offered
22	Berol	7 1	5291	5291
23	Chlorpyrifos, Methyl	2.5	26845	67112.50
24	Paraquat	1	Not Offered	Not Offered
25	Octanol	0.5	5122	2561
26	Methyl Carbitol	0.2	6345	1269
	Total Price In USD			**2845403**

Luxembourg

أولية بالعرض المقدم للمشاتر
لكيميا وبارة الطارق
المغلق ٢٠٠٠/٦/١
طلبية المشاتر ٣٤٢/٢٠٠٠
المغلق ٢٠٠٠/٦/١

بسم الله الرحمن الرحيم

Al - Bashair Trading Co. Ltd.

شركة البشائر التجارية المحدودة

Ref No. : ت ٩٥٨٩

Date : / /

العدد :

التاريخ : ٩ / ٨ / ٢٠٠٠

الى / شركة TTSA

م / الطلبية ٢٤٢ أ / ٢٠٠٠

اكرام جوال

نشيركم الى الاجتماع المنعقد بتاريخ ٢٠٠٠/٦/١٩ مع الجهه المستفيده في معرض بغداد الدولي وبحضور ممثل شركتنا حيث اوعدتمونا بتقديم العرض التجاري المسعر النهائي يوم ٢٠٠٠/٦/١٩.

للتفضل بالاطلاع واعلامنا اجراءاتكم بصدد تقديم العرض المشار اليه اعلاه.

مع التقدير

المدير المفوض
منير ممدوح عواد
٢٠٠٠/٨/٩

مستلم
٢٠٠٠/٨/١٢

٢٠٠٠/٨/١٢

Sadoon St. Al - Ani Building 1st Floor, Phone : 7170768 Baghdad - Iraq
Phone :7182185 Fax : 8867700 Tlx : 213545 P.O.Box 3532

شارع السعدون - عمارة العاني - الطابق الاول هاتف : ٧١٧٠٧٦٨ بغداد - العراق
هاتف : ٧١٨٢١٨٥ فاكس : ٨٨٦٧٧٠٠ تلكس ٢١٣٥٤٥ ص. ب : ٣٥٣٢

Technology Trading.S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Ref. No. : TT/ALBA/2000/28

Date : 27.05.2000

To:
Al-Tariq General Company
Falluija-IRAQ.

Ref.: Offer for Enq. No. 342/2000
Due the closing Date : 01.06.2000

Sub.: Chemicals

Dear Sirs,

In reference to the above mentioned subject, we would like to submit our offer as per your specifications stated in the tender.

Commercial terms & conditions

Total Cost : USD 2845403

Payment : Cash

Delivery : 5 1/2 - 6 months partial shipment allowed.

Validity : 30.06.2000

Hopping you will find the same in order.

Awaiting your favorable reply soon.

With Best Regards,
For Technology Trading S.A.,

Authorized Signatory

عدت للبث ثريا ١/٦/٢٠٠٠

COMMERCIAL OFFER

Enq. No. 342/2000
Closing Date : 01.06.2000

Sl. No.	Description	Qty.	Unit Price In USD/Ton	Total Price In USD
1.	DDVP, Technical	18	5389	97002
2.	Diazinon, Technical	22	17089	375958
3.	Sumicidin, Technical	26	12903	335478
4.	Diclofop, Methyl	3	Not Offered	0
5.	Permethrin, Technical	0.25	38591	9647.75
6.	Propanil, Technical	94	7326	688644
7.	Isophorone	55	Not Offered	0
8.	Tensifox B 7453	5.5	5546	30503
9.	Tensifox B 7438	3.5	5544	19404
10	Berol 947	1	5291	5291
11	Berol 94 B	0.5	5291	2645.50
12	Xn 6	20.5	5635.50	115527.75
13	Xn 10	7	5635.50	39448.50
14	Malathion, Technical	50	3919.50	195975
15	Cypermethrin, Technical	0.5	24375	12187.50
16	Trifluralin	5	11401	57005
17.	Carbaryl	5	Not Offered	0
18	2, 4-D Amine	5	3367	16835
19	Deltamethrin	1	405600	405600
20	Glyphosate, Technical	39.5	9165	362017.50
21	Terweet	7	Not Offered	0
22	Berol	1	5291	5291
23	Chlorpyrifos, Methyl	2.5	26845	67112.50
24	Paraquat	1	Not Offered	0
25	Octanol	0.5	5122	2561
26	Methyl Carbitol	0.2	6345	1269
Total Price In USD				**2845403**

2000NECREP175/24MAY

To : Mr.MUNTASIR AWNI
From : G.CHOCKALINGAM

ATC CHEMICALS

x 1.30

S. No.	DESCRIPTION	UNIT COST	QUAN TITY	TOTAL COST
1	DDVP, Technical 2950	4145	18	74610 3450
2	Diazinon, Technical 9100	13145	22	289190
3	Sumicidin, Technical 10300	9925	26	258050
4	Diclofop, Methyl	----	3	0
5	Permethrin, Technical 25800	29685	0.25	7420
6	Propanil, Technical	5635	94	529690
7	Isophorone —	----	55	0
8	Tensifox B 7453	4265	5.5	23455
9	Tensifox B 7438	4265	3.5	14925
10	Berol 947	4070	1	4070
11	Berol 94 B	4070	0.5	2035
12	Xn 6 4180	4335	20.5	88865
13	Xn 10	4335	7	30345
14	Malathion, Technical 3300	3015	50	150750
15	Cypermethrin, Technical 14600	18750	0.5	9375
16	Trifluralin 6000	8770	5	43850
17	Carbaryl 6250	—	5	0
18	2,4-D Amine	2590	5	12950
19	Deltamethrin	312000	1	312000
20	Glyphosate, Technical 3300	7050	39.5	278475
21	Terweet	--	7	0
22	Berol	4070	1	4070
23	Chlorpyrifos, Methyl	20650	2.5	51625
24	Paraquat	—	1	0
25	Octanol	3940	0.5	1970
26	Methyl Carbitol	4880	0.2	976
	TOTAL			2188696

2000NECREP175/24MAY

To : Mr.MUNTASIR AWNI
From : G.CHOCKALINGAM

ATC CHEMICALS

S. No.	DESCRIPTION	UNIT COST	QUANTITY	TOTAL COST
1	DDVP, Technical	4145	18	74610
2	Diazinon, Technical	13145	22	289190
3	Sumicidin, Technical	9925	26	258050
4	Diclofop, Methyl	—	3	0
5	Permethrin, Technical	29685	0.25	7420
6	Propanil, Technical	5635	94	529690
7	Isophorone	—	55	0
8	Tensifox B 7453	4265	5.5	23455
9	Tensifox B 7438	4265	3.5	14925
10	Berol 947	4070	1	4070
11	Berol 94 B	4070	0.5	2035
12	Xn 6	4335	20.5	88865
13	Xn 10	4335	7	30345
14	Malathion, Technical	3015	50	150750
15	Cypermethrin, Technical	18750	0.5	9375
16	Trifluralin	8770	5	43850
17	Carbaryl	—	5	0
18	2,4-D Amine	2590	5	12950
19	Deltamethrin	312000	1	312000
20	Glyphosate, Technical	7050	39.5	278475
21	Terweet	—	7	0
22	Berol	4070	1	4070
23	Chlorpyrifos, Methyl	20650	2.5	51625
24	Paraquat	—	1	0
25	Octanol	3940	0.5	1970
[illegible]	[illegible]	1880	0.2	976
	TOTAL			[illegible]

2000NECREP175/24MAY

To : Mr.MUNTASIR AWNI
From : G.CHOCKALINGAM

COMMERCIAL OFFER

1.0. Total Cost	:	US $ 2,188,696
2.0. Payment	:	Cash
3.0. Delivery	:	3 months
4.0. Validity	:	30JUN2000

With regards,

Tender No. 342/2000

C.D 01.06.2000

T.T.S.A تيتسا

انتظار عطاء من GCC .

ملاحظة :

مرفقة جميع الاوليات المدعية .

١٨/٥/٢٠٠٠

٥٨

To: Mr. G.C.C., Chemical Tender for A.T.C.
regards,
Muntsair 16.05.2000

FAXED (17.05.2000)

Enq. No.: 342/2000
Closing Date : 25.05.2000

No.	Name	Specification	Qty.
1	DDVP (Nogoz Tech.) 3450 INKD	Purity min. : 96% Acidity max. : 0.5% Water content max. : 0.01% Density : 1.4200 R.I : 1.4500	18000 kg (packing in drums 200-250kg)
2	Diazinon Tech. 11950 أستراليا	Purity min. : 95% Acidity max. : 0.03 Specific gravity : 1.116. 118 at 20 C R.I : 1.4978 - 1.4981 at 20 C Moisture content max.: 0.06	22000 kg (packing in drums 200-250 kg)
3	Sumicidin Tech. (Fenvalerate) 9400	Purity min. : (90 - 95)% Density : 1.1750	26000 kg (packing in drums 200 kg)
4	Diclofop - methyl —	Purity min. : 95% m.p : 39-41C	3000 kg (packing in drums 25 kg)
5	Permethrin Tech.	Purity min.: 90% Trans : 75% Cis : 25%	250 KG (packing in drums 50 kg)
6	Propanil Tech.	Purity : 90% M.P. : 70% Density : 25%	94000 kg (packing in drums 50 kg)
7	Isophorone —	Purity min : 98% Density : 0.92 b.p : 208 - 212C n20/d : 1.47B 14000	~~55000~~ kg (packing in drums 200 kg)
8	Tensiofix B 7453 (Emulsifier manufacture : Omnichem) 3900	Specific gravity : 1.02 Water content : < 0.5% An Ionic and non Ionic Surfatant : + 70% Solubility at 20°C in (xylene and alkohol) : complete soluble Viscosity at 20 C: 1400 MPA.s 4500	~~5500~~ kg (packing in drums 200 kg)

(1—4)

FAXED 17.05.2000

No.	Name	Specification	Qty.
9.	Tensiofix B 7438 (Emulsifier manufacture : Omnichem)	Specific gravity : 1.00 Water content : < 0.5% An Ionic and non Ionic Surfatant : + 75% Solubility at 20 C in (xylene and alkohol) : complete soluble	3500 kg (packing in drums 200 kg)
10.	Berol 947 (Emulsifier) manufacture : Akzo-Nobel	Specific gravity : 1.01 Water content : < 0.3% Anionic / nonioic Viscosity : 1150 maps Viscosity at 20 C: 1400 MPA.s	1000 kg (packing in drums 200 kg)
11.	Berol 94B (Emulsifier) manufacture : Akzo-Nobel	Solubility : xylene, water Specific gravity : 1.06 Water content : < 0.3 % Nonionic Viscosity : 200 mpas Solubility : xylene, water	500 kg (packing in drums 200 kg)
12.	Xn 6 Manufacturer : Omnichem	Composition Blend of anionic & nonionic surbactants 99.5% Water 0 - 5 % Appearance at 20 C Clear brown liquid Specific gravity at 20 C : 1.10 Stability and temperature Cloud point : < -20 C Solidifying point about 13 C Clearing point : < -20 C ph (5% in water / Iso propanil) 2 Flash point : > 100 C Viscosity in mpa.s At 20 C about 1400 At 50 C about 1100 Solubility at 20 C Completely soluble in xylene naphtha solvent and alcohol Dispersible in water	20500 kg (packing in drums 200 kg)

FAXED 17-05-2000

No.	Name	Specification	Qty.
13.	Xn 10 Manufacture : Omnichem	Composition Blend of anionic & nonionic surbactants 99.5% Water 0-5% Appearance at 20 C Clear brown liquid Specific gravity at 20 C : 1.12 Stability and temperature Coud point about 20 C Solidifying point about 3C Clearing point about - 9C Ph (5% in water / Iso propanil) 2 Flash point : > 100 C Viscosity in mpa.s At 20 C about 5000 At 50 C about 540 Solublity at 20 C Completely soluble in xylene, naphtha Solvent and alcohol Dispersible in water	7000 kg (packing in drums 200 kg)
14.	Malathion (Tech.) 2250 انثر	Purity min : 95% Water content max.: 1% Density : 1.2315 R.I.: 1.4985 65000	50000 kg (packing in drums 200-250 kg)
15.	Cypermethrin Tech. 12500 انثر	Purity min.: > 90% M.P. : 60 - 80 C Density : 1.23 Acidity max. 1.5 g/kg (calculated as H2SO4) Cis - isomar = 40 - 60 % Max water 1 g/kg 750	~~500~~ kg (packing in drums 50 kg)
16.	Trifluralin n-nitroso-di-n-propyl amine	MP 48.5 - 49 C Punity = min. 95% Solubility : soluble in arganie Solvents	5000 kg (packing in drums 200 kg)
17.	Carbaryl ——	Purity : 99% MP : 142 C Density : 1.232 2000	~~5000~~ kg (packing in drums 200-250 kg)

FAXED

No.	Name	Specification	Qty.
18.	2, 4-D dimethyl amine salt	A.I. : min 94%	5000 kg (packing in drums 200 kg)
19.	Deltamethrin (decis)	Purity min. : 95% 250 m.p. = 98 - 101 C deltamethrin R isomer max 10 g/kg optical rotation D=57+1.5 <	1000 kg (packing 25 kg)
20.	Glyphosate Isopropyl amine salt	Isopropyl min. 62%	39500 kg packing indvumg 200 kg
21.	Terweet	Active content 100% Ph 1% in water 9 - 10 Density : kg1m3 1055 Viscosity at 20cmpas 300 Solubility in ethanol soluble In propylene glycol soluble Water soluble Xylene soluble	7000 kg packing in drum 200 kg
22.	Berol 907 (bioactivator manufacture Akzo - noble)	Ph 1% in water 9-10.5 Density : kg 1 m3 1055 Viscosity at 20 mpas 300 Solbility in water soluble In echanol soluble	7000 kg packing in drum 200 kg
23.	Chloropyrifos - methyl	Purity min.: 94% Water max. : 1 g/kg Acetone insoluble max 5 g/kg Acidity max 1 g/kg (calculated as H2SO4)	2500 kg packing in drum 200 kg
24.	Paraguat Dichloride	Colorless crystalling solid decomposes at approximately 300C sparingly soluble in lower alcohols, insoluble in hydrocarbons Purity min : 500 g/lit	1000 kg packing in drum 200 kg
25.	Octanol	Purity min : 99% M.p : (-15) - (-13) b.p : 193 - 195 d4 : 0.824 n : 1.429	500 kg packing in drum 25 kg
26.	Methyl carbitol (Diethylene glycol monomethyl ether)	Purity min: 98% b.p : 190 - 194 d : 1.02 , n: 1.426	200kg packing in drums 25 kg)

My Document 1/Tender

No.	NAME	SPECIFICATION	QTY.
1	DDVP (Nogoz Tech.)	Purity min.. : 96% Acidity max. : 0.5% Water content max. :0.01 % Density : 1.4200 R.I : 1.4500	18000 Kg (packing in drums 200-250kg)
2	Diazinon Tech.	Purity min. : 95% Acidity max : 0.03 Specific gravity :1.116.118 at 20 c R.I : 1.4978-1.4981 at 20 c moisture contnet max . :0.06	22000 Kg (packing in drums 200-250kg)
3	Sumicidin Tech. (Fenvalerate)	Purity min. :(90 - 95)% Density : 1.1750	26000 Kg (packing in drums 200 kg)
4	diclofop -methyl	Purity min. : 95% m.p : 39-41c	3000 kg (packing in drums 25 kg)
5	Permethrin Tech.	Purity min. : 90% Trans : 75 % Cis : 25 %	250 Kg (packing in drums 50kg)
6	propanil Tech	Purity min. : 90% M.P. : 70% Density : 25%	94000 Kg (packing in drums 50 kg)
7	Isophorone	Purity min. : 98% density : 0.92 b.p : 208-212c n20/d : 1.478	55000 Kg packing in drums 200 kg)
8	Tensiofix B 7453 (Emulsifier) manfacture : Omnichem	Specific gravity : 1.02 Water content : < o.5% An Ionic and non Ionic Surfatant : +70% Solubility at 20oC in(xylene and alkohol): complete soluble Viscosity at 20 C:1400 MPA.s	5500 kg (packing in drums 200 kg)
9	Tensiofix B 7438 (Emulsifier) manfacture : Omnichem	Specific gravity : 1.00 Water contentn : < o.5% An Ionic and non Ionic Surfatant : +75% Solubility at 20 C in(xylene and alkohol): complete soluble	3500 Kg (packing in drums 200 kg)
10	Berol 947 (Emulsifier) manfacture : Akzo-Nobel	specific gravity :1.01 water content :< 0.3% anionic / nonioic viscosity :1150maps Viscosity at 20 C:1400 MPA.s	1000 kg (packing in drums 200 kg)

تابع للملف ٦/١/٢٠٠٠

٢٤٢/٢٠٠٠

No.	NAME	SPECIFICATION	QTY.
11	Berol 948 (Emulsifier) ok manfacture : Akzo - Nobel	Solubility : xylene,water specific gravity : 1.06 water content :<0.3 % nonionic viscosity : 200 mpas solubitity : xylene, water	500 kg (packing in drums 200 kg)
12	Xn 6 ok manufacture : Omnichem	compsition blend of anionic & nonionic surbactants 99.5% water 0 - 5 % appearance at 20 C clear bro wn liguid specifie gravity at 20 C 1.10 stability and temb rature cloud point <-20 C solidifying point about 13C clearing point <-20 C ph (5% in water /lso propanil) 2 flash point >100 C viscosity in mpa.s at 20 C about 1400 at 50 C about 1100 solublity at 20 C completley soluble in xylene . naptha solvent and alcohol dis persible in water	20500 Kg (packing in drums 200 kg)
13	Xn 10 ok manufacture : Omnichem	compsition blend of anionic & nonionic surbactants 99.5% water 0 - 5 % appearance at 20 C clear bro wn liguid specifie gravity at 20 C 1.12 stability and temb rature cloud point about-20 C solidifying point about 3C clearing point about-9C ph (5% in water /lso propanil) 2 flash point >100 C viscosity in mpa.s at 20 C about 5000 at 50 C about 540 solublity at 20 C completley soluble in xylene , naptha solvent and alcohol dis persible in water	7000 Kg (packing in drums 200 kg)
14	Malathion(Tech.) ok	Purity min. : 95% Water content max. : 1% Density : 1.2315 R.I : 1.4985	50000Kg (packing in drums 200-250kg)
15	Cypermethrin Tech	Purity min. :>90% M.P. : 60 - 80 C Density : 1.23 acidity max.1.5 g/kg(calculated as H2SO4 cis -isomar=40-60% max water 1 g/kg	500 Kg (packing in drums 50 kg)

No.	NAME	SPECIFICATION	QTY.
16	Trifluralin n-nitroso-di-n-propyl amine	MP 48.5- 49 C · punity = min 95% solubilgty : soluble in arganie sollvents	5000 Kg (packing in drums 200 kg)
17	Carbaryl	purity : 99% MP : 142C Density : 1.232	5000 Kg (packing in drums 200-250kg)
18	2,4-D dimethyl amine salt	A.I. : min 94%	5000 Kg (packing in drums 200 kg)
19	Deltamethrin (decis)	purity min : 95% m.p. = 98-101 C deltamethrin R isomer max 10g/kg optical rotation D=57+1.5<	1000 Kg (packing 25kg)
20	Glyphosate isopropyl amine salt	isopropyl min 62%	39500kg packing indvumg 200 kg
21	Terweet	Active contant 100% ph 1% in water 9-10 density :kglm3 1055 viscosity at 20cmpas 300 solbility in ethanol soluble in propyiene glycol soluble water soluble xylene soluble	7000kg packing in drum 200 kg
22	Berol 907 (bioactivator) manfacture akzo -nobel	ph 1% in water 9-10.5 density :kglm3 1055 viscosity at 20 mpas 300 solbility in water soluble in echanol soluble	7000 kg packing in drum 200 kG
23	chloropyrifos -methyl	purity min . =94% water =max 1g/kg aceton insolube max . 5g/kg acidity max . 1g/kg(calculated as H2SO4	2500 kg packing in drum 200 kG
24	paraguat dichloride	colorless crystalline solid decomposes at approximately 300c sparingly soluble in lower alcohols ,insoluble in hydrocarbons purity min 500 g/lit	1000 kG packing in drum 200 kG

PH 2 - 6

25	Octanol	purity min . =99% m.p = (-15) - (-13) b.p = 193-195 d4 = 0.824 n = 1.429	500 kg packing in dram 25 kg
26	Methyl Carbitol (Diethylene glycol monomethyl ether	purity min . =98% b.p = 190-194 d= 1.02 n= 1.426	200 kg packing in dram 25 kg

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971-4-397 1476 FAX : 971-4-397 3845

Date : 24th Jan,2001

To : Jabber bin Hayyan Company,
Mosul – Iraq .

Sup. : Authorization

Dear Sirs,

This is to inform you that Mr. Samir Kasim Al-Jarrah is hereby authorized to submit offer and negotiate with your esteemed company and to sign on behalf of M/s Technology Trading S.A Company.

With Best Regards.

For Technology Trading S.A

Authorized signatory

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971-4-397 1476 FAX : 971-4-397 3845

16th Jan,2001

To : Jabber bin Hain Company,
Mosul – Iraq.

Sub. : Authorization

Dear Sirs,

This is to inform you that Mr. **Adhl Abd Al-Kareem** is hereby authorized to submit offers and negotiate with your esteemed company and to sign on behalf of M/s Technology Trading S.A Company .

With Best Regards .

For Technology Trading S.A

Authorized signatory.

Regd. Office : 19, Rue Aldringen, L.1118 LUXEMBOURG

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971-4-397 1476 FAX : 971-4-397 3845

15.01.2001

To:

M/s Al-Bashair Trading Company Ltd.,
Baghdad

Sub: Offer For Enq. No. 1594/Q2/2000
Ref.: Jabber Ibn Hayyan for Tender No. 173
Closing Date: 18th Jan,2001

Dear Sirs,

In reference to the above mentioned subject, we are pleased to submit our offer as per your specification:

Si. No.	*Material*	*Qty. (Ton)*	*Unit Price In USD*	*Total Price In USD*
1	Thiuram TH	0.2	12,864	2,572.8
2	Retarder A	0.25	28,464	7,116
3	Super Active Carbon (B2)	10	Not Offered	Not Offered
4	Natural Rubber RSS1	35	3,450	120,750
5	Carom 2200, Grade A	10	5,200	52,000
6	NBR Rubber 3307	15	5,800	87,000
7	Aktiplast	2	13,760	27,520
8	Magnesium Oxide Mgo	1.5	3,721.2	5,581.8
9	Vulcacit NPV / c	0.1	Not Offered	Not Offered
10	Natural Rubber CMR	15	4,140	62,100
11	Neoprene Rubber WRT	0.5	9,240	4,620
Grand Total In USD				**369,260.6**

GENERAL CONDITIONS

Grand Total Price	: **USD 369,260.6** (To be paid in equivalent EURO at the prevailing rate as on the date of payment)
Delivery	: 4 – 5 Months from the date of deposit in Amman
Payment Conditions	: Cash
Validity	: 01.03.2001

Waitting for favourable response.

With Best Regards,
For Technology Trading S.A

Authorized Signatory

* تم ارسال العرض بواسطة عادل الى الموصل
مع كتاب غطاء من البحائر بتاريخ ١٥/١/٢٠٠١

١٥/١/٢٠٠١

ادوية عرض ال HP

	Description	Unit Price US$
1.	Synthesized Signal generator	100000.00
2.	Noise figure meter	90000.00
3.	Synthesized microwave sweeper	90000.00
4.	Spectrum analyzer	125000.00
5.	Spectrum analyzer	250000.00
6.	Network analyzer	175000.00
7.	Test set	350000.00
8.	Digital Power meter	15000.00
9.	Power sensor	8500.00
10.	Color plotter	10000.00
11.	Antenna & RCS	325000.00
12.	Microwave counter	75000.00
13.	Pulse/CW microwave counter	50000.00
14.	Digitizing oscilloscope	30000.00
15.	HP 82350A Card	5000.00
16.	Network analyzer	250000.00
17.	Pulse generator	25000.00
18.	ARAMIS near field antenna test facility	50000.00
19.	Strip line PCB matching & drilling	15000.00
20.	ALTRA low RCS target positions	15000.00
21.	Compact range illumination Antenna & PCS test facilities software	75000.00
22.	Frequency counter	75000.00
23.	Synthesized equivalent to HP 8340, 8341	75000.00
24.	High precision antenna side lamp – 30 dB up to 8 GHz	60000.00
25.	Digitizing oscilloscope	35000.00
26.	Antenna design software	40000.00
27.	RCS measurement & calculation software	30000.00
28.	Digital & Microwave design software	50000.00
29.	Absorbing material 50 dB	10000.00

أوراق الطلبة ٢١٩/٢٠٠٠

الباقي

قد تم بالتسلسل 2000/040

بتاريخ ٢٠٠٠/٧/٥

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971-4-397 1476 FAX : 971-4-397 3845

Ref.: **TT/ALBA/2000/040** 05.07.2000

To:

Al-Bashair Trading Company Ltd.,
Baghdad.

Sub: **TENDER NO. 219/2000**
CLOSING DATE: 05.07.2000

Dear Sirs,

In reference to the above mentioned subject, we would like to offer the following:

1. DECHLORANE PLUS:

SPECIFICATION:

- Chlorine Content	: Min 64%
- Density	: at 25 °C (1700 - 1900) kg/m^3
- Particle Size	: 5 – 15 micron.
- Volatiles	: at 110 °C 0.1 %

- Quantity	: 10 Tons
- Price	: USD 65,000.00 per ton
- Total Price	: USD 650,000.00
- Delivery	: 41/2-5 months from the date of deposit.
- Validity	: Up to 05.08.2000

2. EPDM [ETHYLENE PROPYLENE DIENE MONO MER].

SPECIFICATION:

- Mooney Viscosity (ML 1 + 4) 125	: 40
- Ethylene wt %	: 55
- Propylene wt %	: 40
- ENB wt %	: 5
- Specific Gravity	: 0.86
- Residual Transition Metal, ppm	: < 10
- Ash Content, wt %	: < 0.1
- Total Volatiles, wt %	: < 0.4
- Product Form	: Bale
- Molecular Weight Distribution	: Broad*

*Suitable for Moulding & Extrusion

- Qty : 10 Tons
- Price : USD 21,000.00 per ton.
- Total Price : USD 210,000.00
- Delivery : 41/2-5 months from the date of deposit .
- Validity : Up to 06.08.2000

3. NOT OFFERED.

4. NOT OFFERED.

5. NOT OFFERED.

With Best Regards,
For Technology Trading S.A

Authorized Signatory

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Ref.: **TT/ALBA/2000/~~017~~** 039

~~30.04.2000~~
05.07.2000

To:

Al-Bashair Trading Company Ltd.,
Baghdad.

219/2000

Sub: **TENDER NO. ~~219/2000~~**
CLOSING DATE: ~~01.05.2000~~
05.07.2000

Dear Sirs,

In reference to the above mentioned subject, we would like to offer the following:

1. DECHLORANE PLUS:

SPECIFICATION:

- Chlorine Content	: Min 64%
- Density	: at 25 °C (1700 - 1900) kg/m^3
- Particle Size	: 5 – 15 micron.
- Volatiles	: at 110 °C 0.1 %
- Quantity	: ~~8~~ 10 Tons 65000
- Price	: USD ~~60,000.00~~ per ton
- Total Price	: USD ~~340,000.00~~ 650 000
- Delivery	4½-5 : ~~4~~ months from the date of deposit
- Validity	: Up to ~~04.06.2000~~ 06.08.2000

2. EPDM [ETHYLENE PROPYLENE DIENE MONO MER].

SPECIFICATION:

- Mooney Viscosity (ML 1 + 4) 125	: 40
- Ethylene wt %	: 55
- Propylene wt %	: 40
- ENB wt %	: 5
- Specific Gravity	: 0.86
- Residual Transition Metal, ppm	: < 10
- Ash Content, wt %	: < 0.1
- Total Volatiles, wt %	: < 0.4
- Product Form	: Bale
- Molecular Weight Distribution	: Broad*

*Suitable for Moulding & Extrusion

- Qty : ~~5~~ 10 Tons 21000
- Price : USD ~~23,000~~.00 per ton.
- Total Price : USD ~~115,000.00~~ 210 000
- Delivery 4 1/2 - 5 : ~~3 months~~ from the date of deposit
- Validity : Up to ~~01.06.2000~~ 06.08.2000

3. NOT OFFERED.

4. NOT OFFERED.

5. ~~HTPB (SILICON OIL)~~ NOT OFFERED

~~**SPECIFICATION:**~~

	Designated Characteristic	***Actual Analysis***
- Water Content, wt %	<=0.10 max 0.00	
- Viscosity, BF. Poise @ 30C	40.0-60.0	43.4
- Specific Gravity @ 25C	>=0.870 min 0.900	
- Color, APHA	<=50.0 max	7.5
- Hydroxyl Value Meq/g	0.70 – 0.80	0.74
- Nonvolatile Material, wt%	>=99.5 min	99.9
- CC 14 Insoluble, wt%	<=0.20 max	0.04
- Unsaturated Type, wt%		
- Trans 1-4	50.0 – 60.0	54.4
- CIS 1-4	10.0 – 25.0	16.3
- Vinyl 1-2	20.0 – 30.0	29.3
- Sulfated Ash, wt%	<=0.050	0.000
- Total H_2O_2, ppm	<=500.0	146.0
- Iodine No. ppm	<=500.0	418.0

These chemical characteristics are consistent with hydroxyl terminated Polybutadiene.

- Qty : 8 Tons. 30
- Price : USD 32,000.00 per ton.
- Total Price : USD 288,000.00
- Delivery : 6 month from the date of deposit
- Validity : Up to 01.06.2000

~~**6. NOT OFFERED.**~~

With Best Regards,
For Technology Trading S.A

Authorized Signatory

٧٦

T.T. SA
استلمت شباك ١٢/٢ مساء
استاذ عزيز

رقم المفاتيح ٢٠٠٠/٢١٩

تاريخ الغلق ٢٠٠٠/٦/٢٥

[1] DECHLORANE 10 TON

- chlorine content 64% min
- Density at 25°C (1700–1900) Kg/m³
- particle size (5–15) micron
- Volatiles at 110 C° 0.1% max

[2] EPDM
[Ethylene propylene DIENE Mono Mer] 10 TON

- Density at 25°C (0.82–0.88) g/cm³
- Mooney Viscosity 40
- propylene wt% 40
- Ethylene wt% 55
- Ash Content wt% < 0.1
- Residual Transition Metal, ppm < 10
- Colour : yellow

[3] HTPB
[Hydroxyl Terminated Poly butadien] 10 TON

- Hydroxyl No. 0.75 – 0.95
- moisture 0.06 % max
- Sulfated Ash, wt% <= 0.050
- Total H_2O_2, ppm <= 500
- Nonvolatile Material wt% >= 99.5 min

[4] Welding wire special for sheet type 30CrMoV9 rolls, open length diameter 1.6 mm

[5] Spray Teflon 500 piece

عرض T.T المقدم ٤٢/٢٠٠٠

بتاريخ ١٦/٥/٢٠٠٠

الى البائع بموجب المناقصة

رقم ٢٠٠٠/٨٨

موضوع H.P

منشاء اوربي .

Ref. : 204/2000
Date : 18/5/2000

INQ. NO. 117 / WAD / 2000
Closing Date: 4/6/2000

1. Syntheiszed signal generator
   - Frequency range 0.01 – 20 GHz
   - Frequency resolution 1KHz
   - Output power 20dBm
   - Resolution 0.01 dB
   - GB.IB equivalent to HP 83752

2. Noise figur meter
   - Frequency range DC 18 GHz
   - Noise figure measurement range 0 to 30 dB
   - Noise figure resolution 0.01 dB
   - GB.IB
   - Noise figure test set
   - Frequency range : 10 MHz – 26.5 GHz
   - Input SWR 2.5 dB
   - GB.IB
   - Noise source
   - Frequency range 10MHz – 18 GHz
   - Max. SWR 1.15 dB
   - Power supply 18 volt DC

3. Synthesized microwave sweeper
   - Frequency range 0.01 to 20 GHz
   - External AM modulation
   - Output power 20 dBm
   - Resolution 0.01 dB
   - GB.IB equivalent to HP 83752

H.P نفس طلبية
البديل .
استلمت من استاذ
علي
تاريخ تلقي ١٦/٧/٢٠٠٠
شاكر

4. Portable specrtum analyzer
   - Frequency range 30 Hz to 26.5 GHz
   - Amplitude range (noise level 30dB)
   - Dynamic range 130dB
   - Input attenuate 70dB
   - Resolution band width - 3dB range 1Hz to 1Mhz
     - 6 dB – 3 MHz
   - GB.IB equivalent to HP 8563E

5. Spectrum analyzer
   - Frequency range 100Hz to 22 GHz
   - Frequency span 0Hz, 100Hz to 22 GHz
   - Resolution bandwidth 3dB BW 10Hz to 3MHz
   - Video BW 1Hz to 3MHz
   - Amplitude range - 134 dBm
   - Dynamic range < 70 dBc
   - GB/IB equivalent to HP 8566B

6. Network analyzer
   - Frequency range 45 MHz to 110 GHz
   - Dynamic range 80dB
   - Resolution 0.001 dB, 0.01 dgree, 0.01 ns
   - Time domain analysis
   - 60 dB effective directivity & source match
   - Real time error – corrected matched measurment
   - GB.IB equivalent to HP 8510C

7. Test set
   - Frequency range 0.615 to 50GHz
   - Test ports –1 to –10 dBm power level
   - Max. power input 13dBm
   - Impedance 50 Ω
   - Attenuator range 0 to 90 dB in 10 dB step
   - GB.IB equivalent to HP 8517B

8. Digital power meter
   - Dual chanel power meter
   - Frequency range 100KHz to 50 GHz
   - Power range –70 dBm to +44dBm
   - Power sensor compatable with HP 8480
   - Dynamic range 90 dB
   - GB.IB

9. Power sensor
   - Frequency range 10 MHz to 18 GHz
   - Power handling 3 watt

10. color plotter
    A4 color plotter for Network analyzer

11. Antenna and RCB measurement system
    - Frequency range 45 MHz to 110 GHz
    - Measure speed up to 5000 P/S
    - Fast multiple chanel measurment
    - Manual & automated operation
    - Built in graphical display and analysis
    - GB.IB equivalent to HP 85301C

12. Microwave counter
    - Frequency & power measurement
    - Frequency range 10MHz to 46 GHz
    - Digital frequency power read out
    - GB.IB EQUIVALENT TO hp 53150

13. Pulse / CW frequency counter
    - Frequency range DC – 26GHz
    - Frequency frequency profiling
    - Resolution 1Hz
    - 60ns min pulse width
    - 1 Hz PRF down mesauremnt
    - GB.IB equivalent to HP 5361B

14. Digitizing Oscilloscope
    - 50GHz band width
    - < 62.5 fs timing resolution
    - 8 PS timing interval accuracy
    - 2.5 GHz edge trigger
    - GB.IB equivalent to HP 54750A

15. GB.IB card for AT buses equivalent to HP 82530A

16. Network analyzer
    - 50 MHz to 20 GHz
    - Fast sweeping built in synthesized source
    - Integral solid state switching 8 – parameter
    - Vector receiver, error correction time domain up to 105dB dynamic range
    - GB.IB equivalent to HP 8720D.

17. Pulse generator
    - Max clock rate 150 MHz
    - Digitally read out
    - Resolution 3 digit
    - Transition time 2ns variable
    - 10 volt peak to peak
    - 2 channel output
    - equivalent to HP 8110A

18. ARAMIS near field antenna test facilities

19. Strip line PCB machining & drilling edging

20. Ultra low RCS target positioners

21. Compact range illumination antenna and PCS test facilities software

22. Frequency converter
    - Frequency range DC – 18 GHz
    - GB.IB equivalent to HP 8511A

23. Synthesized signal generator
    - Frequency range Dc – 18 GHz
    - Resolution 4 KHz
    - Output voltage 20dBm
    - Resolution 0.01 dB
    - GB.IB equivalent to HP 8340, 8341

24. High precission antenna side lobe, DC – 18GHz low side loble level.

25. Digitizing Oscilloscope
    - Frequency band 500MHz
    - Four – channel stoarge
    - GB.IB

26. Antenna design software

27. RCS measurement & calculation software

28. Digital & microwave design software

29. Absorbing material 50dB attenuation

	Description	Unit Price US$
1.	Synthesized Signal generator	90000.00
2.	Noise figure meter	75000.00
3.	Synthesized microwave sweeper	82000.00
4.	Spectrum analyzer	120000.00
5.	Spectrum analyzer	240000.00
6.	Network analyzer	170000.00
7.	Test set	300000.00
8.	Digital Power meter	13000.00
9.	Power sensor	7000.00
10.	Color plotter	90000.00
11.	Antenna & RCS	320000.00
12.	Microwave counter	62000.00
13.	Pulse/CW microwave counter	40000.00
14.	Digitizing oscilloscope	25000.00
15.	HP 82350A Card	2000.00
16.	Network analyzer	200000.00
17.	Pulse generator	20000.00
18.	ARAMIS near field antenna test facility	40000.00
19.	Strip line PCB matching & drilling	13000.00
20.	ALTRA low RCS target positions	13000.00
21.	Compact range illumination Antenna & PCS test facilities software	60000.00
22.	Frequency counter	70000.00
23.	Synthesized equivalent to HP 8340, 8341	70000.00
24.	High precision antenna side lamp – 30 dB up to 8 GHz	56000.00
25.	Digitizing oscilloscope	30000.00
26.	Antenna design software	35000.00
27.	RCS measurement & calculation software	25000.00
28.	Digital & Microwave design software	48000.00
29.	Absorbing material 50 dB	8000.00

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Ref.: TT/ALBA/2000/032 24.06.2000

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Ref: **Your Letter No. A/1214 dtd. 02.05.2000**

Dear Sirs,

In reference to the above mentioned subject and to our letter No. TT/ALBA/2000/027 dtd. 21.05.2000.

1. Please inform us your reply to the above mentioned letter.
2. We enclosed herewith some information, which have been quoted from the Internet. Kindly peruse it.

Waiting for your favourable response.

With Best Regards,
For Technology Trading S.A.

Authorized Signatory

FACT SHEET

USAF Fact Sheet

C-5 Galaxy

Mission

With its tremendous payload capability, the gigantic C-5 Galaxy, an outsized-cargo transport, provides the Air Mobility Command intertheater airlift in support of United States national defense.

Features

The C-5 is one of the largest aircraft in the world. It can carry outsized cargo intercontinental ranges and can take off or land in relatively short distances. Ground crews can load and off load the C-5 simultaneously at the front and rear cargo openings since the nose and aft doors open the full width and height of the cargo compartment. It can also "kneel down" to facilitate loading directly from truck bed levels. Other features of the C-5 are:

- High flotation landing gear with 28 wheels sharing the weight.
- Full width drive-on ramps at each end for loading double rows of vehicles.
- An automatic trouble-shooting system that records and analyzes information and detects malfunctions in more than 800 test points.
- Able to take off fully loaded within 8,300 feet (2,530 meters) and land within 4,900 feet (1,493 meters).

The C-5 is similar in appearance to the smaller transport aircraft, the C-141 Starlifter, although the C-5 is much larger. Both aircraft have the distinctive high T-tail, 25-degree wing sweep and four turbofan engines mounted on pylons beneath the wings.

The Galaxy carries nearly all of the Army's combat equipment, including such heavy oversized items such as its 74-ton mobile scissors bridge, from the United States to any theater of combat on the globe.

Four TF-39 turbofan engines power the big C-5. They are pylon-mounted and rated at 41,000 pounds thrust each. They weigh 7,900 pounds (3,555 kilograms) each and have an air intake diameter of more than 8.5 feet (2.6 meters). Each engine pod is nearly 27 feet long (8.2 meters).

The Galaxy has 12 internal wing tanks with a total capacity of 51,150 gallons (194,370 liters) of fuel -- enough to fill more than six regular size railroad tank cars. The fuel load weighs 332,500 pounds (150,820 kilograms) allowing the C-5 with a load of 204,904 pounds (92,207 kilograms) to fly 2,150 nautical miles, offload, and fly to a second base 500 nautical miles away from the original destination -- all without aerial refueling. With aerial refueling, crew endurance is the only limit to the aircraft's range.

Background

Lockheed-Georgia Co. delivered the first operational Galaxy to the 437th Airlift Wing, Charleston Air Force Base, S.C. in June 1970. C-5s are stationed now at Altus AFB, Okla.; Dover AFB, Del.; Travis AFB, Calif. and Kelly AFB, Texas. AMC transferred some C-5s to the Air Reserve starting with Kelly AFB, in 1985; followed by Stewart Air National Guard Base, N.Y. and Westover Air Reserve Base, Mass.

In March 1989, the last of 50 C-5B aircraft were added to the 76 C-5A's in the Air Force's airlift force structure. The C-5B includes all C-5A improvements as well as more than 100 additional system modifications to improve reliability and maintainability. All 50 C-5B's are scheduled to remain in the active-duty force, shared by comparably sized and collocated Air Force Reserve associate units.

The C-5, C-17 Globemaster III and C-141 Starlifter are partners of AMC's strategic airlift concept. The aircraft carry fully equipped, combat-ready military units to any point in the world on short notice then provide field support required to help sustain the fighting force.

General Characteristics

Primary function: Outsized cargo transport
Contractor: Lockheed Georgia Co.
Power Plant: Four General Electric TF-39 engines
Thrust: 41,000 pounds, each engine
Wingspan: 222.9 feet (67.93 meters)
Length: 247.1 feet (75.3 meters)
Height: 65.1 feet (19.84 meters) (at tail)
Cargo Compartment: height, 13.5 feet (4.11 meters); width, 19 feet (5.79 meters); length, 143 feet, 9 inches (43.8 meters)
Takeoff/Landing Distances: 8,300 feet (2,530 meters) takeoff fully loaded; and 4,900 feet (1,493 meters) land fully loaded
Pallet Positions: 36

Speed: 518 miles per hour (.68 Mach)
Range: 6,320 nautical miles (empty)
Crew: 7 (pilot, co-pilot, two flight engineers and three loadmasters)
Unit Cost: C-5B, $184.2 million (FY96 constant dollars)
Date Deployed: June 1970 (operational)
Inventory: unavailable

Point of Contact

Air Mobility Command, Public Affairs Office; 502 J Street; Scott AFB, Ill. 62225-5335; DSN 576-5003 or (618) 256-5003.

keywords:aircraft, cargo

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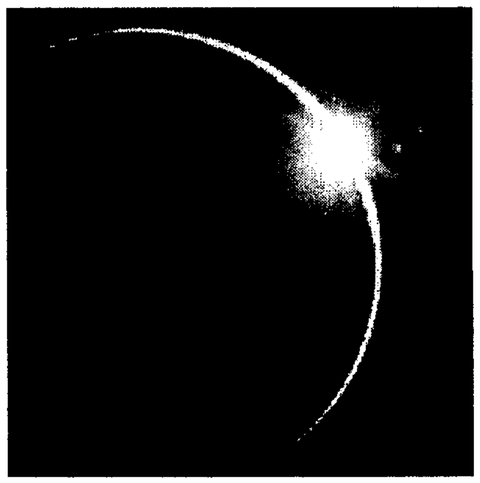

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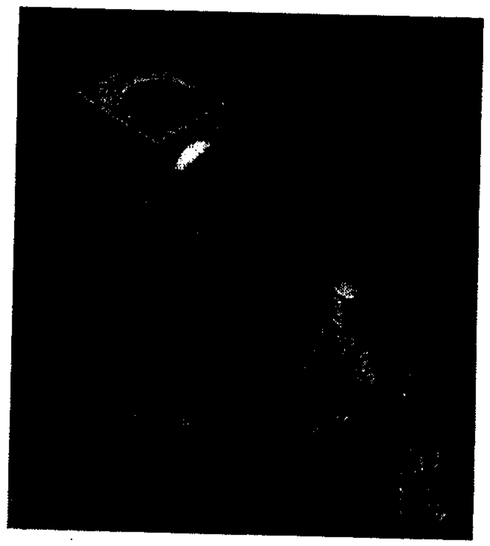

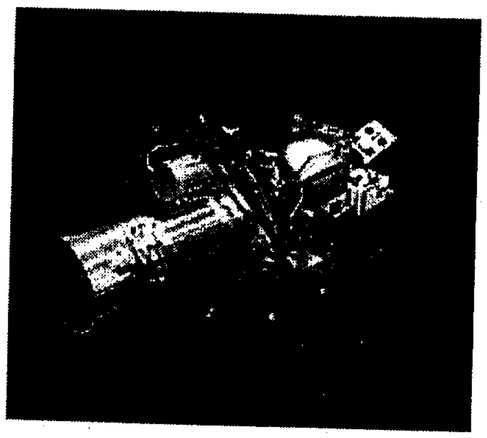

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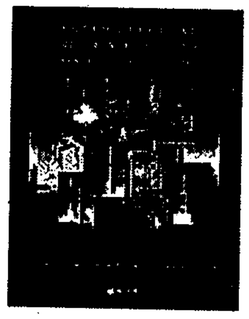

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Flare dispenser guards C-5 from air-to-air, surface-to-air missiles

Released: 15 May 2000

by Hal McKenzie
Warner Robins Air Logistics Center Public Affairs

ROBINS AIR FORCE BASE, Ga. (AFPN) -- Members of the C-5 Management Directorate's Modernization Division and the Electronic Warfare Management Directorate here are equipping many of the Air Force's C-5 Galaxy cargo planes with a state-of-the-art defense against surface-to-air and air-to-air missiles.

The C-5 Airlift Defense System combines the AAR-47 Missile Warning System with the ALE-47 Countermeasure Dispensing System. The Modernization Division serves as system program office while the Electronic Warfare Directorate is item manager.

According to Division Chief Roger Saucedo, "During one of our campaigns one of the C-5s was locked on by a surface-to-air missile. The threat was noticed. As a result there was a mandate to install the C-5 Airlift Defense System on all 50 C-5Bs," as well as one C-5A, he said. The modification focuses on the C-5Bs because they are more frequently deployed in Europe and Asian theaters.

"This provides surface-to-air or air-to-air warning and protection. It detects incoming missiles and dispenses decoys to distract the missile," Saucedo said.

Project Manager Alex Mendoza said each craft is equipped with 12 flare dispensers armed with six flares each, four under each wing and four under the nose. The system's sensors detect the missile while its software identifies the nature of the threat and cues the dispensers to shoot flares automatically to counter it.

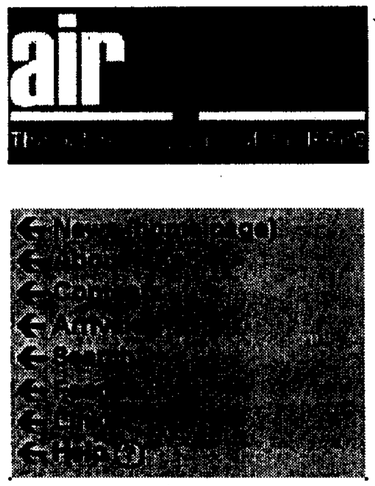
The work is contracted to Boeing Aircraft Company from its plant in Shreveport, La. So far they have modified 35 aircraft with 16 to go, with the work to be complete on March 1, 2001.

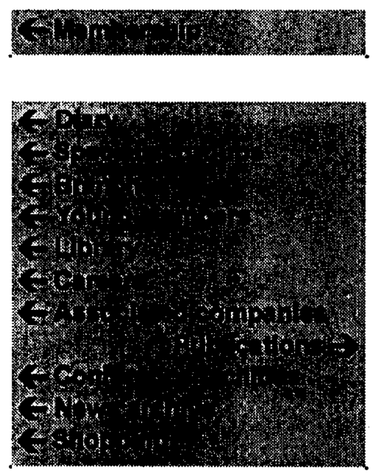
Although the giant heavy-lift jet normally operates out of range of standard anti-aircraft batteries, it may be at risk from terrorists wielding portable shoulder-fired missiles.

Mendoza said the system would work best against the shoulder-fired Stinger or Redeye missiles and their Soviet-made counterparts, but will give warning against any missile.

"Every threat has a different signal, a different algorithm we go by to determine what the threat is," he said. "The software detects what kind it is and how the flares will be dispensed to avoid that threat.

"We're always working to improve the system. We have two system upgrades that are happening now. It gives us better threat protection and avoids false alarms," he said.





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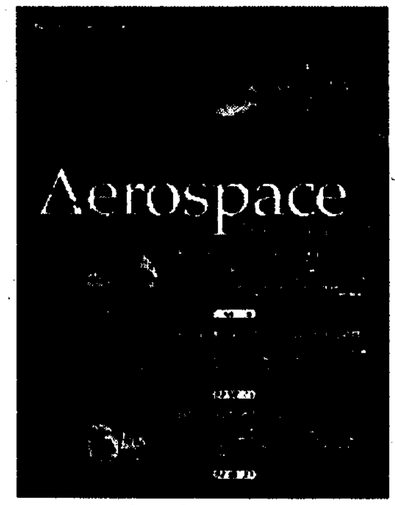

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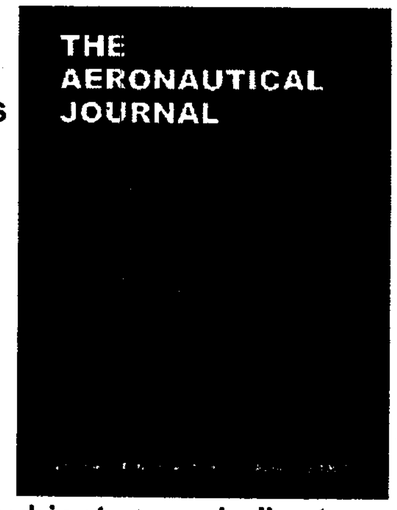

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نؤكد أهمية الموضوع وأعلمتنا إجابتكم بالرغبة

المبدئية مع التقدير

منير محمد جواد

المدير المفوض

٢١/٥/٢٠٠٢

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971-4-397 1476 FAX : 971-4-397 3845

Date: 18.06.2000

Ref.: TT/ALBA/2000/031

Al-Bashair Trading Company Ltd.,
Baghdad.

Sub..: Offer for Enq. No. 446/2000
Closing Date : 18.06.2000

Dear Sirs,

In reference to the above mentioned subject, we are pleased to submit our offer as per the specifications mentioned in the tender as below:

- Item : Air Dryer
  - -Manufacturer : SABROE
  - -Unit price : USD 9,625
  - -Quantity : 1 No.
  - -Total Price : USD 9,625 C&F Baghdad.

- Item : Compressor
  - -Unit Price : USD 56,000
  - -Quantity : 2 Nos.
  - -Total Price : USD 112,000 C&F Baghdad

PAYMENT : CASH
GRAND TOTAL PRICE : USD 121,625 C&F BAGHDAD
DELIVERY : 5 - 6 MONTHS
VALIDITY : UP TO 17.07.2000

We now are looking forward to hear from you soon.

With Best Regards,
For Technology Trading S.A.,

Technology Trading S.A. Luxembourg

Authorized Signatory

Regd. Office : 19, Rue Aldringen, L.1118 LUXEMBOURG

17 JUNE, 2000

FAXED 17-06-2000

From ~~TO~~ : MR. MUNTASIR AWNI
TO ~~FROM~~ : G. CHOCKALINGAM

PLS. Send Technical offer also with details. regards.

COMMERCIAL OFFER
FOR THE ENQUIRY NO. 446/2000
OF CLOSING DATE 18 JUNE 2000.

❖ ITEM : AIR DRYER (SABROE MAKE)
UNIT PRICE : USD 7700.00
QTY. : 1 NO.
TOTAL PRICE : USD 7700.00

+ 25%

❖ ITEM : COMPRESSOR
UNIT PRICE : USD 45000.00
QTY. : 2 NOS.
TOTAL PRICE : USD 90000.00

TOTAL COST : USD 97700.00
DELIVERY : 5/6 MONTHS
VALIDITY : 17 JULY 2000

WITH REGARDS,

for [illegible]

FAXED 24.05.2000

24.05.2000

To: Mr. G. C. C
Fr: Muntasir Awni

Please do the needful for the following as soon as possible:-

Eng. No.: 445/2000
Closing Date: 18.06.2000

1. Flame Monitor, type durag 48 V D.C NR 48 644 BABCOCK. Qty.: 4 Pcs.
2. Photo Cell (Durag) type D-LF 480-20. Qty.: 4 Pcs.
3. Solenoid Valve, one way (normal close) 48 V D.C Din ¼".
4. Air Damper System, mechanical part system and type SA-4.
   IP 65, NR 61770, Schtte. A moment- 2- 4A
   UIHUB eingestellt R-5.
   Electrical Part System 2-D 56, 3 ~ 220 V 0-57 KW
   2800 mh, motor No. 2 - 1620 x 0 -76
   IP 65-2-3 I-3A Cos - 73 Qty.: 4 Pcs.

Eng. No.: 446/2000
Closing Date: 18.06.2000

Compressed Air Drier Type SU 2SSA
Manuf: SABROE

1. Max. permissible operating pressure, air side without condensate draining = 25 bar.
2. Max. permissible ambient temp. = 43 °C
   Min. permissible ambient temp. = 2 °C
3. Operating V (3 ph) = 380 V
4. F= 50 Hz
5. Max. current = 3 H
6. Electric Power I/p, when ambient = 1.26 KW temp.=27 °C.
7. Safety refrigerant = R 12
8. Qty. of Safety refrigerant = 4.2 Kg
9. Selling of high pressure control off = 2 – 94 bar abs (- 2 °C) on 3.18 bar abs (+6 °C). Qty.: 1

Complete Dry Running piston compressor with control board.
Qty.: 2
Type/Oil Free
Q: 280 m^3/hr

مساحة غير مشغولة ...

SAKHAD

1- Flame monitor, type Durag 48 V D-C
N.R 48 644 BABCOCK. Qty 4 Pcs
2- Photo Cell (Durag) type D-LE 480 -2 Qty 4 Pc
3- solenoid valve, one way (normal close) 48 V D-C
Dia 1/2" Qty 16 Pcs
4- Air damper system, mechanical part system
and type - SA 4
IP 65, Nr 61770, schtte A moment - 4A
UHUB eingestellt 12-5
Electrical part system 2 - D 56, 3 ~ 220 V 0-57 KW
2800 mh, motor No 201620 8 0.76
IP 65 2-3 1-3 A Cos φ -73 Qty 4 Pcs

المقاولة ٥٤٤/٢٠٠٢
الفلق ١٨/٦/٢٠٠٢

Compressed air driver type SU 255 M

Unit [illegible]

1. Max permissible operating pressure for [illegible] condensate draining = 25 bar

2. Max permissible ambient temp = 43°C

3. Min " " " = 2°C

4. Operating V (3ph) = 380 V

5. f: 50 Hz

6. Max current 31 A

7. Electric power VP when ambient = 126 W temp 29°C

8. Safty refrigerant = R12

9. Qty of " = 4.2 kg

10. Setting of high fresure control off = 2.94 bar abs (−2°)

on 3.81 bar abs (+6°).

(4 [illegible])

② Complete Dry running piston compresser with control board.

Qty = 2

type/ oil free

Q: 280 m^3/hr

استاذ محمد
٥/٢٤

June 1, 2000

TO : MR. MUNTSAIR AWNI

FROM : G.CHOCKALINGAM

Sub: **Enquiry No. 446 /2000 closing date 18/6/2000**

Dear sir,

1. **Flame Monitor** : You are requested to provide us the exact model type of the item.

Model No : D-UV 460

2. **Photo Cell** : You are requested to provide us the exact model type of the item. Kindly confirm whether it is D-LE 460-20 or D-LF 480-20.

Since Model No. D-LF 480-20. does not exist.

4. **Air Damper System** : You are requested to provide us the complete specifications with the drawing.

TYPE SAH

Please send us all the required information at the earliest since closing date is very near.

Regards,

متابعة

م/ب/ ثروة الأستاذ عماد لتحصيل
أجابة عن الاستفسارات بالسرعة
الممكنة .

٤/٦/٢٠٠٠

June 1, 2000

TO : MR. MUNTSAIR AWNI

FROM : G.CHOCKALINGAM

Sub: **Enquiry No. 445 /2000 closing date 18/6/2000**

Dear sir,

1. **Flame Monitor** : You are requested to provide us the exact model type of the item.

Model No. : D-.....

2. **Photo Cell** : You are requested to provide us the exact model type of the item. Kindly confirm whether it is D-LE 460-20 or D-LF 480-20.

Since Model No. D-LF 480-20. does not exist.

4. **Air Damper System** : You are requested to provide us the complete specifications with the drawing.

Please send us all the required information at the earliest since closing date is very near.

Regards,

أولويات الصنف المقدمة
للمصافي بتاريخ ٤/٦/٢٠٠١

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

04.06.2000

Ref.: TT/ALBA/2000/029

To:

Al-Bashair Trading Company Ltd.,
Baghdad.

Sub: OFFERS FOR FIVE MINI REFINERIES

Dear Sirs,

With reference to the above mentioned subject, we are pleased to submit our Technical & Commercial offers for following items:-

Sl. No.	Description	Quantity for One Unit	Price In USD for One Unit	Price In USD for Five Units
1.	Tube Bundle	5	356,193.00	1,780,965.00
2.	~~Elow Fan~~	3	61,300.00	306,500.00
3.	Rolled Joint	64	223,520.00	1,117,600.00
4.	Pumps	78	605,454.00	3,027,270.00
5.	Instrumentation	Total Quantity 2,712 and we are ready to supply you all the quantities mentioned in the tender.		2,998,312.50
	Grand Total Price In USD			9,230,647.50

COMMERCIAL TERMS & CONDITIONS

- Price Basis : C&F Baghdad
- Delivery : Partial shipment will start from the 6th month from the date of deposit and shall be completed by the 9th month.
- Validity : 30 days.
- Payment : 25% from the grand total price of our above mentioned offers should be paid by cash when the material will reach client's stores at Baghdad.
  : 75% will be paid according to the client's payment conditions.

Kindly we are enclosed herewith the details of the Technical & Commercial offers for the above items.

With Best Regards,
For Technology Trading S.A

Technology Trading S.A. Luxembourg

Authorized Signatory

1. TUBE BUNDLE

Sl. No.	Tag No.	Details	Qty.	C&F Site	
				Unit price USD	Total price USD
1.	E-106 A/B	Overhead Condensor	10	139,398	1,393,980
2.	E-107	Kerosene cooler	5	25,840	129,200
3.	E-108	Diesel cooler	5	36,307	181,535
4.	E-109	Naphtha cooler	5	15,250	76,250
Grand total price USD					**1,780,965**

2.A. FLOW FAN

Sl. No.	Description	Qty.	Unit Price US $ C&F Baghdad	Total Price US $ C&F Baghdad
1	Axial Flow Fan Speed of Motor Rpm 308/154 Fixed Blade	5	29,000	145,000

2.B FLOW FAN

Si. No.	Description	Qty.	Unit Price US $ C&F Baghdad	Total Price US $ C&F Baghdad
1	Adjustable Pitch Flow Fan. (E-106).	5	20,000	100,000

2.C FLOW FAN

Si. No.	Description	Qty.	Unit Price US $ C&F Baghdad	Total Price US $ C&F Baghdad
1	Fixed Blade (E-106).	5	12,300	61,500

SPECIFICATION FOR TUBE BUNDLE (E-106)

Service	Overhead Condenser (Tube Side)
Total Flow Rate	81,756 HC+1150 H2O lb/hr
Design Temperature	300 °F
Design Pressure	40 Psig
Test Pressure	60 Psig
Hydrostatic Test	ASME Sec V III Div 1
No. of tube (Fin Tube)	267
No. of Tube Passes	2
No. of Tube Rows	6
Header Type	Box Plug
Corrosion Allowance	1/8"
Total Air	384000 CFM (air side) for two bundles
Temp. In/out	115/164.5 °F (air side)
Tube O.D.	1" Mat : SA-214 Guage 12 BWG Length 40 Ft. Pitch 2.1/2" No. of fins 10 per inch Fin O.D. 2.1/4" Fin Type Footed Fin Material Aluminium
Box. Type Headers :-	
Shell Material	SA 516-70 thick 7/8" Allowance 1/8"
Dimension	Length 9-5", Height 13.3/4" , Width 6"
Tube - Plug Sheets	7/8" Thick with double groove tube holes
Material	SA 516 : 70
Min. thick/Corrosion Allowance	0.5"/0.125"

NOZZLE AND INSPECTION OPENING

Purpose	No.	Size	Type	Material	How attached	Location
Inlet	2	8"	WNRF 150#	SA 105	Welded	Top (Front Header)
Outlet	2	4"	WIRF 150#	SA 105	Welded	Bottom (Front Header)
Vent	1	3/4"	Cplg 6000#	SA 105	Welded	Top (Back Header)
Drain	1	3/4"	Cplg 6000#	SA 105	Welded	Bottom (Back Header)
P.I	1	1/2"	Cplg 6000#	SA 105	Welded	Top (Back Header)

Quantity : 2 Nos.

SPECIFICATION FOR TUBE BUNDLE (E-107)

Service	Kerosene Cooler (Tube Side)
Total Flow Rate	19,490. lb/hr
Design Temperature	500 °F
Design Pressure	130 Psig
Hydrostatic Test	195 psi
No. of tube (Fin Tube)	90
No. of Tube Passes	12
No. of Tube Rows	4
Header Type	Box Plug
Corrosion Allowance	1/8"
Total Air	52032 lb/hr (air side)
Temp. In/out	115/185.6 °F (air side)
Tube O.D.	1" Guage 14 BWG Tube Length 20'. Pitch 2.1/4" No. of fins 10.5 per inch Fin O.D. 2.1/4" Floor area (max.) 13x19 (FtxFt)
Box. Type Headers :- **Shell Material**	SA 516-70 Thick. 1" Corrosion allowance 0.125"
Back Header Dimensions	Length (4'.5" 5/8) , Higth 8" , width 6"
Front Header Dimensions **Top Section Length** **Bottom Section Length**	 Length 4'. 5 5/8", Height 4", Width 6" Length 4'. 5 5/8", Height 6", Width 6"
Tube	Plug Sheets (Double Groove Tube Sheet)
Material	SA 516 70
Min. thick/Corrosion Allowance	0.5"/0.125"

NOZZLES AND INSPECTION OPENINGS

Purpose	No.	Size	Type	Material	Nom. Thick	How attached	Location
Inlet	1	3" 150#	RESO	SA 105	0.437"	Welded	Top (Front Header)
Outlet	1	3" 150#	RFSO	SA 105	0.437"	Welded	Bottom (Front Header)
Vent	1	3/4"	Cplg 6000#	SA 105	-	Welded	Top (Back Header)
Drain	1	3/4"	Cplg 6000#	SA 105	-	Welded	Bottom (Back Header)

Tube : 1" O.D x 0.085 , M.W , SA - 214 with Aluminium Fins

SPECIFICATION FOR TUBE BUNDLE (E-108)

Service	Diesel Cooler (Tube Side)
Total Flow Rate	33,630. lb/hr
Design Temperate	550 °F
Design Pressure	115 Psig
Test Pressure	175 Psig
Hydrostatic Test	ASME Sec V III Div-1
No. of tube (Fin Tube)	134
No. of Tube Passes	12
No. of Tube Rows	4
Header Type	Box Plug
Corrosion Allowance	1/8"
Total Air	76917 lb/hr (air side)
Temp. In/out	115/205.1 °F (air side)
Tube O.D.	1" Guage 14 BWG Length 20 Ft. Pitch 2.1/4" No. of fins 10.5 per inch Fin O.D. 2.1/4" Floor area (max.) 13x19 (FtxFt)
Box. Type Headers :- **Shell Material**	SA 516-70
Back Header Dimensions **Top Section Length** **Bottom Section Length**	 length 6'.5", Height 2", Width 6" length 6'-5", Height 6", Width 6"
Tube	Plug Sheets
Material	SA 516 : 70
Min. thick/Corrosion Allowance	0.5"/0.125"

NOZZLES AND INSPECTION OPENINGS

Purpose	No.	Size	Type	Material	Nom. Thick	How attached	Location
Inlet	1	3" 150#	RFSO	SA 105	0.437"	Welded	Top (Front Header)
outlet	1	3" 150#	RFSO	SA 105	0.437"	Welded	Bottom (Front Header)
Vent	1	3/4"	Cplg 6000#	SA 105	-	Welded	Top (Back Header)
Drain	1	3/4"	Cplg 6000#	SA 105	-	Welded	Bottom (Back Header)
P.I	1	1/2"	Cplg 6000#	SA 105	-	Welded	Top (Back Header)

Tube : 1" OD x 0.11 , SA - 214 with Aluminium Fins

Qty : 1 Nos.

SPECIFICATION FOR TUBE BUNDLE (E-109)

Service	Heavy Naphtha Cooler (Tube Bundle)
Total Flow Rate	14,929. lb/hr
Design Temperate	375 °F
Design Pressure	150 Psig
Test Pressure	175 Psig
No. of tube (* Fin Tube)	46
No. of Tube Passes	8
No. of Tube Rows	4
Total Air	27147 lb/hr (air side)
Temp. In/out	115/169.3 °F (air side)
Box. Type Header :- **Back Header Dimensions** **Front Header Dimensions**	 Length 2-3 1/2", Height 8", Width 6" Section Length 2-3 1/2", Height 8", Width 6"
Qty.	1 No.

NOTE : ALL SPECIFICATIONS SAME AS FOR E-222 EXCEPT THE ABOVE.

TECHNICAL SPECIFICATION FOR AXIAL FLOW FAN
For [E-106]

Sl. No.	Description	E-106
1	Qty	2 NOS.
2	SERVICE	OVERHEAD CONDENSER
3	SP.G	105 Pa Temp.46 °C
4	STAGES	ONE
5	FLOW FAN	214,000 ACFM FOR EACH
6	PITCHES	AUTOMATIC VARIABLE
7	MOTOR DRIVE	30 H.P., 380V, 3 PHASE, 50 HZ
8	SIZE	168"
9	EXP. HAZARD	ZONE II EXD. GAS/TEMP. GROUP II AT3
10	ENCLOSURE	TEFC, WP, TO IP 55
11	INSULATION CLASS	H, TEMP. RISE TO CL.B
12	DESIGN AMBIENT TEMP.	50 °C

Note :

2. Fans shall be equipped with a vibration switch.
2. Pneumatic Positioner, I/P Signal open (0.21) - close (0.6) Bar_g
   Positioner :direct or reverse action.
3. Adjustable pitch provided.

TECHNICAL SPECIFICATION FOR AXIAL FLOW FAN
For [E-106]

Sl. No.	Description	E-106
1	Qty	2 NOS.
2	SERVICE	OVERHEAD CONDENSER
3	SP.G	105 Pa Temp.46 °C
4	STAGES	ONE
5	FLOW FAN	214,000 ACFM FOR EACH
6	PITCHES	AUTOMATIC VARIABLE
7	MOTOR DRIVE	30 H.P., 380V, 3 PHASE, 50 HZ
8	SIZE	168"
9	EXP. HAZARD	ZONE II EXD. GAS/TEMP. GROUP II AT3
10	ENCLOSURE	TEFC, WP, TO IP 55
11	INSULATION CLASS	H, TEMP. RISE TO CL.B
12	DESIGN AMBIENT TEMP.	50 °C

Note :

1. Fans shall be equipped with a vibration switch.
2. Fixed Blade

TECHNICAL SPECIFICATION FOR AXIAL FLOW FAN
For [E-107, E-108 & E-109]

Sl. No.	Description	E-107, E-108, E-109
1	Qty	1 NO.
2	SERVICE	HEAVY NAPTHE COOLER
3	SP.G	125 Pa Temp. 46 °C
4	STAGES	ONE
5	FLOW FAN	172,000 ACFM
6	PITCHES	ADJUSTABLE
7	MOTOR DRIVE	30/7.5 H.P., 380V, 50 HZ; 3 PHASE
8	SIZE	144"
9	SPEED	308/154 RPM
10	EXP. HAZARD	ZONE II EXD. GAS/TEMP. GROUP II AT3
11	ENCLOSURE	TEFC, WP, TO IP 55
12	INSULATION CLASS	H, TEMP. RISE TO CL.B
13	DESIGN AMBIENT TEMP.	50 °C

Note :
Fans shall be equipped with a vibration switch.

3. ROLLED JOINT

Sl. No.	Description	Qty. (Nos.)	Unit Price USD	Total Price USD
1.	Tufcor type 1.500# Series Muleear rolled joint return 4" O.D x 7" c/c A 216/WCB	150	2,880	432,000
2.	Tufcor type 1.500# Series Muleear rolled joint return 4" O.D x 7" c/c A 217/C5	30	3,000	90,000
3.	Tufcor type 1.500# Series Muleear rolled joint return 4" O.D x 4 1/2" O.D x 8"c/c A 217/C5	10	4,800	48,000
4.	Tufcor type 1.500# Series Muleear rolled joint return 4 1/2" O.D x 8"c/c A 217/C5	70	4,170	291,900
5.	Tufcor type 1.500# Series Muleear rolled joint return 5 9/16" O.D x12"c/c A 217/C5	60	3,900	234,000
6.	4", Sch 40, L.R 180° Return, A-234/WP5, C/C 12" Thickness 0.237"	50	434	21,700
	GRAND TOTAL PRICE USD			**1,117,600**

4. PUMPS (CENTRIFUGAL, DOSING & GEAR PUMPS)

Sl. No.	Item No.	Liquid Handled	Qty. Nos.	Price In USD C&F Baghdad		Remarks
				Unit	Total	
1	P-101 A/B	Crude Oil	2	14,122	28,244	
2	P-102 A/B	Crude Residue	2	10,552	21,104	
3	P-103 A/B	Diesel	2	9,423	18,846	
4	P-104 A/B	Kerosene	2	15,093	30,186	
5	P-105 A/B	Heavy Naphtha	2	11,025	22,050	
6	P-106 A/B	Naphtha	2	15,802	31,604	
7	P-107 A/B	Fuel Oil	2	2,058	4,116	Gear Pump
8	P-108 A	Inhibitor Nalco – 165	1	2,257	2,257	Dosing Pump
9	P-108 B	Inhibitor Nalco – 193	1	2,257	2,257	Dosing Pump
10	P-109	W. C. Hydro Carbon	1	4,725	4,725	
11	P-110 A/B	Naphtha	2	4,882	9,764	
12	P-111 A/B	Caustic	2	8,116	16,232	
13	P-112 A/B	Caustic	2	3,423	6,846	
14	P-113 A/B	Light Naphtha	2	14,910	29,820	
15	P-114 A/B	Kerosene	2	4,210	8,420	
16	P-115 A/B	Caustic Sol.	2	2,310	4,620	
17	P-116 A/B	Water Make Up	2	2,310	4,620	
18 (a)	P-117 A	Caustic	1	3,486	3,486	
18 (b)	P-117 B	Methanol	1	6,000	6,000	
19	P-118 A/B	Water	2	6,436	12,872	

Sl. No.	Item No.	Liquid Handled	Qty. Nos.	Price In USD C&F Baghdad		Remarks
				Unit	Total	
20	P-119 A/B	Gasoline	2	11,025	22,050	
21	P-120 A/B	Gasoline	2	11,865	23,730	
22	P-121 A/B	Kerosene	2	11,865	23,730	
23	P-122 A/B	Diesel	2	11,340	22,680	
24	P-123 A/B/C	Fuel Oil	3	10,238	30,714	Gear Pump
25	P-221	Water	1	5,076	5,076	
26	P-222	Water	1	3,885	3,885	Dosing Pumps
27	P-231 A/B	Water	2	3,738	7,476	Vertical
28	P-232	Water	1	4,830	4,830	
29	P-327 A/B	Water	2	4,740	9,480	
30	P-328 A/B	BFW	2	11,022	22,044	
31	P-329	Caustic	1	3,864	3,864	
32	P-333 A/B	Water	2	7,455	14,910	
33	P-334 A/B	Caustic	2	3,685	7,370	
34	P-335 A	Water	1	21,105	21,105	Motor Driven
35	P-335 B	Water	1	21,735	21,735	Engine Driven
36	P-336	Water	1	11,256	11,256	
37	P-342 A/B	Methanol Injected	2	2,625	5,250	Dosing Pumps
38	P-343 A/B	Anti Corrosion	2	3,150	6,300	Dosing Pumps
39	P-344 A/B	Methanol Injection	2	4,725	9,450	Dosing Pumps
40	P-361 A/B	Gasoline	2	8,925	17,850	Centrifugal
41	P-362 A/B	Kerosene	2	8,715	17,430	Centrifugal
42	P-363 A/B	Diesel	2	3,528	7,056	Centrifugal
43	P-364 A/B/C	Fuel Oil	3	6,038	18,114	Gear Pump
Grand Total In USD					**605,454**	

SULZER PUMPS

Division of Sulzer Brothers

Sulzer Pumps India Ltd

QUOTATION NO OPB 002026

Date 16.02.2000 Page 01 of 09

FAXED

1	Sr. No.	1.0	2.0	3.0	4.0
2	Item No.	P-101 A/B	P102 A/B	P-103 A/B	P-104 A/B
3					
4	Quantity	02	02	02	02
5	Pump Type	ZE80-2375	ZE100-3500	ZE 50-2200	ZE 50-4450
6	Liquid	Crude Oil	Crude Residue	Diesel	Kerosene
7					
8	Temperature °C/F	32	288	235	193
9	Sp Gr at P.T	0.84	0.81	0.68	0.63
10	Viscosity cP/CST	6.1	0.95	0.38	0.5
11	Vapour Pr(A)kg/cm² mm hg	NOT GIVEN			
12	Rated Capacity m³/hr	77.22	51.6	30	17
13	Diff Head m	120	78	43.05	70.3
14	Suction Pressure kg/cm²	NOT GIVEN			
15	Discharge Pressure kg/cm²	NOT GIVEN			
16	NPSH Available m.	>2.5	1.5	>2	1.2
17	NPSH Required m	2.0	0.5	1.4	0.5
18	Rated Imp Dia. mm/Type	315 Trim/Closed	500 Trim/Closed	198 Trim/Closed	458 Trim/Closed
19	BKW Water	43.9	27.42	6.28	13.02
20	BKW Liquid	36.9	22.21	4.27	8.2
21	Shut Off Head m	129	80	45	71.5
22	Safe minimum flow m³/hr	28	28	8.0	7.0
23	Efficiency %	67.5	40	56	25
24	Motor KW/RPM	45 / 2950	30 / 1475	5.5 / 2950	11 / 1475
25	Suction Size mm/Position	100 / END	150 / END	80 / END	100 / END
26	Rating/Drilling	ASA 300# / ANSI B16.5			
27	Discharge Size mm/Position	80 / TOP	100 / TOP	50 / TOP	50 / TOP
28	Rating/Drilling	ASA 300# / ANSI B16.5			
29	Mounting / Setting	HORIZONTAL			
30	Casing Support	CENTERLINE			
31	Special Feautures	DRAIN PLUG			
32					
33					
34	Bearing/Lubrication	NORMAL/OIL			
35	Coupling/Guard				
36	Shaft Seal EPIL/DURA	Metaflex / Aluminium			
37	Flushing Plan	P13C / TC	11 C S / C		P13C / TC
38	Cooling Plan	11, 6	02, 62		02, 62
39	Driver CGL/KEC Ex 'd'	STD FLP motor	G Suitable 380V	G ±10%, 50Hz±5%	E 3φ, F, T3, Gas Group IIA/IIB
40	Performance Curve	D1700.25.01/2	D1700.33.02/3	D1700.17.01/2	D1700.62.02/3
41					
42					
43	Casing+Cover	CS	CS	CS	CS
44	Impeller / Diffuser	CS / —	CAGNM / —	CS / —	CS / —
45	Wear Ring (Impeller) / Wear Ring (Casing)	410 / Alloy 410 (H)	410 / 410(H)	410 / 410(H)	410 / 410(H)
46	Shaft / Shaft Sleeve	EN-19 / DIS 1410(H)	EN-19 / 410(H)	EN-19 / 410(H)	EN-19 / 410(H)
47	Drain Plug.	Steel.	Steel.	Steel.	Steel.
48					
49		UNIT PRICES IN RS.			
50	Pump				
51	Accessories (B.P+Cplg+Fb)				
52	Mech Seal				
53	Driver				
54	FL/Qn/CL PLANS (IF APPLICABLE)				
55	Performance + Hydrotest				
56	NPSH Test (If applicable)				
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

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For SULZER PUMPS INDIA LIMITED

SM/MKT/SFF050

SULZER PUMPS

Division of Sulzer Brothers

Sulzer Pumps India Ltd

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1	Sr No	5.0	6.0	7.0	8.0
2	Item No.	P-105 A/B	P-106 A/B	P-109	P-110 A/B
3					
4	Quantity	02	02	01	02
5	Pump Type	ZE 40-2250	ZE 100-3400	ZE25-2215	ZE 40-2250
6	Liquid	Heavy Naptha	Naptha	W.C hydro carbon	Naptha
7					
8	Temperature °C/F	121	66	37.8	38
9	Sp Gr at P.T	0.645	0.66	0.7	0.68
10	Viscosity CP/CST	0.45	0.3	0.3	—
11	Vapour Pr(A)kg/cm² mm hg	←	NOT GIVEN	→	
12	Rated Capacity m³/hr	10.7	69.3	8	14.3
13	Diff Head m	74	50	25.6	84.6
14	Suction Pressure kg/cm²	←	NOT GIVEN	→	
15	Discharge Pressure kg/cm²	←	NOT GIVEN	→	
16	NPSH Available m.	>2.0	1.2	0.85	>2.0
17	NPSH Required m	1.0	0.5	0.35	1.0
18	Rated Imp Dia. mm/Type	250 Trim (Closed)	Trim (Closed)	300 Trim (Closed)	250 Trim (Closed)
19	BKW Water	7.07	15.68	2.23	8.8
20	BKW Liquid	4.56	10.35	1.56	6.0
21	Shut Off Head m	76	52.5	31.5	86
22	Safe minimum flow m³/hr	4.8	18	2.0	4.8
23	Efficiency %	30.5	60.2	25	37.5
24	Motor KW/RPM	7.5 / 2950	15 / 1475	2.2 / 1475	7.5 / 2950
25	Suction Size mm/Position	80 / END	150 / END	50 / END	80 / END
26	Rating/Drilling	←	ASA 300# / ANSI B16.5	→	
27	Discharge Size mm/Position	40 / TOP	100 / TOP	25 / TOP	40 / TOP
28	Rating/Drilling	←	ASA 300# / ANSI B16.5	→	
29	Mounting / Setting	←	HORIZONTAL	→	
30	Casing Support	←	CENTERLINE	→	
31	Special Feautures	←	DRAIN PLUG	→	
32					
33					
34	Bearing/Lubrication	←	NORMAL / OIL	→	
35	Coupling/Guard	←	Metaflex / Aluminium	→	
36	Shaft Seal EPIL / DURA	P13C / SiC	P13C / SiC	P13C / SiC	P13C / SiC
37	Flushing	11, 61	11, 61	11, 61	11, 61
38	Cooling Plan	C	—	—	—
39	Driver CGL / KEC Ex 'd'	STD FLP Motor	Suitable 380V ±10%, 50Hz±5%, 3Φ, F, T3, Ga Group		
40	Performance Curve	D1700.14.01/2	D1700.32.02/3	D1700.68.02/1	D1700.14.01/2
41					
42					
43	Casing + Cover	←	CS	→	
44	Impeller / Diffuser	←	C.S	→	C.S
45	Wear Ring (Impeller) / Wear Ring (Casing)	←	AISI 410	NA	CA6NM / NA
46	Shaft / Shaft Sleeve	←		AISI 410 (H)	AISI410 / AISI410
47	Drain Plug	←	EN-19	AISI 410 (H)	EN-19 / AISI410
48		←	Steel	→	
49					
50	Pump	UNIT PRICES IN RS.			
51	Accessories (B.P + Cplg + Fb)				
52	Mech Seal				
53	Driver				
54	FR / On / CL PLANS (IF APPLICABLE)				
55	Performance + Hydrotest				
56	NPSH Test (If applicable)				
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

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For SULZER PUMPS INDIA LIMITED

SMMKT/SUFO50

SULZER PUMPS

Division of Sulzer Brothers

Sulzer Pumps India Ltd

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1	Sr No	9	10	11	12
2	Item No.	P-112A/B	P-113A/B	P-114A/B	P-111A/B
3					
4	Quantity	02	02	02	02
5	Pump Type	ZE25-0200	ZE50-4450	ZE40-1800	ZE25-2315
6	Liquid	Caustic	Light Naphtha	Kerosene	Caustic
7					
8	Temperature °C/F	37.8	37.8	37.8	37.8
9	Sp Gr at P.T	1.071	0.67	0.77	1.071
10	Viscosity CP/CST	—	0.35	—	—
11	Vapour Pr(A)kg/cm² mm hg	←	NOT GIVEN		→
12	Rated Capacity m³/hr	6.8	13	13.86	6.8
13	Diff Head m	44.4	60	49.28	134
14	Suction Pressure kg/cm²	←	NOT GIVEN		→
15	Discharge Pressure kg/cm²	←	NOT GIVEN		→
16	NPSH Available m	FLOODED	1.0	FLOODED	FLOODED
17	NPSH Requried m	0.8	0.5	3.2	0.3
18	Rated Imp Dia mm/Type	198 Trim/Closed	435 Trim/Closed	198 Trim/Closed	315 Trim/Closed
19	BKW Water	2.46	9.04	4.38	15.05
20	BKW Liquid	2.63	6.06	3.37	16.12
21	Shut Off Head m	48	61	52	136.5
22	Safe minimum flow m³/hr	1.3	7.0	3.5	4.0
23	Efficiency %	33.5	23.5	42.5	16.5
24	Motor KW/RPM	3.7/2950	7.5/1475	5.5/2950	22/2950
25	Suction Size mm/Position	40/END	100/END	80/END	50/END
26	Rating/Drilling	←	ASA 300#	/ ANSI B16.5	→
27	Discharge Size mm/Position	25/TOP	50/TOP	40/TOP	25/TOP
28	Rating/Drilling	←	ASA 300#	/ ANSI B16.5	→
29	Mounting/Setting	←	HORIZONTAL		→
30	Casing Support	←	CENTERLINE		→
31	Special Feautures	←	DRAIN PLUG		→
32					
33					
34	Bearing/Lubrication	←	NORMAL/OIL		→
35	Coupling/Guard	←	Metaflex	/ Aluminium	→
36	Shaft Seal EPIL/DURA	P-13C/Sic	P-13C/Sic	P-13C/Sic	P-13C/Sic
37	Flushing	11,61	11,61	11,61	11,61
38	Cooling Plan	—	—	—	—
39	Driver CGL/KEC Ex 'd'	STD FLP Motor	Suitable 380V	±10%, 50Hz±5%, 3φ, 'F', T3, Gas Group II	
40	Performance Curve	D1700.11.01/2	1700.62.02/3	D1700.13.01/2	D1700.68.01/1
41					
42					
43	Casing+Cover	←	CS		→
44	Impeller / Diffuser	CS / —	CS / —	CA6NM / —	CF8M / —
45	Wear Ring (Impeller) / Wear Ring (Casing)	410 / 410(H)	410 / 410(H)	410 / 410(H)	S.S316 / S.S316
46	Shaft / Shaft Sleeve	EN-19 / 410(H)	EN-19 / 410(H)	EN-19 / 410(H)	S.S316 / S.S316
47	Drain Plug	←	Steel		→ S.S
48					
49		UNIT PRICES IN RS.			
50	Pump				
51	Accessories (B.P+Cplg+Fb)				
52	Mech Seal				
53	Driver				
54	FL/QN/CL PLANS (IF APPLICABLE)				
55	Performance + Hydrotest				
56	NPSH Test (If applicable)				
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

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For SULZER PUMPS INDIA LIMITED

SUMMKT75P/050

SULZER PUMPS

Division of Sulzer Pumps

Sulzer Pumps India Ltd

QUOTATION NO. OPB 002026

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		13	14	15	16
1	Sr No				
2	Item No.	P-117 B	P-118 A/B	P-119 A/B	P 120 A/B
3					
4	Quantity	02	02	02	02
5	Pump Type	ZE 40-160	ZE 25-2315	ZE 100-2315	ZE 40-2315
6	Liquid	methanol (Ro)	Water	Naphtha	Naphtha
7					
8	Temperature °C	37.8	26.7	37.8	37.8
9	Sp Gr at P.T	078 (Ro)	1.0	0.68	0.68
10	Viscosity CP/CST	—		0.35	0.35
11	Vapour Pr(A)kg/cm² mm hg	NOT GIVEN			
12	Rated Capacity m³/hr	21.57	11.35	125	26.1
13	Diff Head m	28.3	88.4	21.2	91
14	Suction Pressure kg/cm²	NOT GIVEN			
15	Discharge Pressure kg/cm²	NOT GIVEN			
16	NPSH Available m.	FLOODED	FLOODED	1.03	1.03
17	NPSH Required m	1.4	0.5	1.0	0.9
18	Rated Imp Dia. mm/Type	158 Trim/Closed	285 Trim/Closed	≈295 /Closed	285 Trim/Closed
19	BKW Water	2.77	11.39	10.54	15.78
20	BKW Liquid	Ro 2.16	11.39	7.17	10.73
21	Shut Off Head m	33.2	99	28	104
22	Safe minimum flow m³/hr	3.0	4.0	13.0	7.5
23	Efficiency %	60.1	24	68.5	41
24	Motor KW/RPM	3.7 / 2950	15 / 2950	9.3 / 1475	15 / 2950
25	Suction Size mm/Position	80 / END	50 / END	150 / END	80 / END
26	Rating/Drilling	ASA 300# / ANSI B16.5			
27	Discharge Size mm/Position	40 / TOP	25 / TOP	100 / TOP	40 / TOP
28	Rating/Drilling	ASA 300# / ANSI B16.5			
29	Mounting /Setting	HORIZONTAL			
30	Casing Support	CENTERLINE			
31	Special Feautures	DRAIN PLUG			
32					
33					
34	Bearing/Lubrication	NORMAL/OIL			
35	Coupling/Guard	Metaflex / Aluminium			
36	Shaft Seal EPIL/DURA	P13 C/S C			
37	Flushing Plan	11, 61			
38	Cooling Plan				
39	Driver CGLIKEC Ex 'd'	STD FLP Motor	Suitable 380V ±10%, 50Hz±5%, 3φ, 'F', T3, Ga Group		
40	Performance Curve	D1700.12.01/2	D1700.68.01/1	D1700.31.02/2	D1700.15.01/3
41					
42					
43	Casing+Cover	CS			
44	Impeller / Diffuser	CS / NA			
45	Wear Ring (Impeller) / Wear Ring (Casing)	AISI 410 / AISI 410 (H)			
46	Shaft / Shaft Sleeve	EN-19 / AISI 410 (H)			
47	Drain Plug.	Steel			
48					
49		UNIT PRICES IN RS.			
50	Pump				
51	Accessories (B.P+Cplg+Fb)				
52	Mech Seal				
53	Driver				
54	FL/QN/CL PLANS (IF APPLICABLE)				
55	Performance + Hydrotest				
56	NPSH Test (If applicable)				
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

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For SULZER PUMPS INDIA LIMITED

SM/MKT/SF/050

SULZER PUMPS

Division of Sulzer India

Sulzer Pumps India Ltd

QUOTATION NO. OPB 002026

Date 16.02.2000 Page 05 of 09

1	Sr No	17	18	19	20
2	Item No.	P-121 A/B	P-122 A/B	P-221	P-231 A/B
3					
4	Quantity	02	02	01	02
5	Pump Type	ZE40-2315	ZE40-2315	ZE25-0200	CCV40x32-160
6	Liquid	Kerosene	Diesel	Water	Waste water
7					
8	Temperature °C/F	37.8	65.6	32	40
9	Sp Gr at P.T	0.77	0.81	1.0	1.0
10	Viscosity cP/CST	0.5	0.38	0.9	—
11	Vapour Pr(A)kg/cm² mm hg	←	NOT GIVEN		→
12	Rated Capacity m³/hr	25	21.5	2.0	10
13	Diff Head m	103.3	108.6	30	15
14	Suction Pressure kg/cm²	←	NOT GIVEN		→
15	Discharge Pressure kg/cm²	←	NOT GIVEN		→
16	NPSH Available m.	2.35	Flooded (Pressure)	Flooded (Pressure)	Flooded (Pressure)
17	NPSH Required m	0.8	0.75	0.5	2.0
18	Rated Imp Dia. mm/Type	315 Trim/Closed	315 Trim/Closed	160 Trim/Closed	159 Trim/Closed
19	BKW Water	17.50	16.97	1.09	1.21
20	BKW Liquid	13.48	13.75	1.09	1.21
21	Shut Off Head m	114	115	31	19.5
22	Safe minimum flow m³/hr	7.5	7.5	1.3	1.0
23	Efficiency %	40.2	37.5	15	22.9
24	Motor KW/RPM	18.5/2950	18.5/2950	1.5/2950	3.7/2900
25	Suction Size mm/Position	80/END	80/END	40/END	40/Submerged
26	Rating/Drilling	← ASA300#	/ ANSI B16.5	→	ASA150/B16.5
27	Discharge Size mm/Position	40/TOP	40/TOP	25/TOP	32/TOP
28	Rating/Drilling	←	ASA300# /	ANSI B16.5 →	ASA150/B16.5
29	Mounting/Setting	←	HORIZONTAL		→
30	Casing Support	←	CENTERLINE		→
31	Special Feautures	←	DRAIN PLUG		→
32					
33					
34	Bearing/Lubrication	←	NORMAL/OIL		→
35	Coupling/Guard	←	metaflex	/ Aluminium	→
36	Shaft Seal EPIL/DURA	P13C/TC 11,61	P13C/S/C 11,61	P13C/TC 11,61	TIWA Packing
37	Flushing Plan				
38	Cooling Plan				
39	Driver CGL/KEC Ex 'd'	STD FLP motor	Suitable 380V	±10%, 50Hz±5%, 3φ, 'F', T3, Ga Group	
40	Performance Curve	D1700D:15.01/3	D1700D:15.01/3	D1700D:11.01/2	CC-0416-201
41					
42					
43	Casing+Cover	←	CS		→
44	Impeller / Diffuser	←	C.S	NA	C.S / —
45	Wear Ring (Impeller) / Wear Ring (Casing)	← AISI	410	AISI 410 (H)	C.S / 410
46	Shaft / Shaft Sleeve	← EN-19		AISI 410 (H)	N/A / 410
47	Drain Plug.	←	steel		EN-8 / 410
48					
49					
50	Pump	UNIT PRICES IN RS.			
51	Accessories (B.P+Cplg+Fb)				
52	Mech Seal				
53	Driver				
54	FL/QN/CL PLANS (IF APPLICABLE)				
55	Performance + Hydrotest				
56	NPSH Test (If applicable)				
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

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For SULZER PUMPS INDIA LIMITED

SUMMKT/SP/050

SULZER PUMPS

Sulzer Pumps India Ltd

QUOTATION NO. OPB 002026

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1	Sr No	21	22	23	24
2	Item No.	P-232	P-327 A/B	P-328 A/B	P-329
3					
4	Quantity	01	02	02	01
5	Pump Type	ZE25-0200	ZE 80-2160	MB 3816	ZE 50-2160
6	Liquid	Oil	Water	RCW	Caustic
7					
8	Temperature °C/F	32	~~26.6~~ 35	107	32
9	Sp Gr at P.T	0.9	1.0	0.95	0.84
10	Viscosity CP/CST	0.9	0.9	0.24	6.1
11	Vapour Pr(A)kg/cm² mm hg	NOT GIVEN			
12	Rated Capacity m³/hr	2.0	70	7.4	35.2
13	Diff Head m	15	26	120	21.25
14	Suction Pressure kg/cm²	NOT GIVEN			
15	Discharge Pressure kg/cm²	NOT GIVEN			
16	NPSH Available m.	Flooded (Assumed)	Flooded (Assumed)	Flooded (Assumed)	Flooded (Assumed)
17	NPSH Required m	0.3	3.0	1.6	2.3
18	Rated Imp Dia. mm/Type	209 Trim (Closed)	158 Trim (Closed)	130 Trim (Closed)	145 Trim (Closed)
19	BKW Water	0.39	6.98	4.28	3.11
20	BKW Liquid	0.35	6.98	4.06	2.61
21	Shut Off Head m	15.2	28.8	129	24.5
22	Safe minimum flow m³/hr	0.5	10	1.5	5.0
23	Efficiency %	21	71	56.5	65.5
24	Motor KW/RPM	1.1 / 1475	9.3 / 2950	5.5 / 2900	3.7 / 2950
25	Suction Size mm/Position	40 / END	100 / END	50 / TOP	80 / END
26	Rating/Drilling	ASA 300# / ANSI B16.5		150#	ASA 300# / ANSI B16.5
27	Discharge Size mm/Position	25 / TOP	80 / TOP	32 / TOP	50 / TOP
28	Rating/Drilling	ASA 300# / ANSI B16.5		300#	ASA 300# / ANSI B16.5
29	Mounting / Setting	HORIZONTAL			
30	Casing Support	CENTRELINE		FEET	CENTRELINE
31	Special Feautures	DRAIN PLUG			
32					
33					
34	Bearing/Lubrication	NORMAL / OIL			
35	Coupling/Guard	Metaflex / Aluminium			
36	Shaft Seal EPIL / DURA	P13C / TC	P13C / TC	P13C / TC	P13C / TC
37	Flushing Plan	11 / 61	11 / 61	02 / 61	11 / 61
38	Cooling Plan			D	
39	Driver CGL / KEC Ex'd'	STD FLP motor suitable 380V ±10%, 50Hz ±5%, 3Φ, 'F', T3, Ga Group			
40	Performance Curve	D1700.11.02/2	D1700.22.01/2	D4200.11.02/1	1700.16.01/1
41					
42					
43	Casing + Cover	C.S		CF8M	C.S
44	Impeller / Diffuser	C.S	—	CF8M	CF8M	C.S	—
45	Wear Ring (Impeller) / Wear Ring (Casing)	410	410(H)	—	316	410	410(H)
46	Shaft / Shaft Sleeve	EN-19	410(H)	SS316	316	EN-19	410(H)
47	Drain Plug.	Steel					
48							
49		UNIT PRICES IN RS.					
50	Pump						
51	Accessories (B.P + Cplg + Fb)						
52	Mech Seal						
53	Driver						
54	FR / Qn / CL PLANS (IF APPLICABLE)						
55	Performance + Hydrotest						
56	NPSH Test (If applicable)						
57							
58	Pkg & Forwarding						
59	Total Per Unit						
60	Total Amount						
61	Delivery in Weeks						

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For SULZER PUMPS INDIA LIMITED

SMMK73SF/050

SULZER PUMPS

Sulzer Pumps India Ltd

QUOTATION NO. OPB 002026

Date 16.02.2000 Page 07 of 09

1	Sr No	25	26	27	28
2	Item No	P-333A/B	P-334A/B	P-335A/B	P-336
3					
4	Quantity	02	02	02	01
5	Pump Type	ZE 40-2250	ZE 40-1160	ZE 100-3315	ZE 50-3315
6	Liquid	Water	Caustic	Water	Water
7					
8	Temperature °C	37.7	37.8	26.6	26.6
9	Sp Gr at P.T	1.0	1.52	1.0	1.0
10	Viscosity CP/CST	1.0	NOT GIVEN	0.9	0.9
11	Vapour Pr(A)kg/cm² mm hg	←	NOT GIVEN	→	
12	Rated Capacity m³/hr	37.5	25	240	46.5
13	Diff Head m	70	17.6	106	105
14	Suction Pressure kg/cm²	←	NOT GIVEN	→	
15	Discharge Pressure kg/cm²	←	NOT GIVEN	→	
16	NPSH Available m	←	Flooded (Assumed)	→	
17	NPSH Required m	1.3	2.25	3.5	1.3
18	Rated Imp Dia mm/Type	259 Trim (Closed	140 Trim (Closed	315 Trim (Closed	295 Trim (Closed
19	BKW Water	13.49	2.14	94.31	28
20	BKW Liquid	13.49	3.25	94.31	28
21	Shut Off Head m	92	24.2	125	114
22	Safe minimum flow m³/hr	4.8	3.0	58	14
23	Efficiency %	53	56	73.5	47.5
24	Motor KW/RPM	18.5/2950	5.5/2950	110/2950	37/2950
25	Suction Size mm/Position	80/END	80/END	150/END	100/END
26	Rating/Drilling	←	ASA 300# / ANSI B16.5	→	
27	Discharge Size mm/Position	40/TOP	40/TOP	100/TOP	50/TOP
28	Rating/Drilling	←	ASA 300# / ANSI B16.5	→	
29	Mounting/Setting	←	HORIZONTAL	→	
30	Casing Support	←	CENTERLINE	→	
31	Special Feautures	←	DRAIN PLUG	→	
32					
33					
34	Bearing/Lubrication	←	NORMAL/OIL	→	
35	Coupling/Guard	←	Metaflex / Aluminium	→	
36	Shaft Seal EPIL/DURA	P13C/TC 11/61	P13C/SIC 11/61	P13C/TC 11/61	P13C/TC 11/61
37	Flushing				
38	Cooling Plan				
39	Driver CGL/KEC Ex 'd'	STD FLP Motor	Suitable 380V	±10%, 50Hz±5%, 3φ, 'F', T3, Ga Group II	
40	Performance Curve	D1700.14.01/2	D1700.12.01/2	D1700.31.01/2	1700.19.01/3
41					
42					
43	Casing+Cover	←	CS	→	
44	Impeller / Diffuser	←	C.S / NA	→	
45	Wear Ring (Impeller) / Wear Ring (Casing)	←	AISI 410 / AISI 410 (H)	→	
46	Shaft / Shaft Sleeve	←	EN-19 / AISI 410 (H)	→	
47	Drain Plug.	←	Steel	→	
48					
49		UNIT PRICES IN RS.			
50	Pump				
51	Accessories (B.P+Cplg+Fb)				
52	Mech Seal				
53	Driver				
54	FL/Qn/CL PLANS (IF APPLICABLE)				
55	Performance + Hydrotest				
56	NPSH Test (If applicable)				
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

Prices are net ex-Works Navi Mumbai (Maharashtra)

This quotation is subject to our general terms and conditions of sale

For SULZER PUMPS INDIA LIMITED

SMMKT:SF/050

SULZER PUMPS

Sulzer Pumps India Ltd

QUOTATION NO. OPB 002026

Date 16.02.2000 Page 08 of 09

1	Sr No	29	30	31	32
2	Item No	P-361 A/B	P-362 A/B	P-363 A/B	A/Lexhate to Item P-1UA/B
3					
4	Quantity	02	02	02	02
5	Pump Type	ZE 50-2315	ZE 50-8160	ZE 40-1160	MB 32/7
6	Liquid	Gasoline	Kerosene	Diesel Oil	Caustic
7					
8	Temperature °C	38	38	66	37.8
9	Sp Gr at P.T	0.68	0.77	0.81	1.071
10	Viscosity CP/CST	—	—	—	—
11	Vapour Pr(A)kg/cm² mm hg	NOT GIVEN			
12	Rated Capacity m³/hr	25	25	20.45	6.8
13	Diff Head m	21.14	21.12	21.23	134
14	Suction Pressure kg/cm²	NOT GIVEN			
15	Discharge Pressure kg/cm²	NOT GIVEN			
16	NPSH Available m	1.03	2.35	4.9	FLOODED
17	NPSH Required m	0.5	1.4	1.2	1.5
18	Rated Imp Dia mm/Type	275 Trim/Closed	145 Trim/Closed	140 Trim/Closed	130 Trim/Closed
19	BKW Water	3.0	2.59	2.06	4.97
20	BKW Liquid	2.04	1.99	1.67	5.32
21	Shut Off Head m	24	23	26	144.9
22	Safe minimum flow m³/hr	45	50	30	1.5
23	Efficiency %	48	55.5	57.5	50
24	Motor KW/RPM	3.7/1475	3.7/2950	2.2/2950	7.5/2900
25	Suction Size mm/Position	100/END	80/END	80/END	50/TOP
26	Rating/Drilling	ASA 300# / ANSI B16.5			ASA 150# / ANSI B16.5
27	Discharge Size mm/Position	50/TOP	50/TOP	40/TOP	32/TOP
28	Rating/Drilling	ASA 300# / ANSI B16.5			ASA 300# / ANSI B16
29	Mounting /Setting	HORIZONTAL			
30	Casing Support	CENTERLINE			FOOT
31	Special Feautures	DRAIN PLUG			
32					
33					
34	Bearing/Lubrication	NORMAL/OIL			
35	Coupling/Guard	Metaflex / Aluminium			
36	Shaft Seal EPIL/DURA	P13C/SiC 11/61	P13C/SiC 11/61	P13C/TC 11/61	P13C/SiC 11/61
37	Flushing Plan				
38	Cooling Plan				
39	Driver CGL/KEC Ex'd'	STD FLP Motor Suitable 380V ±10%, 50Hz±5%, 3φ, F, T3, Ga Group			
40	Performance Curve	1700.19.02/3	1700.16.01/1	D1700.12.01/2	D4200.11.02/1
41					
42					
43	Casing+Cover	CS			
44	Impeller / Diffuser	CA6NM		NA	CF8M
45	Wear Ring (Impeller) / Wear Ring (Casing)	AISI 410		AISI 410 (H)	CF8M / CF8M
46	Shaft / Shaft Sleeve	EN-19		AISI 410 (H)	— / SS-316
47	Drain Plug.				SS-316 / SS-316
48		Steel			
49		UNIT PRICES IN RS.			
50	Pump				
51	Accessories (B.P+Cplg+Fb)				
52	Mech Seal				
53	Driver				
54	FR/QN/CL PLANS (IF APPLICABLE)				
55	Performance + Hydrotest				
56	NPSH Test (If applicable)				
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

Prices are net ex-Works Navi Mumbai (Maharashtra)

This quotation is subject to our general terms and conditions of sale

For SULZER PUMPS INDIA LIMITED

SMMKT:SF/050

SULZER PUMPS

Division of Sulzer Brothers

Sulzer Pumps India Ltd

QUOTATION NO. OP B002026

Date 16.02.2000 Page 09 of 09

1	Sr. No.	33	34		
2	Item No.	P-328A/B (Alternate)	P-117A		
3					
4	Quantity	02 Nos.	01		
5	Pump Type	ZE 25-2315	ZE25-0200		
6	Liquid	BFW	Caustic		
7					
8	Temperature °C	107	37.8		
9	Sp Gr at P.T	0.95	1.071		
10	Viscosity CP/CST	0.24	—		
11	Vapour Pr(A)kg/cm² mm hg	NOT GIVEN	—		
12	Rated Capacity m³/hr	7.4	6.8		
13	Diff Head m	120	44.4		
14	Suction Pressure kg/cm²	NOT GIVEN	—		
15	Discharge Pressure kg/cm²	NOT GIVEN	—		
16	NPSH Available m.	← FLOODED (ASSUMED) →			
17	NPSH Required m	0.3	09		
18	Rated Imp Dia mm/Type	300mm (Closed)	198mm (closed)		
19	BKW Water	13.83	2.46		
20	BKW Liquid	13.14	2.63		
21	Shut Off Head m	123	48		
22	Safe minimum flow m³/hr	4.0	1.3		
23	Efficiency %	17.5	33.5		
24	Motor KW/RPM	18.5 / 2950	3.7 / 2950		
25	Suction Size mm/Position	50 / END	40 / END		
26	Rating/Drilling	ASA 300# / ANSI B16.5			
27	Discharge Size mm/Position	25 / TOP	25 / TOP		
28	Rating/Drilling	ASA 300# / ANSI B16.5			
29	Mounting /Setting	← HORIZONTAL →			
30	Casing Support	← CENTERLINE →			
31	Special Feautures	← DRAIN PLUG →			
32					
33					
34	Bearing/Lubrication	NORMAL / OIL →			
35	Coupling/Guard	metaflex / Aluminium →			
36	Shaft Seal EPIL / DURA	P/3C/7C	P/3C/8C		
37	Flushing	02, 61	11, 61		
38	Coolinplan,	D	—		
39	Driver CGL IKEC	Ex'd', std FLP, motor, suitable for 380V±10%, 3Ø, 50Hz±5% 'F', IP3, Gas Gr IIA/.			
40	Performance Curve	D1700.68.01/1	D1700.11.01/2		
41					
42					
43	Casing+Cover	CF8M	C.S		
44	Impeller / Diffuser	CF8M / —	C.S		
45	Wear Ring (Impeller) / Wear Ring (Casing)	SS-316 / SS-316	AISI 410 / NA		
46	Shaft / Shaft Sleeve	SS-316 / SS-316	EN-19 / 410(H)		
47	Drain Plug,	SS-316	STEEL		
48					
49		UNIT PRICES IN RS.			
50	Pump				
51	Accessories (B.P+Cplg+Fb)				
52	Mech Seal				
53	Driver				
54	Fl/Qn/CP Plans (If Applicable)				
55	Proof + hydrotest				
56	NPSH TEST (If Applicable)				
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

Prices are net ex-Works Navi Mumbai (Maharashtra)

This quotation is subject to our general terms and conditions of sale.

For SULZER PUMPS INDIA LIMITED

SM/MKT/SF/030

GEAR PUMP

ROTARY POSITIVE DISPLACEMENT PUMP DATA SHEET

SPECIFICATION NUMBER

CLIENT: NEC ENGRS. PVT. LTD.

SHEET NO. 1 OF 1

Total No 1 2 | Working : 2 | Standby : -- | Service :

Item Number P-107 A/B

Manufacturer : ROTODEL PUMPS & GEARS | Size and Type : RDRX-150-M | Serial Number

Motors Req'd YES | Provided By : VENIXOR | Mounted by : VENIXOR | Item/Spec No

Required | Provided By | Mounted by : | Item/Spec No

OPERATING CONDITIONS EACH PUMP

Liquid : FUEL OIL

Flow at P.T. 4.0 M³/HR | m³/h

P.T. 82 °C | Discharge Press. 3.4 kg/cm²

Oper.Temp.(°C) Max. Min .... | Suct. Press. Max. – kg/cm²

Sp. Gr. at P.T. 0.94 | Suct. Press. Min. – kg/cm²

Vap.Press. at P.T. kg/cm² | Diff. Press. 3.4 kg/cm²

Viscosity at P.T. : 35.3 CST | Diff. Head mlc

Viscosity. Max .... cP Min .... cP | NPSHA 4.16 M Hyd.Power kW

☐ Corrosive ☐ Erosive Due To : NOT APPLICABLE

Suspended Solids :

☐ Newtonian ☐

Duty : ☒ Continuous ☐ Intermittent Number Starts/Hour :

CONSTRUCTION

Nozzles	Size	Rating	Facing	Location
Suction	040 NB	ANSI B 16.5	FF	SIDE
Discharge	040 NB	150 #	FINISH	SIDE

Pump Type : GEAR PUMP ☐ Vertical ☒ Horizontal

Casing Max Allow Working Pressure : 12.0 kg/cm²(A) at 130 °C

Mount ☒ Foot ☐ Centerline ☐

Split ☐ Axial ☒ Radial

Connections ☒ Vent ☒ Drain ☐ Gauge ☒ NO CONN.

Jacket : Required ☐ Yes ☒ No Fluid N.A.

Max. Allow. Working Pressure kg/cm²(A) at °C

Rotor : Number : O. Dia : mm Length : mm

Bearing : Radial External : Number : Type : Lube :

Internal : Number : Type : Lube :

Thrust : Number : Type : N. ROLER Lube :

Timing Gear : ☐ Yes ☐ No Lube : ☐ Internal ☐ External

Coupling : Mfr/Type : LOVEJOY/FLEXI. Driver Half Mtd by : VENDOR

Coupling Guard : ALUMINIUM.

Seal : Number Mfr/Type : /Single Mechanical Number of Rings : N.A.

Drive : ☐ Direct ☐ Gear ☐

Gear : ☐ Integral ☐ Separate

Type : ☐ Single ☐ Helical ☐ Double Helical ☐

Ratio : Service Factor : Baseplate : MS FAB.

AUXILIARY. P I R I N G

Cooling Water Required for Pipe : N.A. Material : N.A. ☐ Tubing ☐ N.A.

Total Water required : Flow N.A. m³/h at ΔP N.A. kg/cm² and ΔT : N.A. °C

External Seal Fluid N.A. Flow : N.A. m³/h at Press. N.A. kg/cm²(A)

Aux. Seal Fluid N.A. Flow : N.A. m³/h at Press N.A. kg/cm²(A)

Jacket Heating Fluid Flow at Press N.A. kg/cm²(A) at Temp. N.A. °C

Quench Fluid : Flow N.A. m³/h at Press. N.A. kg/cm²(A) at Temp N.A. °C

DRIVER

1.5 BHP Rev/min 960 Frame : 90L Mfr : CGL

Volts/ph/Hz : 380 /3/ 50 ± 3 % Elec. Hazard Area Class. : FLP MOTOR

PERFORMANCE

NPSHR	3.0	m
Slip at P.T.		%
Efficiency	48 % Speed	960 rev/min
Power at P.T.	0.9 BHP Max	1.1 BHP
Max. Allow. ΔP		kg/cm²
Relief Valve Set Pressure	4.5	kg/cm²
Stuffing Box Pressure		kg/cm²
Rotation Facing Coupling		CW

SHOP TESTS

Tests	Test Code	Witness
☒ Mech Run	VDMA	☒
☒ Performance	24284	☒
☒ Hydro Pump	GRADE II	☒
☐ Hydro Jacket		☐
☒ Shop Inspection		☒
☒ Dismantle & Inspect After Test		☒

MATERIALS

Casing	C.S
COVERS	C.S
GEAR	EN-24, BS970
Shaft	SAE 8620/EN-9
Shaft Sleeve	N.A
Gland	
WEAR RING	PH. BRONZE
BEARING	NEEDLE ROLLER
COUPLING	C.I.
SEAL FACES	CARBON / Cr
SEAL TYPE	RUBBER BELLOW
MAKE	SEALOL / DURA

ACCESSORIES

Relief Valve	INTERNAL & EXTERNAL
Inlet Strainer	N.A
Auxiliary Piping	N.A

REMARKS :

1) MAX. POWER SHALL BE CALCULATED AT RELIEF VALVE SET PRESSURE.

2) VENIXOR SHALL SUPPLY LOOSE ESTIPNA RELIEF VALVE ALONG WITH INBUILT RV

3) MOTOR AS PER 0847/P406-03 NI REV 0

SHIPPING

Weight : Pump and Base 38 kg

Motor : kg Gbal kg

Total Shipping Volume : m³

REVISION NO.	0					
ISSUED FOR	ENQUIRY					
PREPD. BY/ DATE	[illegible]					
CHKD. BY/ DATE						
APPVD. BY/DATE						

C933003 R2 8H 1/1

GEAR PUMP -

ROTARY POSITIVE DISPLACEMENT PUMP DATA-SHEET

SPECIFICATION NUMBER

CLIENT: NEC ENGRS. PVT. LTD.

SHEET NO. 1 OF 1

Total No 9 | Working : 3 | Standby : --

Service :

Item Number P-364 A/B/C

Manufacturer : ROTODEL PUMPS & GEARS P.L. Size and Type : RDRX-500-M Serial Number

Motors Req'd YES Provided By : VENIXOR Mounted by : VENIXOR Item/Spec. No

Required Provided By Mounted by : Item/Spec No

OPERATING CONDITIONS EACH PUMP

Liquid FUEL OIL

Flow at P.T. 50 M³/HR m³/h

P.T. 82 °C

Oper.Temp.(°C) Max. Min ....

Sp. Gr. at P.T. 0.905

Vap.Press. at P.T 0.66-0.816 kg/cm²

Viscosity at P.T. 35-55 CST

Viscosity. Max .... cP Min .... cP

☐ Corrosive ☐ Erosive Due To : NOT APPLICABLE

Suspended Solids :

☐ Newtonian ☐

Duty ☒ Continuous ☐ Intermittent Number Starts/Hour :

Discharge Press : 3.42 kg/cm²

Suct. Press. Max - kg/cm²

Suct. Press Min - kg/cm²

Diff. Press. 3.42 kg/cm²

Diff. Head 38.6 mlc

NPSH A 2.76 M Hyd.Power kW

CONSTRUCTION

Nozzles	Size	Rating	Facing	Location
Suction	125 NB	ANSI B 16.5	FF	SIDE
Discharge	125 NB	150#	FINISH	SIDE

Pump Type : GEAR PUMP. ☐ Vertical ☒ Horizontal

Casing Max Allow Working Pressure : 12 kg/cm²(A) at : 130 °C

Mount ☒ Foot ☐ Centerline ☐

Split ☐ Axial ☒ Radial

Connections : ☒ Vent ☒ Drain ☐ Gauge ☒ NO CONN.

Jacket : Required ☐ Yes ☒ No Fluid : N.A.

Max. Allow. Working Pressure kg/cm²(A) at °C

Rotor Number : O. Dia. : mm Length : mm

Bearing : Radial External : Number : Type : Lube :

Internal : Number : Type : N. ROLLER Lube : OIL

Thrust : Number : Type Lube :

Timing Gear : ☐ Yes ☐ No Lube : ☐ Internal ☐ External

Coupling : Mfr/Type : LOVEJOY/FLEXI. Driver Half Mfd by : VENDOR

Coupling Guard : ALUMINIUM

Seal : Number Mfr/Type : /Single Mechanical Number of Rings : N.A.

Drive ☒ Direct ☐ Gear ☐

Gear : ☐ Integral ☐ Separate

Type ☐ Single ☐ Helical ☐ Double Helical ☐

Ratio Service Factor Baseplate : M S FAB

AUXILIARY PIPING

Cooling Water Required for Pipe : N.A. Material : N.A. ☐ Tubing ☐ N.A.

Total Water required : Flow N.A. m³/h at ΔP N.A. kg/cm² and ΔT N.A. °C

External Seal Fluid : N.A. Flow N.A. m³/h at Press. : N.A. kg/cm²(A)

Aux. Seal Fluid : N.A. Flow : N.A. m³/h at Press : N.A. kg/cm²(A)

Jacket Heating Fluid Flow at Press N.A. kg/cm²(A) at Temp. N.A. °C

Quench Fluid Flow N.A. m³/h at Press. N.A. kg/cm²(A) at Temp N.A. °C

DRIVER

15 HP Rev/min 960 Frame 160 L Mfr : CGL

Volts/ph/Hz : 380 / 3 / 50±3% Elec. Hazard Area Class. : FLP MOTOR

PERFORMANCE

NPSHR 2.0 m

Slip at P.T. %

Efficiency : 55 % Speed : 960 rev/min

Power at P.T. : 11 BHP Max 12 BHP

Max. Allow ΔP kg/cm²

Relief Valve Set Pressure 4.5 kg/cm²

Stuffing Box Pressure kg/cm²

Rotation Facing Coupling CW

SHOP TESTS

Tests	Test Code	Witness
☒ Mech Run	VDMA	☒
☒ Performance	24284	☒
☒ Hydro Pump	GRADE II	☒
☐ Hydro Jacket		☐
☒ Shop Inspection		☒
☒ Dismantle & Inspect After Test		☒

MATERIALS

Casing	CS
COVERS	CS
GEARS	EN-24, BS 970
Shaft	SAE 8620 / EN-9
Shaft Sleeve	N.A.
Gland	
WEAR RING	PH. BRONZE
BEARING	NEEDLE ROLLER
COUPLING	CI
SEAL FACES	CARBON / Cr
SEAL TYPE	RUBBER BELLOW
MAKE	SEALOL / DURA

ACCESSORIES

Relief Valve	INTERNAL & EXTERNAL
Inlet Strainer	N.A.
Auxiliary Piping	N.A.

REMARKS :

1) MAX. POWER SHALL BE CALCULATED AT RELIEF VALVE SET PRESSURE

2) VENIXOR SHALL SUPPLY LOOSE EXTERNAL RELIEF VALVE ALONG WITH INBUILT RV

3) MOTOR AS PER 0647-P496-02 NI REV 0

SHIPPING

Weight : Pump and Base 225 kg

Motor : kg Gear kg

Total Shipping Volume : m³

REVISION NO.	0					
ISSUED FOR	ENQUIRY					
PREPD. BY/ DATE	[illegible] 19/7/99					
CHKD. BY/ DATE						
APPVD. BY/DATE						

C933003 R2 SH 1/1

GEAR Pump

ROTARY POSITIVE DISPLACEMENT PUMP DATA SHEET

SPECIFICATION NUMBER

CLIENT: NEC ENGRS. PVT. LTD.

Total No. 3 | Working : 1 | Standby : --

Service :

SHEET NO. 1 OF 1

Manufacturer : ROTODEL PUMPS & GEARS

Item Number P-123A/B/C

Motors Req'd YES Provided By : VENDOR Size and Type : RDNX-400-M

Serial Number

Required Provided By Mounted by : VENDOR

Item/Spec. No

Mounted by :

Item/Spec No

OPERATING CONDITIONS EACH PUMP

Liquid : FUEL OIL

Flow at P.T. 40 M³/HR m³/h

P.T. 82 °C

Oper.Temp.(°C) Max. Min ....

Sp. Gr. at P.T. 0.9

Vap.Press. at P.T. kg/cm²

Viscosity at P.T. : CST

Viscosity: Max .... cP Min .... cP

☐ Corrosive ☐ Erosive Due To : NOT APPLICABLE

Suspended Solids :

Newtonian ☐

Duty ☒ Continuous ☐ Intermittent Number Starts/Hour :

Discharge Press. kg/cm²

Suct. Press. Max. kg/cm²

Suct. Press. Min. kg/cm²

Diff. Press. kg/cm²

Diff. Head 224 mlc

NPSH A 2.76 M Hyd.Power : kW

PERFORMANCE

NPSHR 1.6 m

Slip at P.T. %

Efficiency : 48 % Speed 960 rev/min

Power at P.T. : 6 kW Max

Max. Allow. ΔP kg/cm²

Relief Valve Set Pressure 0.0 kg/cm²

Stuffing Box Pressure kg/cm²

Rotation Facing Coupling : CW

CONSTRUCTION

Nozzles	Size	Rating	Facing	Location
Suction	100 NB	ANSI B 16.5	FF	SIDE
Discharge	100 NB	150	FINISH	SIDE

Pump Type : GEAR PUMP ☐ Vertical ☒ Horizontal

Casing Max Allow Working Pressure kg/cm²(A) at : °C

Mount ☒ Foot ☐ Centerline ☐

Split ☐ Axial ☒ Radial

Connections : ☒ Vent ☒ Drain ☐ Gauge ☒ NO CONN.

Jacket : Required ☐ Yes ☒ No Fluid N.A.

Max. Allow. Working Pressure kg/cm²(A) at °C

Rotor : Number : O. Dia : mm Length : mm

Bearing : Radial External : Number : Type : Lube :

Internal : Number : Type : Lube :

Thrust : Number : Type : N. ROLER Lube :

Timing Gear : ☐ Yes ☐ No Lube : ☐ Internal ☐ External

Coupling : Mfr/Type : LOVEJOY/FLEXI. Driver Half Mtd by : VENDOR

Coupling Guard : ALUMINIUM.

Seal : Number Mfr/Type : /Single Mechanical Number of Rings : N.A.

Drive ☐ Direct ☐ Gear ☐

Gear : ☐ Integral ☐ Separate

Type ☐ Single ☐ Helical ☐ Double Helical ☐

Ratio Service Factor : Baseplate : M S FAB.

AUXILIARY PIPING

Cooling Water Required for Pipe N.A. Material N.A. ☐ Tubing ☐ N.A.

Total Water required : Flow N.A. m³/h at ΔP N.A. kg/cm² and ΔT N.A. °C

Internal Seal Fluid : N.A. Flow N.A. m³/h at Press. N.A. kg/cm²(A)

Aux. Seal Fluid N.A. Flow : N.A. m³/h at Press : N.A. kg/cm²(A)

Jacket Heating Fluid Flow at Press N.A. kg/cm²(A) at Temp. N.A. °C

Quench Fluid Flow N.A. m³/h at Press. N.A. kg/cm²(A) at Temp N.A. °C

DRIVER

50 H.P Rev/min 960 Frame : 90L Mfr : CGL

Volts/ph/Hz : 380 / 3 / 50 ± 3 % Elec. Hazard Area Class. : FLP MOTOR

SHOP TESTS

Tests	Test Code	Witness
☒ Mech Run	VDMA	☒
☒ Performance	24284	☒
☒ Hydro Pump	GRADE II	☒
☐ Hydro Jacket		☐
☒ Shop Inspection		☒
☒ Dismantle & Inspect After Test		☒

MATERIALS

Casing	C.S
COVERS	C.S
GEAR	EN-24, BS970
Shaft	SAE 8620 / EN-9
Shaft Sleeve	N.A
Gland	
WEAR RING	PH. BRONZE
BEARING	NEEDLE ROLLER
COUPLING	C.I.
SEAL FACES	CARBON / CC
SEAL TYPE	RUBBER BELLOW
MAKE	SEALOL / DURA

ACCESSORIES

Relief Valve	INTERNAL & EXTERNAL
Inlet Strainer	N A
Auxiliary Piping	N A

REMARKS :

1) MAX. POWER SHALL BE CALCULATED AT RELIEF VALVE SET PRESSURE.

2) VENDOR SHALL SUPPLY LOOSE INTERNAL RELIEF VALVE ALONG WITH INBUILT RV

3) MOTOR AS PER 0847/ P406-02 XI REV 0

SHIPPING

Weight : Pump and Base kg

Motor : kg Gear kg

Total Shipping Volume : m³

REVISION NO.	0					
ISSUED FOR	ENQUIRY					
REPD. BY/ DATE						
CHKD. BY/ DATE						
APVD. BY/DATE						

33003 R2 SH 1/1

METERING Pumps

1	Sr. No.				
2	Item No.	P342A/B	P343A/B	P344A/B	P222
3					
4	Quantity	2 Nos	2 Nos	2 Nos	01
5	Pump Type	← Simplex Plunger			Simplex Diaphragm →
6	Liquid	← Anti-corrosion material →			
7					
8	Temperature °C/F	37.8°C	37.8°C	37.8°C	Ambient
9	Sp Gr at P.T	1.2	1.2	0.79	1.0
10	Viscosity CP/CST				
11	Vapour Pr(A)kg/cm² mm hg				
12	Rated Capacity m³/hr	12×10^{-3}	12×10^{-3}	12×10^{-3}	0.3×10^{-3}
13	Diff Head m.				
14	Suction Pressure kg/cm²				
15	Discharge Pressure kg/cm²	15	4	82	3
16	NPSH Available m.	←	Flooded		→
17	NPSH Required m.				
18	Rated Imp. Dia. mm/Type				
19	BKW Water				
20	BKW Liquid				
21	Shut Off Head m				
22	Safe minimum flow m³/hr				
23	Efficiency %				
24	Motor HP/RPM	0.5/1440	0.5/1440	0.5/1440	0.5/1440
25	Suction Size mm/Position	½"	½"	½"	½"
26	Rating/Drilling				
27	Discharge Size mm/Position	½"	½"	½"	½"
28	Rating/Drilling				
29	Mounting /Setting				
30	Casing Support				
31	Special Feautures				
32					
33					
34	Bearing/Lubrication				
35	Coupling/Guard				
36	Shaft Seal				
37	Flushing				
38					
39	Driver	Suitable for IIA/IIB Group, 380V, 3phase & 50Hz			
40	Performance Curve				
41					
42	Material of construction				
43	LIQUID END	←	S.S 316		→ PVC
44	VALVE & VALVE SEAT	←	S.S 316		→ PVC & GLASS
45	PLUNGER	← S.S with	ceramic coating		→ C.S
46	PACKING	←	PTFE		→ GLAND LESS DESIGN PTFE
47	FLANGES	← M.S	BACKING FLANGES		→
48	RELIEF VALVE	←	S.S 316		→
49					
50	Pump				
51	Accessories (B.P+Cplg+Fb)				
52	Mech Seal				
53	Driver				
54					
55					
56					
57					
58	Pkg & Forwarding				
59	Total Per Unit				
60	Total Amount				
61	Delivery in Weeks				

أولية الطلبية والمعاد

246/2000

قدم بالتسلسل TT/21

مؤرخ ١٢/١٥ ٢٠٠٠

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Ref.: TT/ALBA/2000/021 13.05.2000

To:

Al-Bashair Trading Company Ltd.,
Baghdad.

Sub: **Offer for Enq. No. 246/2000**
Closing Date: **13.04.2000**

Dear Sir,

In reference to the above mentioned subject, we would like to submit our offer as below:

Si. No.	*Item*	*Unit Price In USD*	*Qty.*	*Total Price In USD*
1.	***Sieving System***	7087	2	14174
2.	***Granulation System***	Not Offered	3	-
	Total Price In USD			**14174**

COMMERCIAL TERMS

Total Price : USD 14174
Payment : Cash
Delivery : 18 weeks from date of deposit.
Validity : 13 June 2000

With Best Regards,
For Technology Trading S.A.

Authorized Signatory

2000NECREP154/12MAY

To : Mr. MUNTASIR AWNI
From : G.CHOCKALINGAM

T.T.SA

FAXED

C... 19/5

CLIENT : NOT INDIACTED

ENQUIRY NUMBER 246/2000

CLOSING DATE : 13MAY2000

x 1.5 x1.5

S. No.	ITEM	UNIT COST IN US $	QUANTITY	TOTAL COST
1	Sieving System	~~7087~~ 4725	2	~~9450~~ 14174
2	Granulation System	not of Regret	3	0
				~~9450~~ 14174

COMMERCIAL TERMS

1.0. Total Cost : US $ ~~9450~~ 14174
2.0. Payment : Cash
3.0. Delivery : 18 ~~16~~ weeks from date of deposit
4.0. Validity : 30JUN2000

With regards,

4)Gear Box type RF 92w, Ni 250 RPM, Motor Type ZR 160 Mu, Ni 1455 RPM 11KW AMP 22, 3/13A Voltage : 380/600V, Qty: 4
5)Gear Box type RF 83 w, Motor ZK 100L, Qty: 4
6)Gear Box 5.5 KW, R.P.M 30

Enq. No. 246/2000
Closing Date : 13.05.2000

Name of Material	Qty	Description
Sieving System	2	- Explosion proof (Ex) - To sieve sensitive solid materials (ignitable) - Range of grain size from 50 to 1500 of microns capacity: 30 kg/hr
Granulation System	3	- For granulation fine mixtures to get bigger grains - Up to date model - Explosion proof (Ex) - Output of mixture grains should be of different sizes till 1500 micron capacity : 20 Kg/hr

Enq. No. 245/2000
Closing Date : 13.05.2000

S. No.	Name of Material	Description	Qty
1.	Pneumatic filling device	Type M-20 as assembly drawing No. R-514-1 Ex-proof	4
2.	Mechanical filling device	According to drawing H-02-Dv 1.590 Ex-proof	5

Manufacturer : Germany
Spare parts for all items for 2 years

FAX 4.5.2000

أولويات بعض المقدم للطلبية

245/2000

جالتسلل

TT/20

مؤرخ ٢٥/١٢/٢٠٠٠

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Date : 13.05.2000

Ref.: TT/ALBA/2000/020

Al-Bashair Trading Company Ltd.,
Baghdad.

Subject : Offer for Enq. No. 245/2000
Closing Date : 13.05.2000

Dear Sir,

In reference to the above mentioned subject, we would like to submit our offer as the following:

S. No.	Item	Qty.	Unit Price USD C&F Baghdad	Total Price USD C&F Baghdad
1.	Pneumatic Filling Device	4	21,665	86,660
2.	Mechanical Filling Device	5	10,850	54,250
Grand Total Price USD				140,910

COMMERCIAL TERMS & CONDITIONS

- Grand Total : USD 140,910
- Payment : Cash
- Delivery : 18 weeks from the date of deposit
- Validity : 13.06.2000

We are looking forward to hear from you soon.

With Best Regards,
For Technology Trading S.A.,

Authorized Signatory

في تقديم بما سطوح ...
٢٥/١٢/٢٠٠٠

PNEUMATIC FILLING DEVICE

1.0. CLIENT SPECIFICATIONS

Not given

2.0. TECHNICAL OFFER

The equipment is a semi-automatic linear filling system. Empty bottle must be manually placed on the designated slot below the nozzle. Fluid is metered out into the bottle by a pneumatically working piston-cylinder device. A paddle actuates the filling. On completion of filling, the filled bottle has to be removed and an empty bottle placed for filling

3.0. EQUIPMENT CAPABILITY

3.1. Volume to be filled	:	0 – 1 L
3.2. Number of filling head	:	1
3.3. Speed of Filling	:	5 bottles/minute
3.4. Error on Metering	:	< 0.1 % on Volume

4.0. SPECIAL CONSIDERATIONS

4.1. The Equipment would be fabricated out of Mild Steel. All contact parts would be made of Stainless Steel

4.2. The following are not in the scope of supply

4.2.1. The liquid to be metered has to be pumped from the main holding tank to the equipment buffer tank

4.2.2. Feeding of empty bottles and collecting of filled bottles

4.2.3. Sealing, capping and labeling of the filled bottles

MECHANICAL FILLING DEVIE

1.0. CLIENT SPECIFICATIONS

Not given

2.0. TECHNICAL OFFER

The equipment is a semi-automatic linear filling system. Empty bottle must be manually placed on the designated slot below the nozzle. Fluid is metered out into the bottle by a pneumatically working piston-cylinder device. A paddle actuates the filling. On completion of filling, the filled bottle has to be removed and an empty bottle placed for filling

3.0. EQUIPMENT CAPABILITY

3.1. Volume to be filled	:	100 ml
3.2. Number of filling head	:	2
3.3. Speed of Filling	:	20 bottles/minute
3.4. Error on Metering	:	< 0.1 % on Volume

4.0. SPECIAL CONSIDERATIONS

4.1. The Equipment would be fabricated out of Mild Steel. All contact parts would be made of Stainless Steel

4.2. The following are not in the scope of supply

4.2.1. The liquid to be metered has to be pumped from the main holding tank to the equipment buffer tank

4.2.2. Feeding of empty bottles and collecting of filled bottles

4.2.3. Sealing, capping and labeling of the filled bottles

****

2000NECREP153/12MAY

To : Mr. MUNTASIR AWNI
From : G.CHOCKALINGAM

FAXED

C70/1K

T.T.S.A

CLIENT : NOT INDIACTED

ENQUIRY NUMBER 245/2000

CLOSING DATE : 13MAY2000

x1.4

S. No.	ITEM	UNIT COST IN US $	QUANTITY	TOTAL COST	
1	Pneumatic Filling Device	21665 ~~15475~~	4	~~61900~~	86660
2	Mechanical Filling Device	10850 ~~7750~~	5	~~38750~~	54250
				~~100650~~ 140910	

COMMERCIAL TERMS

140910

1.0. Total Cost : US $ ~~100,650~~
2.0. Payment : Cash
3.0. Delivery : 18 ~~16~~ weeks from date of deposit
4.0. Validity : 30JUN2000

With regards,

4)Gear Box type RF 92w, Ni 250 RPM, Motor Type ZR 160 Mu, Ni 1455 RPM 11KW AMP 22, 3/13A
Voltage : 380/600V, Qty: 4
5)Gear Box type RF 83 w, Motor ZK 100L, Qty: 4
6)Gear Box 5.5 KW, R.P.M 30

Eng. No. 246/2000
Closing Date : 13.05.2000

Name of Material	Qty	Description
Sieving System	2	- Explosion proof (Ex) - To sieve sensitive solid materials (ignitable) - Range of grain size from 50 to 1500 of microns capacity: 30 kg/hr
Granulation System	3	- For granulation fine mixtures to get bigger grains - Up to date model - Explosion proof (Ex) - Output of mixture grains should be of different sizes till 1500 micron capacity : 20 Kg/hr

Eng. No. 245/2000
Closing Date : 13.05.2000

S. No.	Name of Material	Description	Qty
1.	Pneumatic filling device	Type M-20 as assembly drawing No. R-514-1 Ex-proof	4
2.	Mechanical filling device	According to drawing H-02-Dv 1.590 Ex-proof	5

Manufacturer : Germany
Spare parts for all items for 2 years

FAXE 4.5.2000

أولويات البعض المقدمة

بالاتصالات

TT/ALB/2000/16
17

جلد كتاب عالي أولوية الطلبات
السابقة وبالأفضل 28/2000
26/2000

٢٠٠٠/٥/٤

٢٠٠٠/٢١٩

المفاكم
رقم ~~الملف~~ ٢٠٠٠ / ٢١٩

تاريخ الملف ٢٠٠٠/٥/١

[1] Dechlorane 5 TON

Chlorine content 64% min
Density at 25°C kg/m³ 1700-1900
Volatile at 110°C 0,10% max
Particle size 5-15 Micron
Density at 25°C g/cm³ 0,82-0,88
yellow

[2] EPDM 5 TON
Colour:

x [3] X-ray industerial film high sensetive
250 unit

x [4] Fixer Developer for the x-ray film

[5] HTPB 5 TON

8 Ton
حسب توجيه شركة الجبوري
٢٠٠٠/٤/٢٤ وبرقية لنو

[6] welding wire special for sheet type
30CrMoVq rolls, open length
diameter 1,6 mm

مشروع ابابيل

تجارة السجائر / استاذ عزيز

استلمت تبادلي ٢٢ ع صباحا"

٢٠٠٠/٢١٨

لمفاتيح
رقم القاعدة ٢٠٠٠/٢١٨

تاريخ الغلق ٢٠٠٠/٥/١

✓ [1] Complete Thermal Analyzer
(DSC, TGA, DMA, DMS, DTA, --)

✓ [2] Strain gauge load cell
- input 10 VDC
- output 2 mV

Capacity	Quantity
0.250 TON	4
1. TON	3
5. TON	2
10. TON	2
20. TON	3
30. TON	4
50. TON	2

× [3] Temperature Measurning unit For flame by laser up to 3500 C°

✓ [4] Grain Analyzer controlled computer to Calculation grain size For powder (1μm - 1mm)

✓ [5] Digital weighing device with capacity (200 kg, 500 kg, 1500 kg, 2000 kg) X 2
sensitivity ±0.01 %

HAAKE Thermal Analysis System	
Computer Configuration for Operation for two Modules	
TA – CBB	CBB – Computer • Intel 200MHz • 17" Color Monitor • 32 MB EDO RAM • 2 GB EIDE Hard Disk • 3.5" 1,4 MB FD-Drive • PC-104 Keyboard and Microsoft mouse • Windows NT 4.0 • 32 – x Speed CD-ROM • Fast Ether link XL/10/100 3C905-TX
Operation of 5 Analysis Modules	
SC Host5m	Control Serial Port Enhancement
SPECIFICATION	
Thermal Gravimeter / Differential Thermal Analyzer	
52 – T0593	TG/DTA Base Unit 6000 • For Operation of all TG/DTA furnaces • 32 Bit CPU • 22 Bit AD – Converter • Heater Control
52 – T0594	TG/DTA Measurement Unit • Sensitivity 0,1 µg • Maximum Load 200 mg
52 – 05C4*A	TG/DTA – High Temp. Furnace 300H • RT to 1500 °C • Heating Rates from 0,1 to 100 °C/min
52 – T0547	Cooling Unit A • Automatic Switching of Cool and Purge Gas • Incl. Rotameter and Needle valve
52 – FTIRMS	Mechanical Interface • for Connection with FTIR and MS • Incl. Heater Control • Max. temperature 300 °C

مواصفات جهاز
الـ HAAKE
٢٠٠١/٥/١٢
أبو أحمد

Dynamic Mechanical Spectrometer DMS 6100	
52 – T0577	TMA/SS Base Unit • For Operation of all TMA furnaces • 32 Bit CPU • 22 Bit AD – Converter • Heater Control
52 – T0578	TMA/SS Measurement Unit • Sensitivity 0,02 µm • Maximum Load 600 g • Measurement Range ± 5mm • Load sensitivity 0,001 g • Stress and Strain Control • Frequency Range 0,001 to 1 Hz
Incl. Standard Accessory • Sample Cylinder and Probe of Metal • Sample Cylinder of Quartz • Expansion Probe • Penetration Probe	
52-T05A8*A	TMA/SS Low Temp. Furnace • -150 to 600 °C • Heating rates from 0,1 to 100 °C/min

SPECIFICATION	
52 – T0552 (U)	DMS 6100 • Measurement of the Dual Cantilever Shear and Tension Modulus • Measurement in the Compression Mode • Stress Relaxation • Creep • Temperature Range –150 to 600 °C • Frequency Range 0,01 to 100 Hz Force Range static ± 10N , dynaDMS 6100 • Measurement of the Dual Cantilever Shear and Tension Modulus • Measurement in the Compression Mode • Stress Relaxation • Creep • Temperature Range –150 to 600 °C • Frequency Range 0,01 to 100 Hz Force Range static ± 10N , dyna mic ± 8N
52 – T0504G*	Automatic Cooling Accessory • 100 Litre Dewar
	Optional Accessory
SSC564D003	Attachment Shear Modulus
SSC561C001	Compression Attachment
SSC564D005	Dual Cantilever Attachm. 8 mm
SSC564D005	Dual Cantilever Attachm. , 32 mm
SSC564D010	Attachment for 3-point Bending

Thermal Analysis Software for Windows NT	
SSC581P001	Thermal Analysis Operating System
SSC583P002	DSC – Measurement Software
SSC583P004	DSC – Standard Data Analysis Software
SSC583P005	TG/DTA – Measurement Software
SSC583P007	TG/DTA – Standard Data Analysis Software
SSC583S017	TMA/SS – Measurement Software
SSC583P009	TMA/SS – Standard – Data Analysis
SSC583S018	DMS, DES – Measurement Software
SSC583S019	DMS, DES – Standard Data Analysis Software
Printer / Plotter	
SSCHP690C	HP – Desk – Jet 690 C
Differential Scanning Colorimeter DSC 6000	
52 – T0574	DSC – Base Unit 6000 • for Operation of all DSC sensors • 32 Bit CPU • 22 Bit AD – Converter • Heater Control
52 – T0587*A	DSC – Standard Sensor DSC6200 • Standard DSC • -150 °C to 725 °C
52 – T0588*A	DSC – High Temp. Sensor DSC6300 • High Temperature DSC • RT to 1500 °C
52 – T0541	Automatic Cooling Accessory • 50 Litre • -150 °C to 500 °C or 725 °C
50-310	Sample Sealer

أولبات الطلبة
١٧٢/ ٢٠٠٠
٢٧ نيسان

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

26.03.2000

Ref.: TT/ALBA/2000/012

To,
Al-Bashair Trading Co. Ltd.,
Baghdad.

Sub.: Offer for your Enq. No. 72/2000
Closing Date : 30.03.2000

Dear Sir,

In reference to the above and according to your requirements. Pls. find enclosed the offer for Hot Carbon Steel / High Tempered Bars of square cross section.

Hoping you will find the same in order.

With Best Regards,
For Technology Trading S.A.

(Authorized Signatory)

في ضوء الاستفتاء الذي قمتم به بشأن
* تم تقديم تخفيض مقداره نسبة ٤٪ من
السعر الاصلي وان منشأ المواد هو تركي
وسوف نقوم بتقديم منشأ روسي وسعر
آخر إن شاء الله .

المدير التجاري
عماد عوني محمد

* [illegible] لشركة
* قيمة [illegible] البشائر بتاريخ ٢٧/٢/٢٠٠٠ صالحة .
* العرض [illegible] شركة البشائر العامة .

- *TECHNICAL OFFER*

Item: Steel Bars

S. No.	Tender Specification	Offer Specification
1.	Type & Heat treatment condition Hot rolled carbon steel/high tempered.	Type & Heat treatment condition Forged Steel Bars / high temperature.
2.	Bars of square cross section dimension Side Length : A=185 $^{\pm 2}$ Diagonal: D=Φ 230 $^{-3}$ Corner Radius : R=30 Bar Length = 3.5 m	Bars of square cross section dimension Side Length : A=185 $^{\pm 2}$ Diagonal: D=Φ230 $^{-3}$ Corner Radius : R=30 Bar Length = 3.5 m
3.	Grad Steel St. C-60 according to Gost 10230-15	Grad Steel St. C-60 according to Gost 10230-15
4.	Chemical composition %: C : 0.55/0.66 Ni : 0.25 Max. Si : 0.17 / 0.4 P : 0.035 Max. Mn : 0.5 / 0.8 S : 0.035 Max. Cr : 0.3 Max. Cu : 0.3 Max.	Chemical composition %: C : 0.55/0.66 Ni : 0.25 Max. Si : 0.17 / 0.4 P : 0.035 Max. Mn : 0.5 / 0.8 S : 0.035 Max. Cr : 0.3 Max. Cu : 0.3 Max.
5.	Mechanical Properties : - Hardness 223 HB Max. in condition of high tempered . - Yield strength : 32 Kgf /mm² Min. - Reduction of area : 20% Min.	Mechanical Properties : - Hardness 223 HB Max. in condition of high tempered . - Yield strength : 32 Kgf /mm² Min. - Reduction of area : 20% Min.
6.	Macrostructure (As per your technical specification)	Macrostructure (As per your technical specification)
7.	Micro Structure (As per your technical specification)	Micro Structure (As per your technical specification)

- *COMMERCIAL OFFER*

- Unit Price	: USD 1750.00
- Quantity	: 200 M.T.
- Total Price	: USD 350,000.00
- Payment	: in Cash
- Delivery	: 3 Months from the date of deposit
- Validity	: up to 30 APR.2000

Techpoint Luxembourg TT

МАГНУМ КОРП.
Закрытое Акционерное Общество
Россия, 129110, г. Москва,
Олимпийский проспект, дом 20, комн. правл.

MAGNUM CORP.
Joint-Stock Company
Russia. 129110. Moscow.
Olympiyski prospekt, 20, management office

Date 29.05.2000

Att: Mr. Omar
Re: Steel C-60

Dear Sir,

We have considered your request for decrease of a total cost of delivery.
We have carried out negotiation with the transport companies which we many years cooperate. They have carefully studied the materials and come to the conclusion that they can meet our request to reduce price of shipment.
We should be pleased to allow you a discount if you care to order from us for further extension 1000 tonn steel.
Using the maximal discounts we can to shipment of steel at **best price**:
USD **432** per metric tonn on condition C&F Tartous (port Syria).

Yours faithfully

A.Gulimov
Deputy Director

٤٣٢ طن معدنيا
— ١ نقل
٥٣٢
١٨٠ $ ربح
٧١٢,—

МАГНУМ КОРП.
Закрытое Акционерное Общество
Россия, 129110, г. Москва,
Олимпийский проспект, дом 20, комн. Правл.

MAGNUM CORP.
Joint-Stock Company
Russia. 129110, Moscow,
Olympiyski prospekt, 20, management office

Date 29.05.2000

Att: Mr. Omar
Re: Steel C-60

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We should be pleased to allow you a discount if you care to order from us for further extension 1000 tonn steel.
Using the maximal discounts we can to shipment of steel **at best price**:
USD **432** per metric tonn on condition C&F Tartous (port Syria).

Yours faithfully

A.Gulimov
Deputy Director

للمتابعة

مناقشة الموضوع مع باقي الرؤساء
أم لا !

والمفاوضات بسرية تامة.

١٥/٤/٢٠٠٠

مناقشة مع [illegible]

١٧/٤/٢٠٠٠

* تم تحديد موعد مناقشة في شركة سيناك
وذلك يوم السبت الصادف ٦/٥
الساعة ١٠:٠٠ صباحاً.

٥/٦

Sn. Recep Albayrak/Ramazan Toprak dikkatine

نابه السيد ابو بكر المحترم
بعد التحية والاحترام
وصلت الى تركيا اليوم
وارسل لكم عرض شامل من شركة
شاملة في تركيا وسعر (٥٩٠*) للطن الواحد
مع كافة تفاصيل المادة وارجو
بالحق سلامي الى الوالد ومنتظر
ونظار ربح بنزيل الشكر وتقديره
ابن عمكم

فيصل رطل صبيح
٤/٤/٢٠٠٠ الجزيرة / تركيا

1- Type & Heat treatment condition : Hot Rolled Carbon Steel / High Tempered

2- Bars of square cross section:

Dimension:

Side Length	A = 185 (size tol. +/-2,5mm)
Diagonal	D = 229.96534+/- 3.44531
Corner Radius	R = 33
Bar Length	= 4200 mm +/- 200 (Max 10% 3000mm)

Short length : Max %10 min. 3 m.

3- Grade of Steel : St C60 according to DIN standards.

4- Chemical Composition % :

C : 0.55 / 0.60	Ni : 0.25 Max
Si : 0.17 / 0.4	P : 0.035 Max
Mn : 0.5 / 0.8	S : 0.035 Max
Cr : 0.3 Max	Cu : 0.3 Max

5- Mechanical Properties: * It will be guaranteed on quenched and tempered sample

* Delivery condition : Hot rolled and softened to hardness max 223 HB.
- Hardness 223 HB Max. in condition of high tempered
- Yield strength : 32 Kgf / mm2 Min.
- Reduction of area : 20 % Min

6- Macrostructure: Steel macrostructure shall be free from shrinkage cavities porosity, blowholes subskin cracks blister, laminations, slag and foreign inclusions bending of crust, spotted liquation lemon spot seen with out magnifying glasses eton shaped and naphalene fractures are not allowed. Hefroginity of fracture, liquation square tears in fracture are rejecting criteria. Edge defects-seperate under crust cavities, slag inclusions shall not exceed the norms given point 7.

- Point Metergenity shall not exceed mark 3.
- Central porosity shall not exceed mark 2.
- Shrinkage liguation mark 1 according to DIN

*Picture 2 is guaranteed acc. to SEP 1584.

7- Micro structure : *5 and finer acc. to ASTM E 112.

*US-Test guaranteed : Equivalent disc. Shapped reflector guaranteed is max. 3mm.

Size of austenite grain shall be not bigger than number 5 as per DIN

- Bars : Must be controlled for hardness & ultrasonic test to provided free of internal cracks.

*Other points not mentioned will be acc. to DIN standart and AD's conditions.

Quantity	: 200 tons Quantity tolerance : +/- %10
Price	: US$ 590.00 FOB Marmara Ports, Turkey
Payment	: Cash or irrevocable confirmed at sight L/C on before confirm your orders.
Delivery	: June 2000
Validity	: 10 days

Ziya Şahinkaya

بخصوص طلبية سيسان (200 طن) بواسطة "فيدار/تركيا

تربط مع اوليات العرض

İLGİ: 15.02.2000 tarihli telefaxınız.

İlgi telefaksınızda talep edilen çelik malzemenin üretim durumu incelenmiş ve talep konusu malzeme aşağıda belirtilen şartlarda sıcak dövme yöntemiyle imal ve teslim edilecektir.

Ebat : 185 = 2 x 185 = 2 x 3500 ± 30
Evsaf: c. 60 (istenilen kimyasal kompozisyonda)
Miktar: 200.000 kg
Köşe Radyüsü.
Diajonal :230 kg
İmal edileçek malzemelere yumuşak tavlama işlemi ve ultrasonik muayene yapılacaktır.
Sertlik: 223HB
Akma mukavemeti: Min. 32kgf/mm2
Kesit daralması: Min %20 olacaktır.
Teklifimiz aşağıda sunulmuştur.

Tanım ve fiyat :	Miktar :	Bir.Fiy.(USS/KG):	TOPLAM (USS):
Yukarıda özellikleri verilen Çelik malzeme.	200.000 kg	0.60	120.000.

Fiyatımız Ağır Silah ve Çelik San. ve Tic. A.Ş. Kırıkkale teslimi esasına göre hazırlanmıştır. (FOB Türk Limanları)

TESLİMAT :

Kesin Siparişin Kurumumuza intikalinden 2 ay sonra imal ve teslim edilecektir.

ÖDEME :

Aşağıda belirtilen Bankada Kurumumuzun 0018 6799 No'lu hesabına havale yolu ile yapılacaktır.

أولبات العرض المقدم للبث للتقدم

72/2000

المغلق ٢٠/١٢/٢٠٠٠

قدم بالتسلسل

TT/ALBA/2000/012

مؤرخ ٢٦/١٢/٢٠٠٠

Ref:your fax dd.15,2,2000

We have examined the fax concerning steel requirments .and it will be produced with hot wrought metod ,and dispatched to your side ,in addition you will find condition of product as follows.

Size:185 =2x185 =2x3500 +/- 30
Qualification:c.60 (regarding chemical composition.)
Qty: 200 000 kg
Radyus of corner
Diagonal: 230 kg
The producing materials will be done Temper and spectrometric analysis.
Hardness:223 HB.
Yield Strench: min. 32 kgf/mm.
Crosscut narrow: min %20

You will find our offer as follows.

Material	Qty(Kg)	Price(USD/Kg)	Total(USD/Kg)
Steel Material	200 000	0,60	120 000

Our prices had been prepared according to Heavy weapon and Çelik San TicAş KIRIKKALE

Delivery: It will have manufactured after your certain order within 60 days .

* عرض من تركيا بواسطة قيدار خليل جنيه .
* العرض فصاطلية ٧ نيسان .
* تاريخ تلقي الطلبية ٢٠/٢/٢٠٠٠ .

٠٠٩٠٥٢٢٥٨٢٧٨٠١ تقال
« تركيا » قيدار خليل

Ref:your fax dd.15.2.2000

We have examined the fax concerning steel requirments .and it will be produced with hot wrought metod ,and dispatched to your side ,in addition you will find condition of product as follows.

Size:185 =2x185 =2x3500 +/- 30
Qualification:c.60 (regarding chemical composition.)
Qty: 200 000 kg
Radyus of corner
Diagonal: 230 kg
The producing materials will be done Temper and spectrometric analysis.
Hardness:223 HB.
Yield Strench: min. 32 kgf/mm.
Crosscut narrow: min %20

You will find our offer as follows.

Material	Qty(Kg)	Price(USD/Kg)	Total(USD/Kg)
Steel Material	200 000	0,60	120 000

Our prices had been prepared according to Heavy weapon and Çelik San TicAş KIRIKKALE

Delivery: It will have manufactured after your certain order within 60 days .

Ref:your fax dd.15,2,2000

We have examined the fax concerning steel requirments ,and it will be produced with hot wrought metod ,and dispatched to your side ,in addition you will find condition of product as follows.

Size:185 –2x183 =2x3500 +/- 30
Qualification:c.60 (regarding chemical composition.)
Qty: 200 000 kg
Radyus of corner
Diagonal: 230 kg
The producing materials will be done Temper and spectrometric analysis.
Hardness:223 HB.
Yield Strench: min. 32 kgf/mm.
Crosscut narrow: min %20

You will find our offer as follows.

Material	Qty(Kg)	Price(USD/Kg)	Total(USD/Kg)
Steel Material	200 000	0,60	120 000

Our prices had been prepared according to Heavy weapon and Çelik San TicAş KIRIKKALE

Delivery: It will have manufactured after your certain order within 60 days .

26.03.2000
~~24.02.2000~~

To,

Al-Bashair Trading Co. Ltd.,
Baghdad.

offer for you Enq. No. 72/2000

Sub.: ~~**Tender against 7-Nissan Company**~~
~~Due~~ Closing Date : ~~**25.02.2000**~~
~~28~~.03.2000
30

Dear Sir,

In reference to the above and according to your requirements Pls. Find enclosed the offer for Hot Carbon Steel / High Tempered Bars of Square cross section.

Hoping we will find the same in order.

With Best Regards,
For ~~**NEC Engineers Pvt. Ltd.**~~,
T.T. S.A

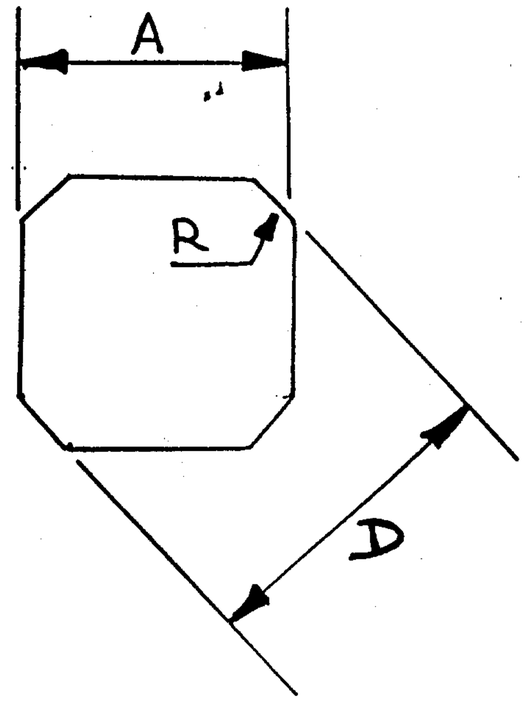
(Authorized Signatory)

سيف ن
المدير المفوض بالصورة الثانية
ج بالملاحظات المدون.

الآنسة سيقا ملاحظاتها
يطبع بعد تعديل الملاحظات
على ورق T.T.SA ويقدم

fax No.: 007095-4691703

تاريخ الغلق ٢٧/٢/٢٠٠٠ Tenden No. 72/2000



1. Type & Heat treatment condition
   - Hot rolled carbon steel / high tempered
2. Bars of square cross section
   Dimension:

Side Length	$A = 185^{\pm 2}$
Diagonal	$D = Ø\ 230^{-3}$
Corner Radius	R=30
Bar length	= 3,5 m

3. Grad steel
   St. C – 60 according to Gost 10230 – 15
4. Chemical Composition % :-

C : 0,55 / 0.66	Ni : 0.25 Max.
Si : 0,17 / 0.4	P : 0.035 Max
Mn : 0,5 / 0.8	S : 0.035 Max.
Cr : 0,3 Max.	Cu : 0.3 Max

5. Mechanical Properties
   - Hardness 223 HB Max. in condition of high tempered
   - Yield strength : 32 Kgf/mm^2 Min
   - Reduction of area : 20% Min.

6. Macrostructure
   Steel macrostructure shall be free from shrinkage cavities porosity, blowholes subskin cracks blister, laminations, slag and foreign inclusions bending of crust, spotted liquation lemon spot seen with out magnifying glasses ston-shaped and naphalene fractures are not allowed.
   Hefroginity of fracture, liquation square tears in fracture are rejecting criteria.
   Edge defects-sperate under crust cavities, slag inclusions shall not exceed the norms given point 7
   - Point Metergenity shall not exceed mark 3
   - Central prosity shall not exceed mark 2
   - Shrinkage liguation mark 1 according to Gost 10 230-15

7. Micro structure
   Size of austenite grain shall be not bigger than number 5 as per Gost 5639-65
   - Bars : Must be controlled for hardness & ultrasonic test to provided free of internal cracks

Required Quantity : 200 Ton

Payment : In Cash

الاخ العزيز عمار عبد الكريم المحترم / موسكو
تحية وتقدير ...
المرجاء تأمين عرض فني وتجاري ومطابق
للشرح المرسل لكم وعلى ان تصلنا اجابتكم
قبل تاريخ ٢٧/٢/٢٠٠٠ موعد غلق المناقصة
وهو عبارة عن حديد مربع يستخدم في القذيفة مع التقدير

اضوح
عمار عوض
ابو بكر
٢/٤/٢٠٠٠

أولويات الطلبية 27/2000

قدمت بالمراسلة

TT/ALBA/2000/006

dated 30.01.2000

Ref : TT/ALBA/2000/002

30January 2000.

To
Al Bashair Trading Company Limited
Baghdad, IRAQ

Sub : Tender Number : ~~25~~ 27/2000

Dear Sirs,

We are pleased to submit our offer for the above tender as below :

item: 2 : xRay

1.0. Item 4

1.1.	Description :	Teflon Spray
1.2.	Rate :	US $ 48.00 per can [500 ml]
1.3.	Quantity :	1000 pieces
1.4.	Total Price :	US $ 48,000.00 C&F Baghdad
1.5.	Delivery :	2 months from the date of deposit

2.0. Item 5

2.1.	Description :	Teflon Bar
2.2.	Rate :	US $ 6,850 per piece
2.3.	Quantity :	25 pieces
2.4.	Total Price :	US $ 171,250.00 C&F Baghdad
2.5.	Delivery :	4 months from the date of deposit
2.6.	Technical Specifications	
2.6.1.	Size :	∅ 250 X 1000 mm L

3.0. Item 6

3.1. Description : Teflon Pipe

3.2. Rate : US $ 5,877 per piece
3.3. Quantity : 25 pieces
3.4. Total Price : US $ 146,925.00 C&F Baghdad
3.5. Delivery : 4 months from the date of deposit
3.6. Technical Specifications
3.6.1. Size : 250 O.D. X 150 I.D. X 1000 mm L

COMMERCIAL TERMS

~~1. Grand Total : US $ 366,175~~
~~2. Payment : Cash~~
~~3. Validity : 01MAR2000~~

We hope that you will find the above in order

With regards,

For Technology Trading S.A.

Authorized Signatory

ت-١٤٧

٣٠/٨/٢٠٠٠

(ج)

Enq. No: 27/2000
C.D. 30.01.2000
رقم القائمة

تاريخ الغلق

X [1] High Tension Voltag (1-6) Mev with Moniter Scanning
- Head current (4-10) mA
- Beam angle min 120°
- Coolling by water

X [2] Normal tension voltage (x-ray) For 250 kV
500 kV

X [3] Wraping machine
Lonay Suddle Feed length 500 mm
approx. High of center about 300 mm

✓ [4] Tephlon spray 1000 pieces

✓ [5] Tephlon Bar High quality
Diamter : 250 mm
length ≥ 2000 mm
25 pieces

✓ [6] Tephlon pipe High quality
- out Diamter : 250 mm
- inside Diamter : 100 mm
- length ≥ 2000 mm
25 pieces

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Ref.: TT/ALBA/99/019

November 3, 1999

To :

Al Bashair Trading Company Ltd.,
Baghdad - IRAQ

Sub.: **Tender No. 623/99**

Dear Sirs,

In reference to the above mentioned tender & referring to our offer Ref. No. TT/ALBA/99/007 dated 23.09.99, we are pleased to inform you that we have new offer regarding Item No. 2 & 4 for the above tender as below:

Item No. 2 : NATURAL TEFLON SHAFT
Size : Ø 250 mm X 1000 mm
Unit Price : USD 6,850.00

Item No. 4 : NATURAL TEFLON PIPE
Size : Ø 250/150 X 1000 mm
Unit price : USD 5,877.00

We hope you to find the above in order.

With Best Regards,
For **Technology Trading S.A**

تم تسليمه للسادة البشائر بواسطة شايخ
٩٩/١١/٢

(Authorized Signatory)

	DESCRIPTION	Unit Price US$
1.	**LINATRON 1000A** **X - Ray Linear Accelerator** • X – ray head, modulator, recirculating chiller, control console and interconnecting cables and hoses per specification • Greater than 1000 rad/min – m output at 6 MV beam energy • Pushbutton 2.2 and 6.0 MV energy selection • Spare Parts Kit, excluding Magnetron • Flattening Filter • Voltage Regulator 50/60 Hz • Extended Signal Interface for Electronic Imaging • External Signal Interface for Electronic imaging • Two sets of Operator and Maintenance Manuals, and Data Books • Tuition for two students at one week Linatron Maintenance Course • Export Crating, installation & Start Up Assistance	**1500000.00**
	Options (Quoted on request)	
2.	Spare Magnetron	
3.	Variable External Collimator Control	
4.	Remote Collimator Control & Digital Display	
5.	Motorized manipulator with Pushbutton Controls	

الإجمالي : $ 1610 000

التجهيز : ٨ شهر

المنشأ : U.S.A

التعاقدية : شهر

تقديم عرض

OPTIONS	Unit Price $
1- External Signal For RTIS/CT Interface	13800
2- Spare Magnetron	~~45000~~ 60000
3- Flattening Filter	~~9450~~ 10000
4- Variable External Collimator	~~130000~~ 140000
5- Remot Control and Digital Display	25100
6- Additional Cable (max 40 m)	~~530~~/ M 600
7- Voltage Stabilizer	~~41250~~ 50000
8- X- Ray Inspection System	382000

مرفق الـ options الخاصة بـ XRay

كطلبية ٢٧/٢٠٠٠

* تم تقديم عرضها بتاريخ ٦/١٢/٢٠٠٠
للبائع.

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Date : 22.05.2000

To:
Al-Bashair Trading Company Ltd.,
Baghdad.

Subject : Enq. No. 25 & 28/2000

Dear Sirs,

In reference to the meeting held with your company and the client's representatives on 17.05.2000, we are enclosing herewith catalogues (2 leaflets) concerning:-

1)Grain Analyzer. [France Origin]
2)Strain Gauge Load Cell. [Germany Origin]

We are confirming you that all the specifications already submitted are matching your specifications and requirements.

With Best Regards,
For Technology Trading S.A.,

Authorized Signatory

تم تقديمها لك بتاريخ ٢٢/٥/٢٠٠٠
وهي تتكون من ثلاثة أسماء .

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Date : 22.05.2000

To:
Al-Bashair Trading Company Ltd.,
Baghdad.

Subject : Enq. No. 25 & 28/2000

Dear Sirs,

In reference to the meeting held with your company and the client's representatives on 17.05.2000, we are enclosing herewith catalogues (2 leaflets) concerning:-

1) Grain Analyzer. [France Origin]
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We are confirming you that all the specifications already submitted are matching your specifications and requirements.

With Best Regards,
For Technology Trading S.A.,

Authorized Signatory

تم تقديمها لك بتاريخ ٢٢/٥/٢٠٠٠
مرفقة تذكرتان الى شركة أسمة .

168,000
16800
184800

~~Ref : TT/ALBA/2000/004~~ 30January 2000.

To
Al Bashair Trading Company Limited
Baghdad, IRAQ

Sub : Tender Number : 25/2000

Dear Sirs,

We are pleased to submit our offer for the above tender as below :

1.0. Item 2

1.1. Description : Grain Analyser
1.2. Rate : US $ ——— 184,800.00
1.3. Quantity : 1 Unit
1.4. Total Price : US $ C&F Baghdad
1.5. Delivery : 5 months from the date of deposit
Pay
Val :

2.0. Item 3

2.1. Description : Digital Weighing Device
2.2. Rate : US $ 3,675.00
2.3. Quantity : 1 Unit
2.4. Total Price : US $ 3,675 C&F Baghdad
2.5. Delivery : 4 months from the date of deposit
2.6. Technical Specifications
2.6.1. Capacity : 1000 Kg
2.6.2. Sensitivity : ± 0.02 %

3.0. Item 4

3.1. Description : Load Cell [2000 Kg]

3.2. Rate : US $ 3,968.00 per Unit
3.3. Quantity : 1 Unit
3.4. Accessories: US $ 1,180.00
3.5. Total Price : US $ 5,148.00 C&F Baghdad
3.6. Delivery : 4 months from the date of deposit
3.7. Technical Specifications
3.7.1. Nominal Load : 10 KN
3.7.2. Accuracy : 0.1 %
3.7.3. Sensitivity : 2 mV/V

4.0. Item 5A

4.1. Description: Pressure Transmitter
4.2. Rate : US $ 3,500.00 per Unit
4.3. Quantity : 1 Unit
4.4. Total Price : US $ 3,500.00 C&F Baghdad
4.5. Delivery : 4 months from the date of deposit
4.6. Technical Specifications
4.6.1. Range : 0 – 500 bar
4.6.2. Output : 4 – 20 mA

COMMERCIAL TERMS

1. Grand Total : US $
2. Payment : Cash
3. Validity : 01MAR2000

We hope that you will find the above in order

With regards,

For Technology Trading S.A.

Authorized Signatory

٢٠٠٠/٢٥

٢٠٠٠/١/١٣

(٣)

K Enq. No. 25/2000
C.D : 30.01.2000

رقم القائمه

تاريخ الغلق

X [1] Temperature Measuring unit For Flame by Laser up to 3500 c°

✓ [2] Grain Analyzer controlled by Computer to Calculation grain Size For Powder (1 μm – 1 mm)

✓ [3] Digital weighing Device
Capacity : 1500 kg and 2000 kg
Sensitivity : ±0.01 %

✓ [4] Load cell capacity 2000 kg
with sensitivity : ±0.01 %

✓ [5] pressure Transmiter
From 0 – 500 Bar
0 – 5000 Bar

X [6] pressure Amplifer with low Frequency filter

 $ 168,850/2

GRAIN ANALYZER

1.0. GENERAL

Particle Size Analyzer is an instrument of modern design, which makes it possible to measure powdery materials with particle size ranging from 0.3 to 400 μ without changing the optic system or the calibration

The system can be fitted with accessories for:

- Measuring powders by dry process
- Automatic feed and analysis (up to 28 Samples)
- Display of shapes from 10 to 400 μ with the aid of CCD camera
- Digitizing of the image on a computer
- Obtaining an output on printer

The Equipment is very easy to install and use. The total measurement time is less than 3 minutes

2.0. APPLICATION

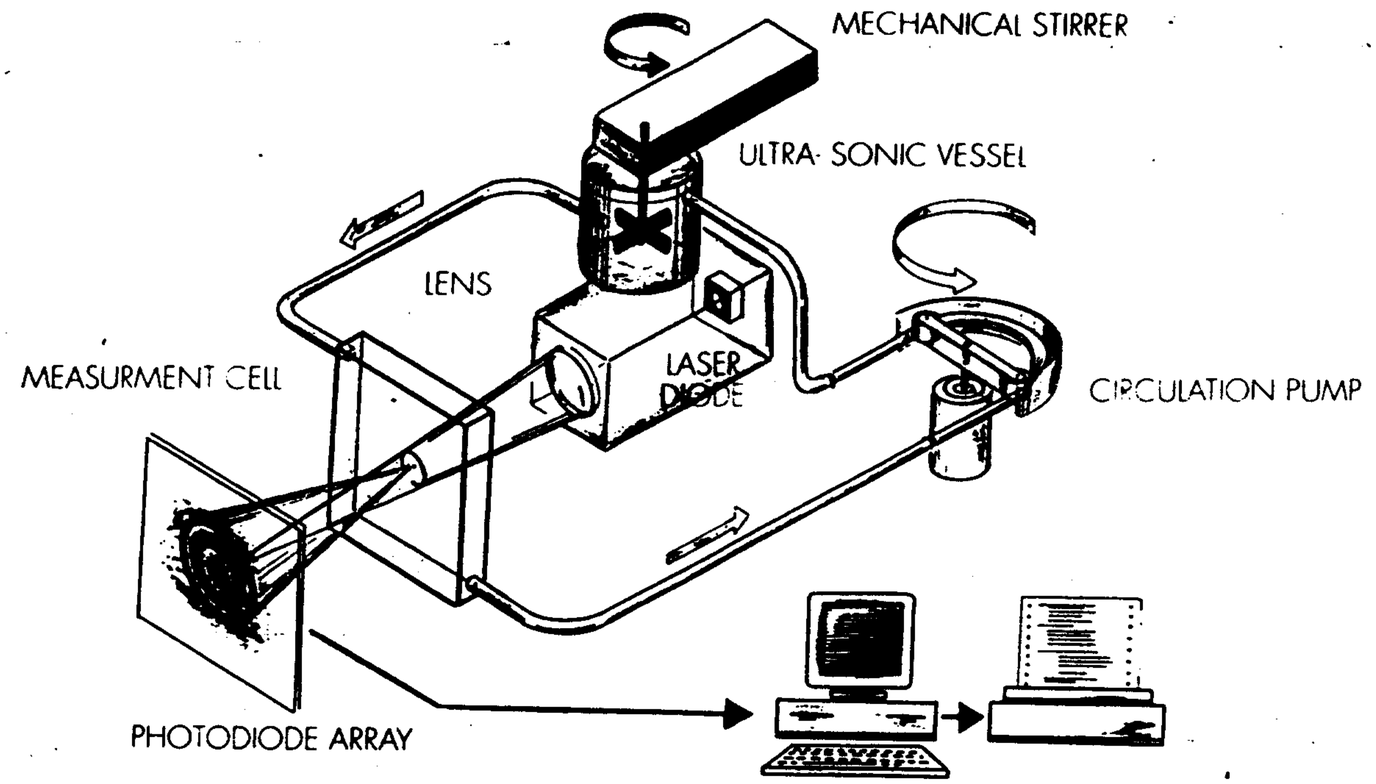
It finds application in laboratories and industries such as chemicals, cement, metallurgy, electrochemistry, pharmacy and agribusiness

Materials such as aluminas, calcium carbonate, metallic powders, graphite, pigments, paints, pesticides, fertilizers, ceramics, etc. can be analyzed

3.0. PRINCIPLE

The coherent light, coming from a low power laser diode emitting at a wavelength of 830 nm, passes through liquid

containing the suspended powder which results in diffraction of the light beam



The distribution of the luminous energy in the diffraction pattern depends upon the size of the diffracting particles. If all these particles are spherical and of the same diameter, the diffracted energy is distributed according to Airy disc, i.e., there is a formation of infinite distance of a central spot and a series of concentric rings whose diameter are related to the particle size

On the other hand, if sets of different diameters are involved, the diffraction pattern is more monotonic. In this case the particle size distribution can only be obtained by analyzing the energy distribution between the various rings showing up in the focal plane image of the lens

4.0. OPERATION

The powder to be measured is placed in suspension in a suitable liquid, circulating in a sample holder, driven by peristaltic pump. A stirrer and an ultrasonic vessel disperse and defloccualte this powder in the liquid

The laser diode emits a light beam. This beam is picked up by an optic system, which then passes through the sample holder containing the powder to be analyzed. A specially designed single chip silicon photodiode array positioned at the beam's focusing point measures the energy distribution of the various diffraction rings. The signals coming from the photodiode are then amplified before being converted by analog to digital converter which enables them to be processed by an external computer via an RS 232 C series digital link

5.0. PRESENTATION OF THE RESULTS

The results of the analysis are displayed on a computer screen in the following ways:

- Curves of percentage by weight, cumulative "undersize" of "oversize"
- Histogram by weight
- Histogram by area
- Histogram by number of particles
- Possibility of processing measurements for values of 50 optional diameters specified by the user
- Possibility of processing by the following methods
- SPLINE interpolation
- ROSIN - RAMLLER's law
- Log - normal law
- Possibility of displaying super imposed curves

****

Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : 971 - 4 - 515 476 FAX : 971 - 4 - 513 845

Ref.: TT/ALBA/99/021

To :

Al-Bashair Trading Company Ltd.,
Baghdad.

مطلوب للمعاون
للبياودر وليس
للمعاون
١١/٢٥

SUB.: **Tender No. 622/99 [Item No.3]**
GRAIN ANALYSER

Dear Sirs,

With reference to the above subject, we are pleased to submit our Techno-Commercial offer which is matching your requirements as below :

ITEM : GRAIN ANALYZER

Description	**: Metallurgical Trinocular Microscope**
Model	**: DMI CROWN**
Manufacturer	**: De Winter**

- **TECHNICAL FEATURES**

  - **MAIN BODY**
    - Main body consist of co-axial focussing controls with large knobs, pre-focussing lever and tension adjustment ring.
    - Inverted quadruple nosepiece revolves on ball bearing
    - Mechanical Stage size is 150 mm X 200 mm
    - The Mechanical Stage has low positioned co-axial controls on ball rolling on guideways
    - Hand rest on both sides

  - **OPTICS**
    - Trinocular sidentof head inclined at 30°
    - Phototube for photomicrography
    - Diopter adjustment ring on ocular tube
    - Interpupillary distance from 55 mm to 75 mm
    - Koehler's illumination system with 6V - 20 W halogen lamp, adjustable brightness
    - 10 X Wide field eyepiece {18 mm}
    - DIN Long working distance metallurgical grade objectives {PL 10X, PL 25X, PL 40X, PL 100X}

Technology Trading S.A Luxembourg

تم تقديمه للسيد رئيس بتاريخ ٢٠٠٠/١١/١٤ بإستلامي
للسيد تحرير

My document /TTSA PRE-FORMED CRUCIBLES

- Noise can be removed on stored frames
- Coloured images that are stored can be converted into black & white
- Size of stored image can be altered

♦ MASUREMENT

- Length, width, perimeter, angle and area of particular specimen captured from microscope can be measured

- Phase volume, decarborisation, coating thickness, nodularity, porosity, count, grain size in any metallurgical structure can be measured.

♦ HARDWARE

- Includes Intel Pentium P II 233 MMX, 4,3 GB HDD, Video Coupler port, 15" SVGA Colour Monitor, EPSON Stylus 640 with 1400 dpi printer, Windows compatible 104 keyboard and Mouse

- **COMMERCIAL OFFER**

  - **Price** : **USD 47,000.00** C&F Baghdad
  - **Payment** : Cash Basis
  - **Delivery** : 9 -10 Weeks form the date of deposit

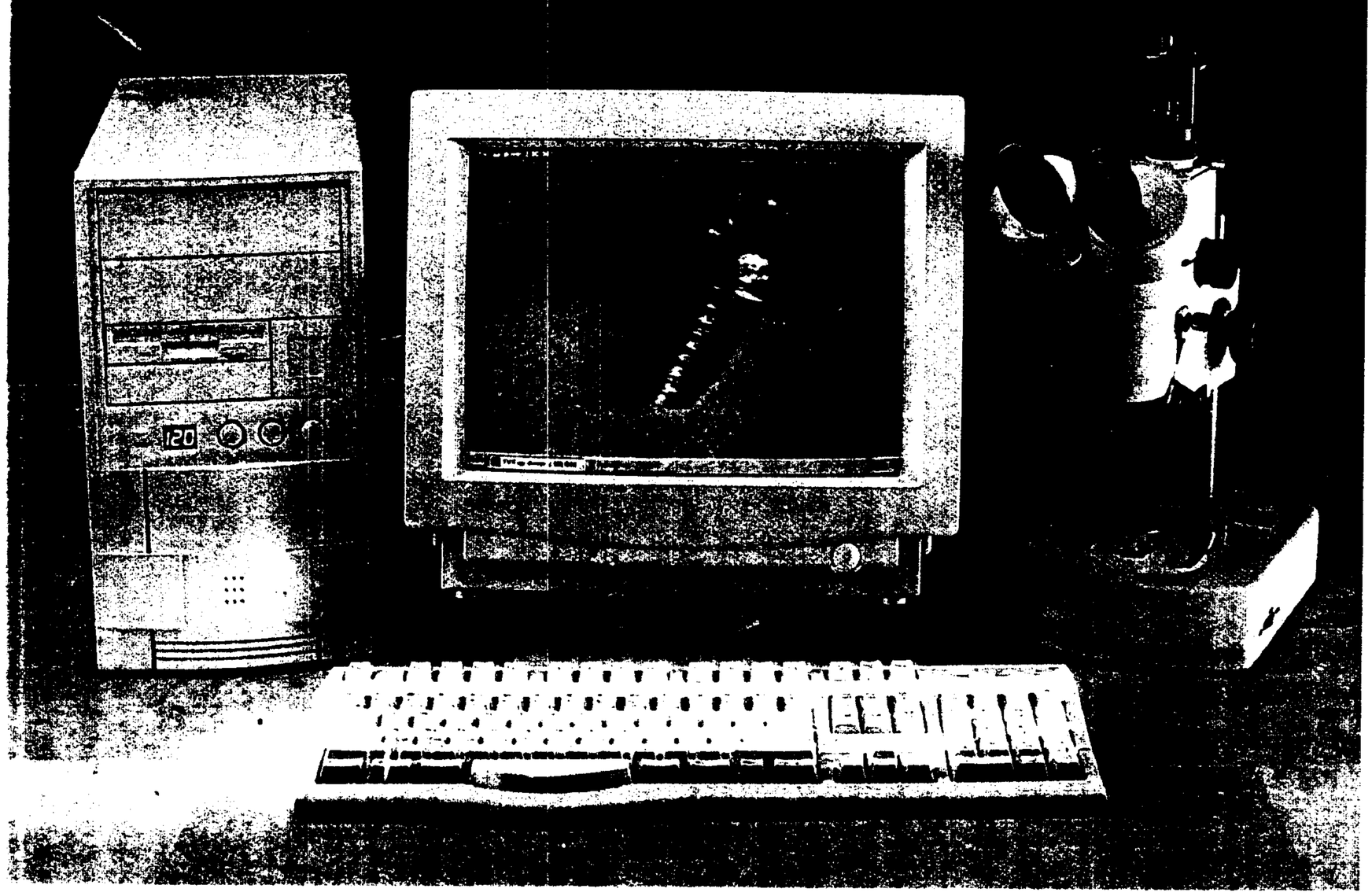
With Best Regards,
For **Technology Trading S.A**

(Authorized Signatory)

De Winter

INDUSTRIAL MICROSCOPE

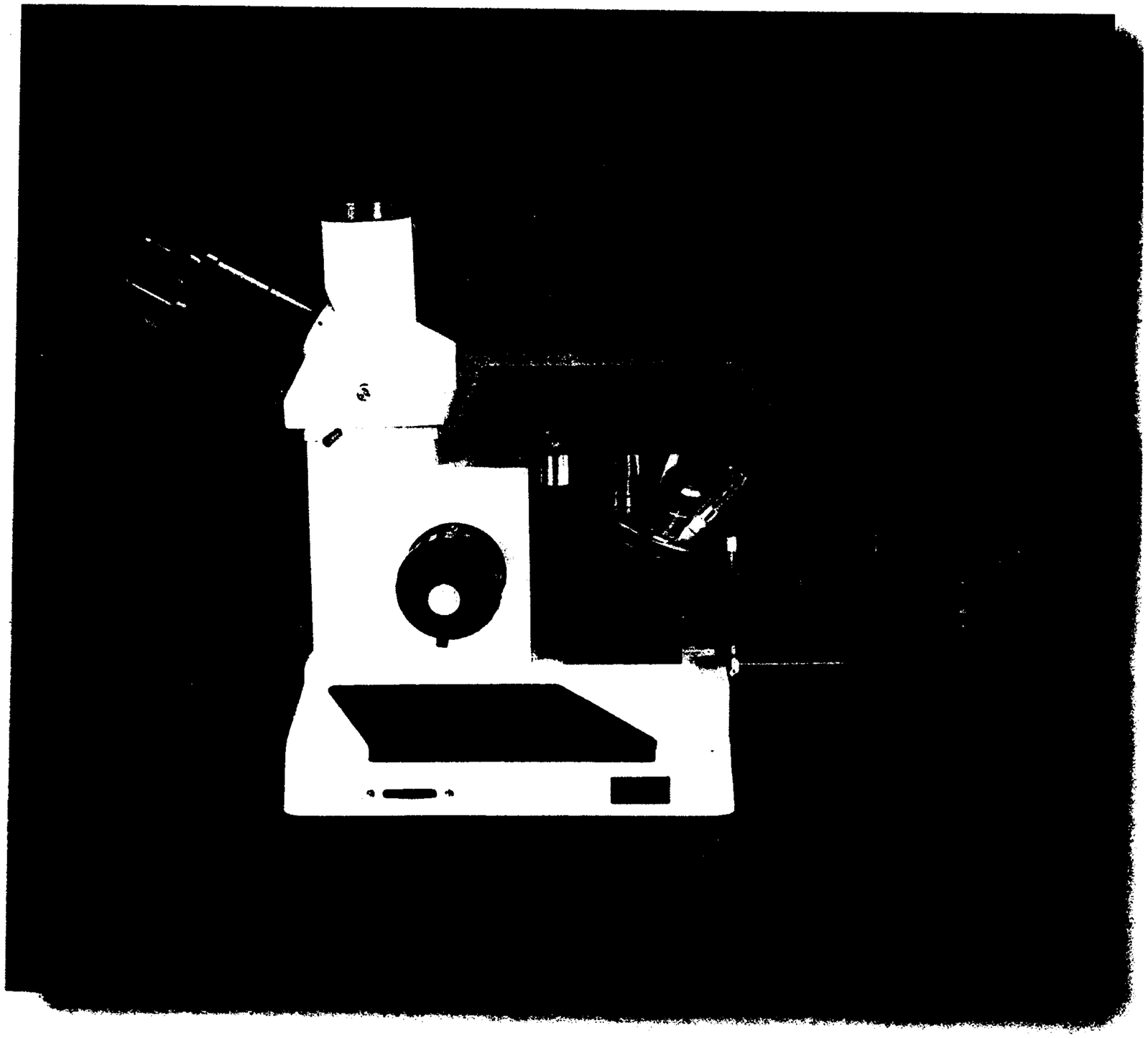
ZOOM STAR WITH MICROCAM



De Winter

DMI CROWN

INVERTED METALLURGIAL MICROSCOPE

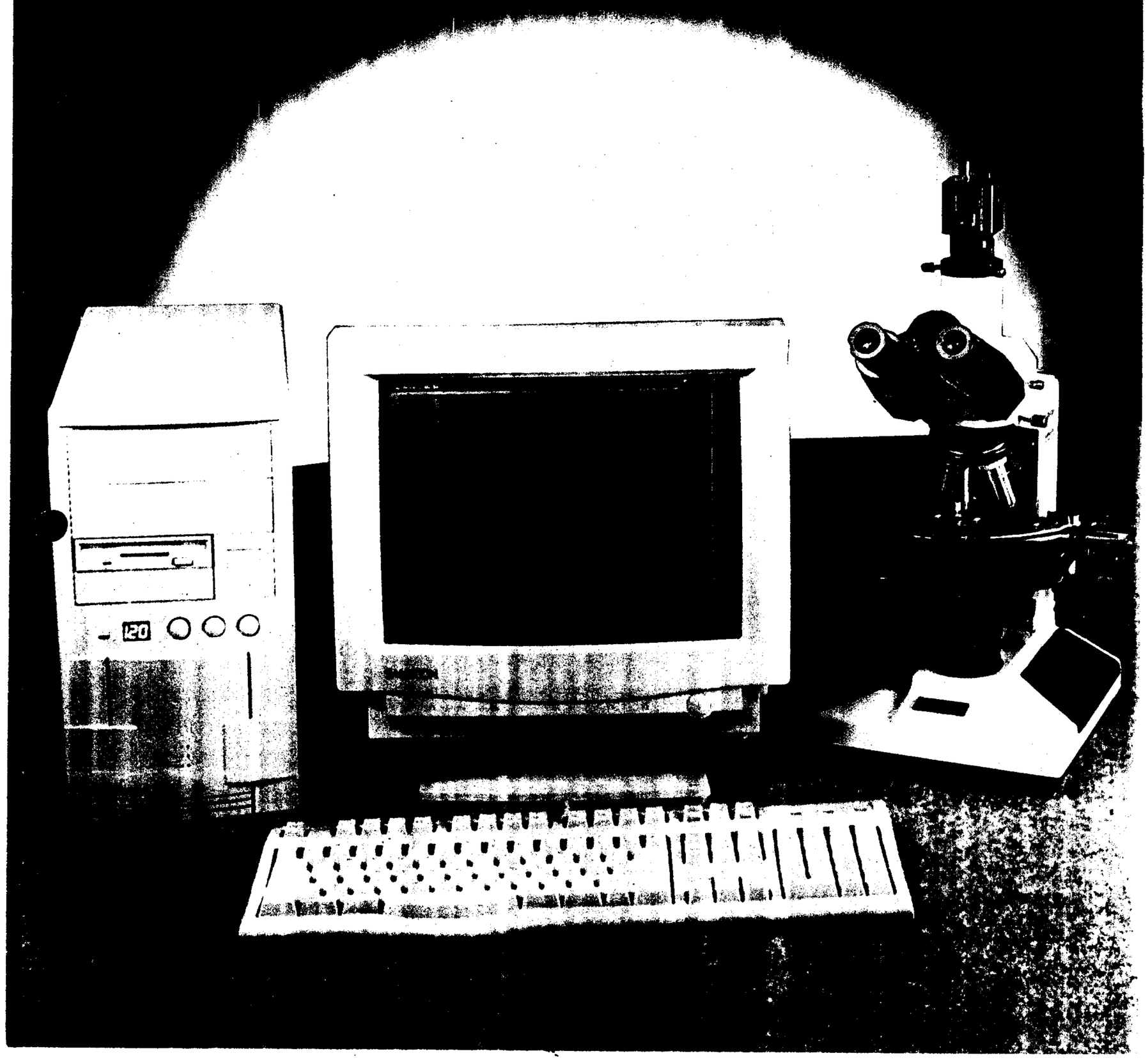


- Trinocular siedentorf head inclined at 30 degree.
- Eyepieces Plan 10x wide field 18mm.
- Infinity corrected objectives PL 10x, PL 25x, PL 40x & PL 100 oil.
- Co-axial mechanial stage controls size 150x200mm.
- Koehler's illumination system 6v/20w quartz halogen lamp with filters and polarizers.
- Separate camera port allows addition of Camera, Computer & TV Monitor.

DE WINTER

MICROCAM

Imaging System



Technology Trading S.A

AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : (04) 515 476 FAX : (04) 513 845

Ref.No. : TT/ALBA/99/006/A

Date : 23.9.99

AL BASHAIR TRADING CO. Ltd.,
Baghdad.

Tender No.: 622/99

Dear Sir,

This has reference to your above-mentioned tender, we are pleased to quote for the following :-

Item No. 3

GRAIN ANALYZER

- Microscope with Computer to measure particle size ranging from 1 m to 1mm

Commercial Offer

5% تخفيض
٩٩/١٠/٧

- Cost : US$ 28,355. per Unit.
- Payment : Cash
- Delivery : 9 – 10 weeks from the date of deposit.
- Validity : 15 OCT 99

Item No. 4

DIGITAL ELECTRONIC SCALE

2% تخفيض
٩٩/١٠/٧

Technical Offer
- Capacity : 1000 Kg
- Sensitivity : +/- 0.02%

Commercial Offer

- Cost : US$ 3,750 per Unit.
- Payment : Cash
- Delivery : 9 – 10 weeks from the date of deposit.
- Validity : 15 OCT 99

* تم تقديمه للبشائر بالاستاذ
عبدالعزيز بتاريخ ٢٣/٧/٩٩
بواسطتي .

Regd. Office : 19, Rue Aldringen, L.1118 LUXEMBOURG

Item No. 5

DIGITAL LOAD CELL 27. تخفيض ٩٩/٣/٧

Technical Offer
- Capacity : 2000 Kg

Commercial Offer

- Cost : US$ 1,750 per Unit.
- Payment : Cash
- Delivery : 9 – 10 weeks from the date of deposit.
- Validity : 15 OCT 99

We hope you find the same in order. Looking forward to your favourable response at the earliest.

Thanking You,

Yours Faithfully,
For TECHNOLOGY TRADING S.A

Siddharth Hans

Tt/622/99

تم تقديمه للتداول يوم ١٩/١٢/٢٠٠٠
اعتماد الاجتماع مع اللجنة في بشبائو .

GRAIN ANALYZER

1.0. GENERAL

Particle Size Analyzer is an instrument of modern design, which makes it possible to measure powdery materials with particle size ranging from 0.3 to 400 μ without changing the optic system or the calibration

The system can be fitted with accessories for:

- Measuring powders by dry process
- Automatic feed and analysis (up to 28 Samples)
- Display of shapes from 10 to 400 μ with the aid of CCD camera
- Digitizing of the image on a computer
- Obtaining an output on printer

The Equipment is very easy to install and use. The total measurement time is less than 3 minutes

2.0. APPLICATION

It finds application in laboratories and industries such as chemicals, cement, metallurgy, electrochemistry, pharmacy and agribusiness

Materials such as aluminas, calcium carbonate, metallic powders, graphite, pigments, paints, pesticides, fertilizers, ceramics, etc. can be analyzed

3.0. PRINCIPLE

The coherent light, coming from a low power laser diode emitting at a wavelength of 830 nm, passes through liquid

Technogen Trading Co. Luxembourg TT

4.0. OPERATION

The powder to be measured is placed in suspension in a suitable liquid, circulating in a sample holder, driven by peristaltic pump. A stirrer and an ultrasonic vessel disperse and defloccualte this powder in the liquid

The laser diode emits a light beam. This beam is picked up by an optic system, which then passes through the sample holder containing the powder to be analyzed. A specially designed single chip silicon photodiode array positioned at the beam's focusing point measures the energy distribution of the various diffraction rings. The signals coming from the photodiode are then amplified before being converted by analog to digital converter which enables them to be processed by an external computer via an RS 232 Ç series digital link

5.0. PRESENTATION OF THE RESULTS

The results of the analysis are displayed on a computer screen in the following ways:

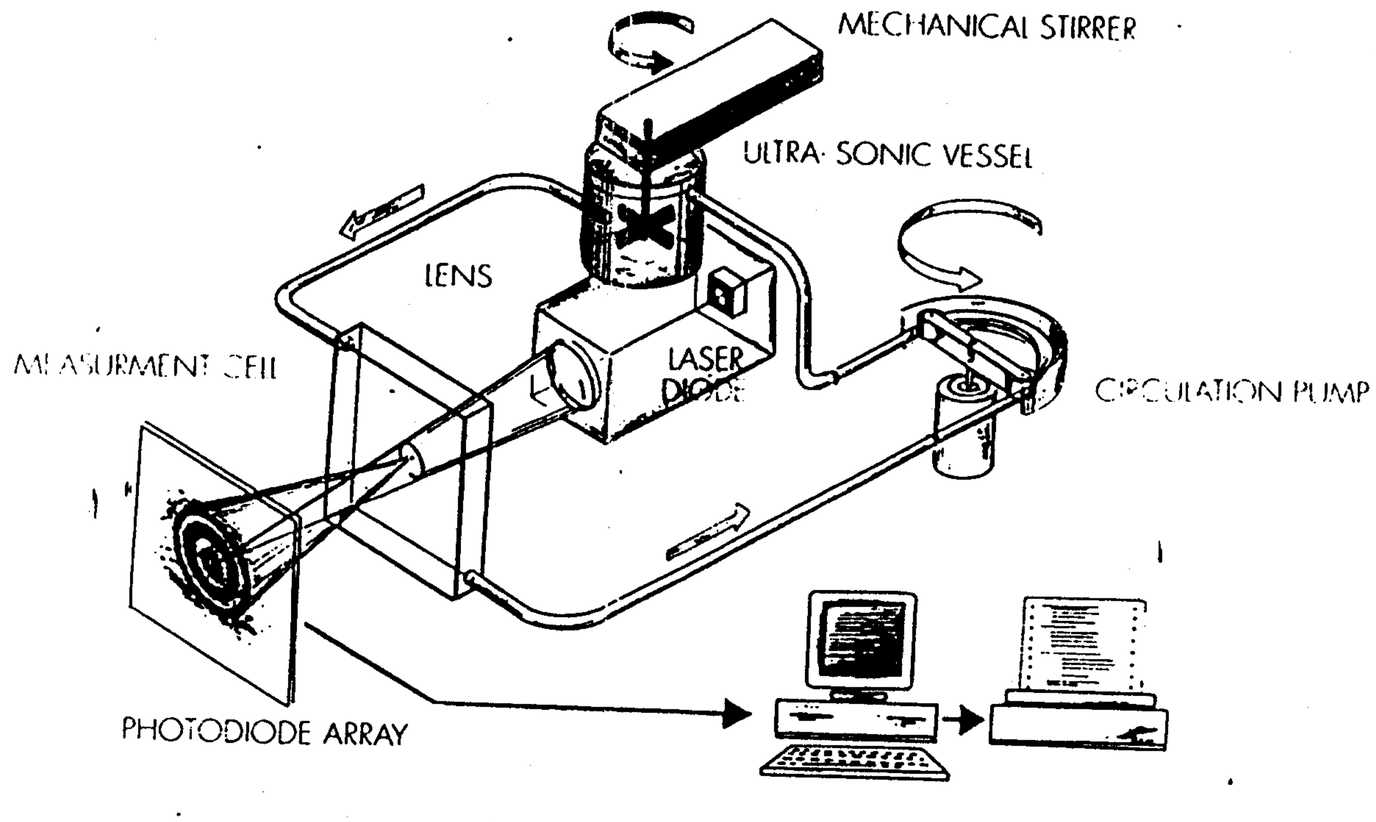
- Curves of percentage by weight, cumulative "undersize" of "oversize"
- Histogram by weight
- Histogram by area
- Histogram by number of particles
- Possibility of processing measurements for values of 50 optional diameters specified by the user
- Possibility of processing by the following methods
- SPLINE interpolation
- ROSIN - RAMLLER's law
- Log - normal law
- Possibility of displaying super imposed curves

****

* Note: Country of Origin: FRANCE.

Technology Trading S.A. TT Luxembourg

containing the suspended powder which results in diffraction of the light beam



The distribution of the luminous energy in the diffraction pattern depends upon the size of the diffracting particles. If all these particles are spherical and of the same diameter, the diffracted energy is distributed according to Airy disc, i.e., there is a formation of infinite distance of a central spot and a series of concentric rings whose diameter are related to the particle size

On the other hand, if sets of different diameters are involved, the diffraction pattern is more monotonic. In this case the particle size distribution can only be obtained by analyzing the energy distribution between the various rings showing up in the focal plane image of the lens

Technology Tracing S.A. TT Luxembourg

أولويات الطلبية :

28/2000

قدمت بالرسالة

TT/ALBA/2000/007

مؤرخة ٢٠/٧/٢٠٠٠

الاولويات تحتوي رسالة سابقة هي :

* TT/ALBA/99/006 B
* ——— 007
* ——— 025

Ref : TT/ALBA/2000/003 30January 2000.

To
Al Bashair Trading Company Limited
Baghdad, IRAQ

Sub : Tender Number : 28/2000

Dear Sirs,

We are pleased to submit our offer for the above tender as below :

1.0. Complete Thermal Analyzer:

1.1. Description	:	Thermal Analyzer
1.2. Rate	:	US $ 632,000.00
1.3. Quantity	:	1 Unit
1.4. Total Price	:	US $ 632,000.00 C&F Baghdad
1.5. Delivery	:	6 months from the date of deposit

2.0. Graphet:

2.1. Description	:	~~Graphite Bar~~
2.2. Rate	:	US $ 6,825.00 per piece
2.3. Quantity	:	50 pieces
2.4. Total Price	:	US $ 341,250.00 C&F Baghdad
2.5. Delivery	:	8 – 10 weeks from the date of deposit
2.6. Technical Specifications		
2.6.1. Size	:	∅ 250 X 1000 mm L
2.6.2. Density	:	~~1.85 g/cc~~ 2 – 2.05 g/cm³
~~2.6.3. Pure Density~~	:	~~1.82 g/cc~~
2.6.4. Hardness	:	65
2.6.5. Strength	:	98
2.6.6. Ash	:	0.10 %

Tomorrow 7 PM Meeting being arranged

SALAM

I AM NOT HERE

~~3.0~~ Item 2B

3.1. Description : Graphite-Cylinder
3.2. Rate : US $ 7,420.00 per piece
3.3. Quantity : 50 pieces
3.4. Total Price : US $ 371,000.00 C&F Baghdad
3.5. Delivery : 8 – 10 weeks from the date of deposit
3.6. Technical Specifications
3.6.1. Size : 250 O.D. 150 I.D. X 1000 mm L
3.6.2. ~~Density~~ : ~~1.85 g/cc~~ (2 – 2.05) g/cm³
3.6.3. ~~Pure Density~~ : ~~1.82 g/cc~~
3.6.4. Hardness : 65
3.6.5. Strength : 98
3.6.6. Ash : 0.10 %

3.0 : Strain gauge Load Cell

~~4.0 Item 3A~~
3.1

~~3.1.~~ Description : Strain Gauge Load Cell [250 Kg]
~~4.2.~~ Rate : US $ 1,412.00 per piece
~~4.3.~~ Quantity : 4 pieces
~~4.4.~~ Total Price : US $ 5,648.00 C&F Baghdad
~~4.5.~~ Delivery : 4 months from the date of deposit
~~4.6.~~ Technical Specifications
4.6.1. Nominal Load : 2 KN
4.6.2. Accuracy : 0.1 %
4.6.3. Sensitivity : 2 mV/V

~~5.0 Item 3B~~

3.2 ~~5.1.~~ Description : Strain Gauge Load Cell [1 M.T.]
~~5.2.~~ Rate : US $ 1,412.00 per piece
~~5.3.~~ Quantity : 3 pieces
~~5.4.~~ Total Price : US $ 4,236.00 C&F Baghdad
~~5.5.~~ Delivery : 4 months from the date of deposit
~~5.6~~ Technical Specifications
5.6.1. Nominal Load : 10 KN
5.6.2. Accuracy : 0.1 %
5.6.3. Sensitivity : 2 mV/V

~~6.0 Item 3C~~

3.3 ~~6.1.~~ Description : Strain Gauge Load Cell [5 M.T.]
~~6.2.~~ Rate : US $ 4,429.00 per piece
~~6.3.~~ Quantity : 2 pieces
~~6.4.~~ Total Price : US $ 8,858.00 C&F Baghdad
~~6.5.~~ Delivery : 4 months from the date of deposit
~~6.6.~~ Technical Specifications
6.6.1. Nominal Load : 50 KN
6.6.2. Accuracy : 0.02 %
6.6.3. Sensitivity : 2 mV/V

~~7.0 Item 3D~~

3.4 ~~7.1.~~ Description : Strain Gauge Load Cell [10 M.T.]
~~7.2.~~ Rate : US $ 6,042.00 per piece
~~7.3.~~ Quantity : 2 pieces
~~7.4.~~ Total Price : US $ 12,084.00 C&F Baghdad
~~7.5.~~ Delivery : 4 months from the date of deposit
~~7.6.~~ Technical Specifications
7.6.1. Nominal Load : 300 KN
7.6.2. Accuracy : 0.1 %
7.6.3. Sensitivity : 2 mV/V

~~8.0 Item 3E~~

3.5 ~~8.1.~~ Description : Strain Gauge Load Cell [20 M.T.]
~~8.2.~~ Rate : US $ 6,042.00 per piece
~~8.3.~~ Quantity : 3 pieces
~~8.4.~~ Total Price : US $ 18,126.00 C&F Baghdad
~~8.5.~~ Delivery : 4 months from the date of deposit
~~8.6.~~ Technical Specifications
8.6.1. Nominal Load : 300 KN
8.6.2. Accuracy : 0.1 %
8.6.3. Sensitivity : 2 mV/V

~~9.0. Item 3F~~

3.6 9.1. Description : Strain Gauge Load Cell [30 M.T.]
9.2. Rate : US $ 6,042.00 per piece
9.3. Quantity : 4 pieces
9.4. Total Price : US $ 24,168.00 C&F Baghdad
9.5. Delivery : 4 months from the date of deposit
9.6. Technical Specifications
9.6.1. Nominal Load : 300 KN
9.6.2. Accuracy : 0.1 %
9.6.3. Sensitivity : 2 mV/V

~~10.0. Item 3G~~

3.7 10.1. Description : Strain Gauge Load Cell [50 M.T.]
10.2. Rate : US $ 13,086.00 per piece
10.3. Quantity : 2 pieces
10.4. Total Price : US $ 26,172.00 C&F Baghdad
10.5. Delivery : 4 months from the date of deposit
10.6. Technical Specifications
10.6.1. Nominal Load : 500 KN
10.6.2. Accuracy : 0.1 %
10.6.3. Sensitivity : 2 mV/V

~~11.0.~~ Accessories for Item 3
11.1. Description : Connector & Amplifier for the Load Cell
11.2. Rate : US $ 1,180.00
11.3. Quantity : 20
11.4. Price : US $ 23,600.00 C&F Baghdad
11.5. Delivery : 4 months from the date of deposit

~~COMMERCIAL TERMS~~

1. Grand Total : ~~US $ 1,467,142~~
2. Payment : Cash
3. Validity : 01MAR2000

We hope that you will find the above in order

With regards,

For Technology Trading S.A.

Authorized Signatory

٢٠٠٠/٢٨

٢٠٠٠/١/٣٠

(٥)

Enq. No.
28/2000
C.D. 30.01.2000

رقم القائمة

تاريخ الغلق

✗ [1] Complete Thermal Analyzer
(TGA, DSC, DMA, DHS, DES, ...) يقدم كاسبق

[2] Graphet
- Bar: with out side diameter 250 mm, length 1000 mm
- cylinder: out side diameter 250 mm, length 1000 mm
  inside diameter 100 mm
- Density ≥ 2.0 g/cm³
- Hardness ≥ 110
- Strength ≥ 86
- Ash ≤ 0.01%

Quanlity = 50 pieces
For each type
كمية بالتوضيح
٢٨٠٠

[3] Strain gauge load cell
input 10 VDC (2 wire)
out put 2 mV/V (2 wire)
Capel 4 wire

٥٩٠٠

Capacity			quantity
١	250	Kg	4
٢	1	TON	3
٣	5	TON	2
٤	10	TON	2
٥	20	TON	3
٦	30	TON	4
٧	50	TON	2

جميع الطلبات استلمت من استاذ عزيز.

بتاريخ ١٧/١/٠٠٠ صباحاً

Technology Trading S.A
AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : (04) 515 476 FAX : (04) 513 845

Ref.: TT/ALBA/99/006/B

September 23, 1999

To :

AL-BASHAIR TRADING CO. LTD.,
Baghdad.

Sub.: Tender No. 622/99

Dear Sir,

We are pleased to quote for the following items as per your tender.

ITEM NO.
COMPLETE THERMAL ANALYZER (TA, DSC, DMA, DMS,...)

- **HAAKE**
  Price : USD 632,000.00

- **PERKLIN ELMAR**
  Price : USD 490,000.00

Payment : In Cash
Delivery : 6 months

With Best Regards,
For Technology Trading S.A

Technology Trading S.A. Luxembourg

Technology Trading S.A
AJMAN FREE ZONE, AJMAN - UNITED ARAB EMIRATES. TEL : (04) 515 476 FAX : (04) 513 845

Ref. No. : TT/ALBA/99/007

To :

September 23, 1999

Al-Bashair Trading Company Ltd.,
Baghdad.

Tender No 623/99

Dear Sir,

We are pleased to quote the for the following items as per your tender :

ITEM NO 1

* تقديم الجنيس لقادم .

- ***Bar Graphite Ø250 mm X 1000 mm.***
- ***Cylinder Graphite 250/100mm X 1000 mm.***

• **Material**	**N-791**	**N-773**
• ~~Apparent Density~~	~~1.85~~	~~1.77~~
• Pure Density 1.82	2.00-2.05	1.90-2.00
• Hardness	65	55
• Electrical Resistivity	10.00	11.50
• Flexural Stress (MPC)	51.90	39.20
• Average pore size (UM)	10	10
• Compressive Strength	98.00	78.40
• Coefficient of Thermal	4.60	4.60
• Ash (%)	0.10	0.10

تقديم نفس الجنس

0.005

PRICES :-

Price for Bar Graphite / One Piece	**USD**	~~7,582.00~~ 6672	~~5,987.00~~ 5388
Price for Cylinder Graphite /One Piece	**USD**	~~8,245.00~~ 7255	~~6,545.00~~ 5890

Payment : **Cash Basis**
Delivery : ~~**8-10**~~ **weeks** 12-14 (للنوعين) 10% تخفيض
Validity : ~~**15**~~ **October,** ~~**1999**~~
30 Feb 2000

٩٩/١٠/٧

* تم تقديم للشارة / الكاست ذهب لعزيز
بواسطتي بتاريخ ٩٩/٩/٢٢

Regd. Office : 19, Rue Aldringen, L.1118 LUXEMBOURG

ITEM NO 2
NATURAL TEFLON SHAFT

Size	**: 250mm Ø X 300 mm**
Price per piece	**: USD 4,000.00**

ITEM NO 3
NATURAL TEFLON BLOCK

Size	**: 50mm X 500 mm X 1000 mm**
Price per Piece	**: USD 2,100.00**

ITEM NO 4
NATURAL TEFLON PIPE

Size	**: 250mm O.D., 150mm I.D. X 500mm L**
Price per Piece	**: USD 4,600.00**

ITEM NO 5
TEFLON SPRAY CAN

Volume	**: 500 ML**
Price per Piece	**: USD 48.00**

With Best Regards,

Yours Faithfully,
For Technology Trading S.A

Bar & Cyl Gr

* أولويات العرض المقدم للمباشر
للطلبية 907/99 المطلق 750/...
بالتسلسل TT/ALAB/2000/003

أ ولاية الطابية والبعض

246/2000

قدم بالسلسل 77/21

مؤرخ ١٢/١٥ ٢٠٠٠

TO MR. MUNTSIR AWNI

1/4

Ref.: NEC/GENRL/TBM/83/2000

January 7, 2000

OFFER FOR PIPE BENDING MACHINE

REF: ENQUIRY NO. 907/99 DUE DATE 08.01.2000

GENERAL SPECIFICATIONS FOR SINGLE AXIS CNC TUBE BENDING MACHINE

Max. Capacity	:	114 mm OD x 5 mm thick Ferrous tubes UTS 45 Kg/MM2.
Min Capacity	:	25 mm (this can further be reduced with the use of special tooling / attachments.
Max. bend radius (CRL)	:	500 mm
Min. bend radius (CRL)	:	1.5 mm
Length over mandrel standard	:	2 metres (Extra length can be provided if required at extra cost)
Bend Angle range	:	5 -180°
Direction of bending	:	Clockwise (Anticlockwise on request)
Bending Speed	:	12 Degree / sec.
Indicative Production Rate (Exclusive of handling)	:	60 Nos. 90° bends / hr.
Repetitive Bend Accuracy	:	± 0.25°
Controls	:	Single Axis CNC with monitor & Keyboard.

CONT.....2

INDIA

Memory capacity (Additional capacity on the option)	:	600 Bends
Motor capacity	:	20 HP
Approx. weight	:	4.5 tons

For a brief description of the machine, please refer to the enclosed write up.

Price of the single Axis CNC Tube Bending Mahicne with CNC Control Unit, hydraulic clamping pressure die and mandrel withdrawl system with hydraulic power pack but without hydraulic oil and toolset.	**USD 46,700.00** each.
Extra Price for additional mandrel length	**USD 1200 PER METRE**

Note:

1. *For your information, one set of tools consists of bending die, clamping block, wiper die and mandrel.*
2. *Special tooling if required for particular radial shall be quoted extra.*
3. *Complete instructions with drawings shall be supplied for carrying out erection of equipment.*

PRICES	:	C&F BASIS
DELIVERY	:	4 MONTHS
PAYMENT	:	100% CASH IN ADVANCE.
VALIDITY	:	60 DAYS

for NEC Engineers Pvt. Ltd.

Encl.: Brief description of Machine (2 Pages)

INDIA

7/1

NEC ENGINEERS PVT. LTD.
NEW DELHI,
INDIA

SINGLE AXIS CNC TUBE BENDING MACHINE

BRIEF DESCRIPTION:

Mechanical: Our single axis CNC hydraulic tube bender consists of a heavy duty fabricated frame. The lower body of it carries a horizontally mounted hydraulic cylinder which is coupled to a rack, which in turn meshes with a gear. This gear is mounted at the bottom end of a vertically mounted shaft. This shaft is housed in a rigid steel housing and guided with taper roller bearings. The top end of the shaft carries a base which accommodates the bend former. The outward movement of the hydraulic cylinder rotates the gear in clockwise direction and thus also the bend former. This hydraulic cylinder gives the required power/torque to bend the tube.

Coupled to the main shaft is a bend arm assembly which also carries the clamping arrangement for clamping the tube while bending. This bend arm, clamping arrangement, pressure die and mandrel withdrawal arrangement are assembled to the main frame of the machine.

Clamping Arrangement: The clamping block consists of 2 halves of which one is mounted on the bend former and the other on the clamping arrangement on the bend arm. The clamping block half mounted on the clamping arrangement is capable of to and fro movement to clamp/ declamp the tube with the help of a hydraulic cylinder housed in the bend arm. The clamping block is coupled to the hydraulic clamping cylinder either directly or to toggle mechanism depending upon the machine model. The to and fro moving clamp slide is guided in a square guide. This slide carries the serration on it so that the clamp block can be shifted near or away from the bend axis of the machine depending upon the diameter of the former. In addition, a lead screw is provided for fine setting of the clamping block position.

Pressure Die and Wiper Slide: Like the clamp slide, the pressure die is also guided in a square guide and driven by a hydraulic cylinder coupled directly or through the toggle mechanism. The position of the pressure die is also settable with the help of a threaded shaft. A wiper cross slide is fitted at right angles to the pressure die slide which is capable of moving along with the tube during bending and gives a boosted effect to reduce thinning.

Mandrel Assembly: The mandrel cylinder is mounted at the rear end of the machine on a slide to enable shifting of the axis of the mandrel to various positions depending on the diameter of the bend formers. The mandrel is required during bending of thin walled tubes to prevent collapse. While the mandrel is used, due to tendency of the tube to collapse onto the mandrel, the tube tends to be gripped by the mandrel and removal of the tube manually from the machine after bending becomes a difficult task. The hydraulic mandrel extractor is therefore provided so that extraction of the mandrel from the tube is done hydraulically and automatically before the tube is declamped, thus eliminating operator's fatigue.

Angle Setting System: Our Single Axis CNC hydraulic tube benders are provided with a 8 bit CMOS microprocessor based CRT bend controller. The system enables the user to programme 12 bend angles per programme upto a maximum of 50 programmes. The system consist of a CPU card, keyboard, VDU (Video Display Unit) a regulated power supply and a rotary digital encoder.

The digital encoder is fitted onto the main shaft at the base of the bend former and gives an open loop angle feed back to the controller. The actual angle is displayed on the CRT monitor. The keyboard provided enables the operator to programme and operate the machine in Manual/Auto mode. The VDU gives visual indication of the various parameters set, bend angle in progress, status of the limit switches and the solenoid valves being actuated during operation.

Angle of Bend Indicator: An engraved linear scale marked in degrees rivetted onto the body of the machine along its length shows the angle of bend that is being bent during the working of the machine. An indicator moves over the scale for easy visual indication. This scale can be used to cross check the display panel of the electronic control before starting the production.

HOW THE MACHINE WORKS:

The operator inserts the tube to be bent into the clamping block and then presses the push button for auto bending. The following sequence of operations take place:

1) The clamping cylinder operates and clamps the tube with a firm grip.

2) When full clamping pressure is exerted, the mandrel gets inserted into the tube following which the pressure die travels and applies pressure on the tube.

3) Now the bend cylinder operates and rotates the bend former in the clockwise or anti clockwise direction depending on bending direction.

4) When the tube is bent to the required setting, the rotation stops, the mandrel is withdrawn automatically, clamp is declamped and the pressure die is reset.

5) A dwell time is provided to enable the operator pull the tube forward manually to ensure that the bent tube does not interfere with the bend former during its reverse motion.

6) After the time lapse, the bend former now reverses automatically and stops at the zero position.

As is seen from the above sequence, the operator has only to place the tube at the right location and operate the push button. The rest of the operations are all done semi-automatically enabling the operator to take out a high rate of production.

The built in Single Axis CNC controller provided with the machine enables the operator to operate all the systems manually like inching the bend former, clamping, mandrel, pressure die etc. by pressing the respective push button. The machine will be switched over to automatic system only when the Auto mode push button is pressed. The complete system is provided with electrical inter locks and over loads in addition to the hydraulic sequencing circuitry.

FAXED

Enq. No. : 907/99
C. D.:08.01.2000

Specifications Of Pipes Bending Machine

1. The machine has the ability to bend pipes from 6mm to 100mm diameter, Min thickness: 1mm & Max thickness for pipe wall: 3mm.

2. Supplying all the bending Pipes fixtures according to the specification & drawings enclosed herewith.

3. Supplying pipes testing fixtures according to the drawings mentioned above in No.2.

4. Supplying us with a complete set of bending pipes according to the drawing with the bending program on a disk.

FAXED

Technical Specification For Pipes Bending Machine

1. Pipes Bending Machine.

2. Machine's ability for pipes bending Min Diameter: Ø 6 mm, Max Diameter: Ø 50 mm, Pipe's Type: 1.4541 Stainless Steel.

3. Machine's ability for pipes bending Min Diameter: 1 mm, Max Diameter: 3 mm, Pipe's Type: 1.4541 Stainless Steel.

4. Supplying all the fixtures & bending rolls with the machine according to the Pipe's designs, which enclosed herewith.

5. Supplying two sets of angle measuring fixtures & all bending diameters according to the Pipe's designs.

6. Supplying two complete sets of bending pipes according to the designs & a disk of all bending programs. Quantity: 11 pipes for each set.

7. Training a cadre of two persons for 14 days (Maintenance & Programming).

8. Supplying all the (Mechanical & Electrical) catalogues, three copies in English language.

9. Supplying spare parts enough for two years.

Enq. No. 907/99
C. D. 8, Jan, 2000

رقم الاستفسار ٩٠٧ / ٩٩

تاريخ الاستفسار ٢٠ / ١٢ / ٩٩

مواصفات ماكنة حني الانابيب

١- يمكن للماكنة حني الانابيب من قطر 6mm ولغاية 100mm أقل سمك ١ملم وأعلى سمك جدار الانبوب 3mm.

٢- يجب تجهيز التراتيب الخاصة بحني الانابيب المبينة مواصفاتها في المخططات المرفقة طياً.

٣- تجهيز شابلونات الفحص للانابيب وحسب المخططات في الفقرة (٢) أعلاه.

٤- تجهيزنا بسيت كامل من الانابيب محنية حسب المخطط مع البرنامج الخاص بالحني على دسك.

المرفقات:

مخططات عدد ( ).

الآنسة سيفان لطفي

ترجمة فوراً وتطبع وترسل الى NEC

P(3-4)

المواصفات الفنية لماكنة حني الانابيب:-

١- ماكنة حني انابيب (CNC)

٢- قابلية الماكنة على حني الانابيب اقل قطر (Ø6mm) واكبر قطر (Ø50) نوع الانبوب (1.4541 Stain steel).

٣- قابلية الماكنة على حني انابيب اقل سمك (1mm) واعلى سمك (3mm) (1.4541 StainSteel)

٤- تجهيز مع الماكنة جميع تراتيب ورولات الحني حسب التصاميم الخاصة بالانابيب والمنفذ مسبقاً.

٥- تجهيز مع الماكنة شابلونات قياس الزوايا وجهاز اظهار الحني حسب تصاميم الانابيب وبعدد (٢ سيت)

٦- تجهيزنا (ست عدد/٢) كامل من الانابيب محنية حسب المخططات مع جميع برامج الحني للانابيب على دسك وبعدد (احدى عشر) انبوب لسيت واحد.

٧- تدريب كادر بعدد (اثنان) ولمدة (١٤) يوماً برمجة وصيانة.

٨- تجهيز كافة الكتلوكات (الكهربائية والميكانيكية) وبعدد ثلاثة نسخ وباللغة الانكليزية.

٩- تجهيز مواد صيانة تكفي لمدة سنتين.

الاسعار سيقدمها لاحقاً

ترجمة مكرراً وتطبع وترسل الى شركة NEC مع النسخة المرفقة طيه وتعد بصفحة واحدة.

أوليات العرض المقدم للشبابك

للطلبية 924/99 المغلق ٢٠٠٠/١/٥

بالتسلسل TT/ALBA/2000/001

مؤرخ ٢٠٠٠/١/٢

99REP545/23DEC99

To : Mr. MUNTASIR AWNI
From : G.CHOCKALINGAM

FAXED

TIN - GRADE 'A'

ENQUIRY NUMBER 924/99

CLOSING DATE : 05JAN2000

♦ TECHNICAL

DESCRIPTION	UNIT	CLIENT REQUIREMENT	OFFER SPECIFICATION
Product	-----	Tin	Tin
Purity, min.	%	99.85	99.85
Specification	-----	ASTM	ASTM
Quantity	M.T.	5.0	5.0

♦ COMMERCIAL

- FOB Cost : US $ 9,000 per M.T.
- Quantity : 5 M.T.
- Total Cost : US $ 45,000
- Payment : Advance
- Delivery : 12 weeks from the date of deposit
- Validity : 30JAN2000

****

99REP545/23DEC99

To : Mr. MUNTASIR AWNI
From : G.CHOCKALINGAM

TIN - GRADE 'A'

ENQUIRY NUMBER 924/99

CLOSING DATE : 05JAN2000

◆ TECHNICAL

DESCRIPTION	UNIT	CLIENT REQUIREMENT	OFFER SPECIFICATION
Product	-----	Tin	Tin
Purity, min.	%	99.85	99.85
Specification	-----	ASTM	ASTM
Quantity	M.T.	5.0	5.0

◆ COMMERCIAL

- FOB Cost : US $ 9,000 per M.T.
- Quantity : 5 M.T.
- Total Cost : US $ 45,000
- Payment : Advance
- Delivery : 12 weeks from the date of deposit
- Validity : 30JAN2000

****

To: Mr. G.C.C
Fr.: Muntsair

23.12.99

Enq. No. 924/99
C.D. 05.01.2000

Standard Specification According to Astm 02.04

GRADE "A" TIN SPECIFICATION

Element	Composition 0/9	Qty.
Sn		5 ton.
Tin. Min Sn	99.85	
Antimony max Sb	0.04	
Arisenic max As	0.05	
Bismuth max Bi	0.030	
5.0 minm max Cd	0.001	
Copper max Cu	0.04	
Iron max Fe	0.010	
Lead max Pb	0.05	
Nickel + Cobalt max Ni Cu	0.01	
Sulfur max S	0.01	
Zinc max Zn	0.005	

FAXED

٩٩/٩٢٤

بسم الله الرحمن الرحيم

الدائرة : التجارية

العدد : ١٢/٩٠/١٠/٦١٨١

التاريخ : ٢٨/١١/١٩٩٩

جمهورية العراق
هيئة التصنيع العسكري
شركة الشهيد العامة

الى / شركة البشائر

م / المفاتحة المرقمة ٩٩ / ٦٢ | ٥٥

يسر شركتنا ان تدعوكم لتقديم عروضكم وفقا للتفاصيل التالية ادناه .

١ ـ تقديم الاسعار بطريقة الدفع (التقدي) .

٢ ـ الاسعار واصلة الى الشركة .

٣ ـ العرض نافذ لمدة شهرين على الاقل بعد تاريخ غلق المناقصة .

٤ ـ ترفق مع العرض تامينات اولية وبصك مصدق بقيمة ٥٪ من قيمة العوض بالدينار العراقي حسب سعر صرف الدولار بالدينار العراقي يوم تقديم العطاء وسوف يتم اهمال اي عرض غير مرفق معه الصك .

٥ ـ عند الاحالة تلتزم الشركة المجهزة بتقديم كفالة ضامنة لحسن الاداء بنسبة ٥٪ من قيمة العرض بصيغة خطاب ضمان غير مشروط او صك مصدق لايطلق الا بعد وصول المواد ومطابقتها للمواصفات الفنية لها الصك المصدق عند تقديم الكفالة الضامنة بعد الاحالة القطعية .

٦ ـ ترفق مع العروض جميع العروض الفنية للمواد .

٧ ـ يرفق مع العرض المستمسكات التالية وفي حالة عدم ارفاقها يعتبر العرض لاغيا .

آ ـ وثائق تسجيل الشركة .

ب ـ تقديم قائمة بالاعمال المماثلة التي تم تنفيذها

جـ ـ صورة من هوية اتحاد المقاولين بالنسبة للاعمال المدنية والميكانيكية والكهربائية وهوية غرفة التجارة بالنسبة لاعمال التوريد والنقل .

٨ ـ تقديم وكالة رسمية من صاحب المكتب او الشركة للشخص الذي يمثلة في متابعة اجراءات التعاقد

٩ ـ تاريخ غلق الدعوة نهاية الدوام الرسمي ليوم ..... الرابع ٨/١/٢٠٠٠ ..... وسيتم رفض العروض التي ترد بعد التاريخ اعلاه .

١٠ ـ جميع المراسلات حول المفاتحة تكون فنية بحته ولاتتضمن اي اسعار على ان تقدم العروض بعد تكاملها فنيا بظروف مغلقة ومختومة بختم الشركة متضمنة كافة الشروط الفنية والتجارية وقبل تاريخ غلق المفاتحة ويثبت على العرض من الخارج اسم وعنوان الشركة المجهزه وتاريخ غلق الدعوه وتودع العروض في صندوق العطاءات الموجود في مقر الاستعلامات الخارجية في الشركة حصرا وسوف يهمل اي عطاء يرد خارج صندوق العطاءات مهما كانت الاسباب . مع التقدير

١١ ـ سعر نسخة المفاتحة « » دينار

الحاصلات والكميات الكبيرة

م / المدير العام

نسخه منه الى /

د . التجارية / المشتريات / ش . الاستيراد مع الاولويات

Astm 02.04 المواصفة العالمية حسب

٩٩/٩/٢٤

٢٠٠١/١/١٥

GRADE "A" TIN Specification

Element	Composition 0/9	الكمية
قصدير «Sn»		
Tin, min «Sn»	99.85	
Antimony, Max «Sb»	0.04	
ARisenic Max «As»	0.05	
Bismuth Max «Bi»	0.030	
Cadmium Max «Cd»	0.001	
Copper Max «Cu»	0.04	
Iron Max «Fe»	0.010	
Lead Max «pb»	0.05	
Nickel + Cobalt, Max (Ni)(Co)	0.01	
Sulfur, Max «S»	0.01	
Zinc, Max «Zn»	0.005	