

KERALA STATE CO-OPERATIVE FEDERATION FOR FISHERIES  
DEVELOPMENT LTD  
KAMALESWARAM, TRIVANDRUM.695009, KERALA STATE  
Phone 0471 2457172,2457756 Fax 0471-2457752

**TENDER NOTICE NO.III**

Competitive tenders in separate sealed covers super scribed with the name and number of tender are invited in two-bid system for the supply and erection of the following machinery/equipments for its Fish meal project from the manufacturers, authorised distributors reputable suppliers and sole agents.

Tender No.	Description.	Tender document price (Non Refundable).
No.III	Steam Boiler (3000 kg) & Accessories	Rs 2000 + tax

The tender forms with detailed specifications and terms and conditions may be had from Matsyafed Head Office at Trivandrum on payment of Rs 1000 + tax. and is not refundable under any circumstances. or can be downloaded from the web site [www.matsyafed.org](http://www.matsyafed.org)

The tenderers can submit tenders for either all the machinery/equipment or in part.

Due date and time for receipt of tenders at 3 PM at 23.9.2010

Due date and time for opening of tenders at 4 PM at 23.9.2010

The tender documents should contain two parts namely technical bid and financial bid.

The technical bid should contain

- a) Prescribed tender form duly signed and sealed
- b) Detailed technical specifications with out price quote.
- c) Original brochure & literature supporting the technical specification.
- d) Earnest Money Deposit of Rs 25000
- e) Agreement in Rs100 stamp paper
- f) List of installations in India ,fully your own installed or part.
- g) Details of service facility
- h) Compliance to payment condition
- i) Delivery period
- j) Place of delivery
- k) Warranty
- l) Training details etc
- j) The bidder should submit a quality assurance plan for the equipment they intend to supply
- k) The organizational chart and balance sheet of the bidding firm also to be submitted

The Financial bid should contain

- a) Price of the equipment and its accessories
- b) AMC details
- c) Price list of essential spare parts
- d) Compliance to Terms & conditions etc

The tenders duly filled and signed by the tenderer along with necessary documents should be submitted to the Managing director, Kerala state co-operative federation for fisheries Development Ltd(MATSYAFED),Kamaleswaram, Manacaud. P.O Trivandrum-695009 on or before 3 pm 23.9.2010

Specimen of the agreement to be submitted in stamp paper is in the last page of the tender form. Earnest Money Deposit (EMD) amount of Rs..... shall be submitted by way of demand draft, deposit receipt or bank guarantee in favour of The Managing Director, Kerala state co-operative federation for fisheries Development Ltd(MATSYAFED),Kamaleswaram,Manacaud.P.O Trivandrum-695009. In the case of bank guarantee, its validity should be up to 30/6/2011.

The technical bids will be opened at 4 PM on 23.9.2010 at the office Managing Director ,conference hall in the presence of such tenderers or their authorized representatives who may be present at that time.

The financial bids of the technically qualified firms will be opened at a later stage and the date will be intimated. The Managing Director, MATSYAFED, Trivandrum reserves the right to accept or reject all or any tender at his sole discretion without assigning any reason. For legal purposes, the cause of action will be deemed to have arisen in Trivandrum, Kerala state.

#### TERMS AND CONDITIONS

1. The latest model shall be quoted and certified.
2. The Technical bid will be examined by a committee decided by the management to assess the credibility and authenticity of the bidder.
3. The quoted price should include cost of the equipment, freight, insurance, installation and commissioning separately.
4. Payment condition:
  - (a) If the price is quoted in Indian rupees, 90% payment will be released after successful commissioning.10% of the price will be retained as security deposit and will be released on completion of the guarantee period.
5. Factory site/Installation site  
All the equipments/machinery as per this tender is to be delivered & installed in the factory site in **Arattupuzha** village in **Aleppey district**
6. The installation should be done by the supplier.
7. Delivery period: - The equipment and its accessories should be completely supplied, installed and commissioned within 3 months from the date of supply order.
8. Warranty:- The entire equipment and its accessories should have comprehensive warranty from the date of acceptance. Specify the warranty period
9. The rates and terms of AMC (both comprehensive and labor) for a minimum period of 3 years after the warranty period shall be clearly specified. The labor AMC amount will be taken in to consideration for final selection.

10 Training should be given to the staff free of cost.

11. List of installations in India over past 5 years shall be provided

12. Duely completed tender document through registered post or in person will only be accepted as per the time schedule.

13. The detailed specification of the equipment are given in the web site. **[www.Matsyafed.org](http://www.Matsyafed.org)**

SD/-

THE MANAGING DIRECTOR  
KERALA STATE CO-OPERATIVE  
FEDERATION FOR FISHERIES  
DEVELOPMENT LTD.

KAMALESWARAM, MANACAUD P.O,  
THIRIVANANDAPURAM. PIN. 695009,  
KERALA, Ph. 2457172, 2457756 Fax 0471-2457752

ANNEXURE-1

AGREEMENT

[to be executed on Rs.100/- Kerala Stamp Paper (non-judicial)and submitted with the tender documents – technical proposal]

Articles of agreement executed on this the ..... day of two thousand ..... BETWEEN the Managing director, Kerala state co-operative federation for fisheries Development Ltd(MATSYAFED),Kamaleswaram, Manacaud. P.O Trivandrum-695009 herein after called MATSYAFED and

..... (here enter name and address of the tenderer) (hereinafter referred to as “the bidder”) of the other part.

WHEREAS in response to the Notification No .....dated ..... the bidder has submitted to MATSYAFED a tender for the supply and erection of the machinery/equipments for its Fish meal project subject to the terms and conditions contained in the said tender.

WHEREAS the bidder has also deposited with MATSYAFED, a sum of Rs. .... (Rupees .....only) as earnest money for execution of an agreement undertaking the due fulfillment of the contract in case his tender is accepted by Matsyafed

NOW THESE PRESENTS WITNESS and it is hereby mutually agreed as follows:

- 1.In case the tender submitted by the bidder is accepted by Matsyafed, and the contract for the supply & erection of the machinery/equipments for its fish net project has been awarded to the bidder, the bidder shall within 14 days of acceptance of his tender, execute an agreement with Matsyafed incorporating all the terms and conditions under which Matsyafed accepts his tender.
2. In case the bidder fails to execute the agreement as aforesaid incorporating the terms and conditions governing the contract, MATSYAFED shall have power and authority to recover from the bidder any loss or damage caused to Matsyafed by such breach as may be determined by Matsyafed by appropriating the earnest money deposited by the bidder and if the earnest money is found to be inadequate, the deficit amount may be recovered from the bidder and his properties movable and immovable in the manner hereinafter contained.
3. All sums found due to Matsyafed under or by virtue of this agreement shall be recoverable from the bidder and his properties movable and immovable under the provisions of the Revenue Recovery Act for the time being in force as though such sums are arrears of land revenue and in such other manner as Matsyafed may deem fit.

In witness where of Sri..... (here enter  
name and designation) for and on behalf of Matsyafed and Sri.  
.....  
the bidder have hereunto set their hands, the day and year shown against  
respective signatures

Signed by ..... (date) ..... (for matsyafed)

In presence of witnesses:

- 1.
- 2.

Signed by ..... (date) ..... (for bidder)

In the presence of witnesses:

- 1.
- 2.

ANNEXURE-II

CONTRACT AGREEMENT

(to be executed by the successful bidder on award of the contractor Rs. 100/- Kerala Stamp Paper(Non Judicial)

This agreement made on this ..... day of .....

..... between the Managing director, Kerala state cooperative federation for fisheries Development Ltd(MATSYAFED),Kamaleswaram, Manacaud. P.O Trivandrum-695009 herein after called MATSYAFD which expression shall include its administrators, successors, executors and assigns) of the one part and ..... (name of contracting company), a company/firm incorporated under the ..... having its registered Office at .....

..... (here in after referred to as "Contractor", which expression shall include its administrators, successors, executors and permitted assigns) of the other part.

WHEREAS MATSYAFED has invited bids for supply and erection of the machinery/equipments for its Fish meal Project from manufacturers, authorized distributors, reputable suppliers (briefly describe scope of the works) as per its Tender notice No. ....dated .....

AND ..... WHEREAS \*..... had participated in the above referred bidding vide their proposal no. .... dated ..... and Matsyafed accepted the aforesaid proposal and awarded the contract to \*..... on terms and conditions contained in its work order No. ....dated ..... and the documents referred to therein, which have been accepted by \*.....resulting into a "Contract".

NOW THEREFORE THIS DEED WITNESSETH AS UNDER:-

1. AWARD OF CONTRACT

1.1 MATSYAFED has awarded the contract to \*..... for the work of the supply and erection of ..... on the terms and conditions contained in its work order No.....dated..... and the documents referred to therein. The award has taken effect from .....

1.2

..... ie., the date of issue of the aforesaid letter. The terms and expressions used in this Agreement shall have the same meaning as are assigned to

them in the “Contract Documents” referred to in the succeeding Article.

## 2. CONTRACT DOCUMENTS

2.1 The contract shall be performed strictly as per the terms and conditions stipulated as per the following documents attached herewith (hereinafter referred to as “Contract Documents”):

i)MATSYAFED’s Tender Documents in respect of tender No. ....dated .....

consisting of Notice inviting Tender and conditions of contract including all amendments issued

vide its letter(s) no(s). .... dated .....

(Volume-I)

ii)Matsyafed’s Schedule and Technical Specification (including Amendments issued vide its letter

no..... dated .....

.....

(Volume-II)

iii) ..... proposal no.....

dated ..... along with proposal sheets, payment terms and work schedules submitted by Contractor for the supply and erection of the Glucosamine plant

(Volume-III)

\* Brief name of the contracting company

iii) Agreed Minutes of the meeting held on ..... between MATSYAFED and the Contractor.

(Volume-IV)

iv)MATSYAFED’s Work Order No. ....dated ..... duly accepted by the Contractor.

(Volume-V)

2.2 All the aforesaid contract documents shall form an integral part of this Agreement, in so far as the same or any part thereof conform to the Bid Documents (Volume I & II) and what has been specifically agreed to by Matsyafed in its Work Order. Any matter inconsistent therewith, contrary or repugnant thereto or any deviations taken by the Contractor in its “Proposal” (Volume-III) but not agreed to specifically by Matsyafed in its Work Order shall be deemed to have been withdrawn by the Contractor. For the sake of brevity, this Agreement along with its aforesaid contract documents shall be referred to as the “Agreement”.

## 3. CONDITIONS AND COVENANTS

3.1 The scope of contract, consideration, terms of payment, price adjustment, taxes wherever applicable, insurance, liquidated damages, performance guarantee and all other terms and conditions are contained in MATSYAFED’s Work Order No. ....dated..... read in conjunction with other aforesaid contract documents. The contract shall only be performed by the Contractor strictly and faithfully in accordance with the terms of the Agreement.

3.2 The scope of work shall also include supply and installation of all such items which are not specifically mentioned in the contract documents, but which are needed for successful, efficient, safe and reliable operation of the equipment unless otherwise specifically excluded in the specification under “exclusions” or Work Order.

### 3.3 TIME SCHEDULE

Time is the essence of the contract and schedules shall be strictly adhered to. The Contractor shall perform the work in accordance with the agreed schedule as given in the work order.

3.4 The Contractor guarantees that the equipment package under the contract shall meet the ratings and performance parameters, as stipulated in the Technical Specifications (Volume II) and in the event of any deficiencies found in the requisite performance figures, the MATSYAFED may at its option reject the equipment package or alternatively accept it on the terms and conditions and subject to levy of the liquidated damages in terms of contract documents. The amount of liquidated damages so leviable shall be in accordance with the contract documents and without any limitation.

3.5 It is further agreed by the Contractor that the contract performance guarantee shall in no way be construed to limit or restrict the Matsyafed 's right to recover the damages/compensation due to short-fall in the equipment performance figures as stated in para 3.4 above or under any other clause of the Agreement. The amount of damages/compensation shall be recoverable either by way of deduction from the contract price, contract performance guarantee and/or otherwise.

3.6 This agreement constitutes full and complete understanding between the parties and terms of the presents. It shall supersede all prior correspondence to the extent of inconsistency of repugnancy to the terms and conditions contained in the agreement.

Any modification of the Agreement shall be effected only by a written instrument signed by the authorised representatives of both the parties.

## 4. SETTLEMENT OF DISPUTES

4.1 It is specifically agreed by and between the parties that all the differences of disputes arising out of the agreement or touching the subject matter of the agreement, shall be decided by process of settlement & arbitration as specified in the relevant clauses of the conditions of the contract and the provisions of the Indian Arbitration Act, 1940 shall apply and Kerala Courts at Trivandrum alone shall have exclusive jurisdiction over the same.

4.2 Notice of default given by either party to the other party under the Agreement shall be in writing and shall be deemed to have been duly and properly served upon the parties hereto if delivered against acknowledgement or by telex or by registered mail with acknowledgement due, addressed to the signatories at the address mentioned herein above.

IN WITNESS WHEREOF, the parties through their duly authorised representatives have executed these presents (execution whereof has been approved by the competent authorities of both the parties) on the day, month and year first above mentioned at Thiruvananthapuram.

For KERALA STATE CO-OPERATIVE FEDERATION FOR FISHERIES DEVELOPMENT LTD

(Signature)

(Name), (Designation)

(Seal)

for Contractor

(Contractors signature),

( Name), (Designation)

(Seal)

Witnesses:

1.

2

Witnesses:

1.

2.

KERALA STATE CO-OPERATIVE FEDERATION FOR FISHERIES  
DEVELOPMENT LTD (MATSYAFED)

**Specification sheet for tender No.III**  
**PURCHASE OF STEAM BOILER & ACCESSORIES**

**(Three pass, smoke tube, wet back , integral furnace, balanced draught, packaged shell type boiler with plain furnace)**

**A. SCOPE OF SUPPLY**

**1. MAIN BOILER**

Pressure parts consisting of smoke tube assembly having integral furnace with fixed grate, necessary opening for valves & fittings, manholes & head holes, wet back reversing chamber, smoke chamber with furnace and spirals.

**2. ACCESSORIES**

- Two Numbers of Centrifugal feed water pumps with motors and base frame
- One Forced draft fan with motor and base frame.
- One Induced draft fan with motor and base frame.
- One Heat recovery unit, Air pre heater

**3. PIPING**

- One Set of IBR piping between feed water pumps and boiler.

**4. MOUNTINGS & FITTINGS**

- One Steam stop valve
- One Air vent valve
- Two Single port spring loaded safety valves
- One Shell blowdown valve
- Two sets of gauge glass with protector glass assembly
- Two Isolating stop valves for level controller
- Three Isolating valves on feed water line
- Three Non return valves on feed water line
- One Water level controller drain valve
- One Isolating valve for steam pressure gauge
- One Isolating valve for Inspector pressure gauge

**5. INSTRUMENTS, CONTROLS AND SAFETIES**

- One Steam pressure indicator (gauge) for measuring steam pressure
- One Pressure gauge for measuring feed water discharge pressure.
- One Steam pressure switch for high pressure cut off.
- One Magnetic type water level controller

**6. ELECTRICAL**

- One Pre-wired electrical control panel with contactors, relays & MCCB/MCB for motors.

## B. SAFETIES PROVIDED IN BOILER

Unsafe condition	Initiator	Action
(a) Extra low water level in the boiler	Level controller	Alarm & boiler trip
(b) Very extra low level of Water	Fusible plug	Fusible plug blow off
(c) Steam pressure high	Pressure switch	Alarm & boiler trip
(d) Steam pressure high	Safety valve	Lift

### Technical Specification for Wood Fired Boilers

Description	Unit
<b>PERFORMANCE</b>	
Max. Steam Output (F&A 100°C)	kg/h
Outlet Steam Condition	
Pressure (Safety Valve set Pr.)	kg/cm <sup>2</sup>
Temperature	°C
Dryness Fraction	
Fuel	
Efficiency on GCV basis (As per BS 845 Part II Indirect Method)	%
Type Of Grate	
Grate Area	m <sup>2</sup>
No. of Furnace	
Flue Gas Exit Temperatures	
At Boiler Outlet	°C
At HRU Outlet	°C
Fuel Condition / Water Quality	
<b>DESIGN DATA</b>	
Design Code	IBR 1950 WITH LATEST AMMENDMENTS
Design Pressure	kg/cm <sup>2</sup> 10.54
Material Of Construction	
Shell	SA515/516 GR.70 or eqv.
Tubes	ERW-BS 3059 Part 1 or eqv.
Heating Surface Area	m <sup>2</sup>
Water Holding Capacity	m <sup>3</sup>
Steam Holding Capacity	m <sup>3</sup>
Steam / Water Interface Area	m <sup>2</sup>

Dry Weight Of Boiler	Tons
<b>COMPONENT DATA</b>	
Shell Outside Diameter	mm
Shell Length	mm
Tube Outside Diameter	mm
Thickness	mm
<b>CONNECTIONS &amp; FITTINGS</b>	
Main Steam Stop Valve Size	mm
Steam Safety Valve Size	mm
Quantity	nos
Blow Down Valve Size	mm
Level Control Blow Down Size /Qty	mm/nos
Water Level Gauge Glass (Size / Qty)	mm/nos
Centre To Centre Distance	Mm
Drain Cock (Size)	Mm
Stop Valve In Feed Line (Size / Qty)	mm/nos
NRV In Feed Line (Size / Qty)	mm/nos
Air Vent Valve (Size / Qty)	mm/nos
Mobrey Isolation Stop Valve (Size / Qty)	mm/nos
Stop Valve For Insp. Gauge (Size)	Mm
<b>FEED WATER PUMP</b>	
Type vertical Stainless steel pump with mechanical seal	
Capacity	m <sup>3</sup> /h
Head	mlc
Motor	Hp
<b>INDUCED DRAUGHT FAN</b>	
Type	
Flow	m <sup>3</sup> /min
Head @ 280°C	mmWC
Motor Horse Power	Hp
<b>FORCED DRAUGHT FAN</b>	
Type	
Flow	m <sup>3</sup> /min
Head @ 20°C	mmWC
Motor Horse Power	Hp
<b>Overall Dimensions</b>	
Length	Mm
Width	Mm
Height	Mm

**PREFERED MAKES**

Steam stop valves	-	Klinger, Leader, Spirax
PRS	-	Spirax, Thermax, Klinger
Softener&Resin	-	Ion exchange, Thermax, EqvInt.
Isolation valves	-	Zoloto, Audco, and Inter.
Steam traps		spirax, Thermax, klinger.

### Price Bid

<b>BOQ for 3000kg/hr steam Boiler</b>					
SL. No.	Description	Qty	Unit	Rate	Amount
1	Design, procurement, fabrication, packing & forwarding, supply at site, unloading, erection, testing and commissioning of 3TPH wood/ Husk briquette fired, 3 pass fully wet back, balanced draft Boiler with all accessories such as feed water pumps, induced draft fan, forced draft fan, Air preheater, automatic water level controller and control panel. (As per Annexure 1)	1	No		
2	Fabrication and positioning of flue gas chimney 30 mtr height made of MS Sheet, chimney top dia 700mm, bottom dia 1500mm, 1st 12mtr flare section 10mm thick, 2nd 9mtr straight 8mm thick, 3rd 9mtr straight 6mm thick, each section shall be 12mm thk flanged end connected, flanges with 10mm thk Gusset plate welded all around, chimney Base plate 30 mm thick 2000mm O/D, chair plate 25mm thick 2000mm O/D, with intermediate stiffener plate 12mm thk. The chimney shall be mounted with Ash door strengthened with corresponding cutout area, sampling point for inspection, Plat form for inspection, MS ladder with ladder cage, ladder rung, chimney hood, lightning arrestor connected with GI strip, porcelain clamp and electrode plate etc. All complete with two coat of heat resistant aluminium paint.	1	No		
3	Fabrication and erection of flue gas duct 300 mm dia made of 5 mm thick sheet connecting boiler to ID fan and to chimney including necessary flanges, nut/bolts and gaskets and heat resisting aluminium paint with insulation.	15	Mtrs		
4	Fabrication and installation of fresh air ducting connecting Boiler to APH, APH to FD fan made of 3mm thk sheet including one set flanges, miter Bend, nut/bolts, packings etc All complete with two coat of heat resistant aluminium paint.	600	Kgs		
5	IBR Certified Steam Header fabricated from ASTM A 106 Gr.B schedule 80, 150 mm dia of 2 meter sizes	RO			

	working pressure 9.0 Kg/Sq.cm, 1 nos. steam inlets 80 mm dia with cast steel globe valve, 3 nos. steam outlets with valves, 2 Nos. 50 mm dia, 1 No. 40 mm dia, All complete with necessary fittings such as TD trap assembly, pressure guage, safety valve and insulated with 75 mm thk mineral wool covered with chicken mesh and 24 g Al cladding.				
6	Fabrication and erection of Water Lines, fuel lines , condensate lines and drain lines with Non IBR M.S. 'C' Class ERW pipe including all fittings such as bend, tees, fanges, consumables for cutting, welding consumables.				
	<u>Size</u>				-
	80 NB	18	Mtrs		
	50 NB	48	Mtrs		
	40 NB	36	Mtrs		
	25 NB	24	Mtrs		
	20 NB	18	Mtrs		
	15 NB	36	Mtrs		
7	Fabrication and erection of Steam lines with ASTM A 106 GRB Sch: 40 IBR MS pipe including all fittings such as bends, tees, flanges, consumables for cutting, welding .				-
	<u>Size</u>				-
a	80 NB	40	Mtrs		
b	65 NB		Mtrs		
c	50 NB	24	Mtrs		
d	40 NB	18	Mtrs		
e	25 NB	12	Mtrs		
f	20 NB	12	Mtrs		
g	15 NB	18	Mtrs		
8	Fixing of Valves, Strainers, NRVs for feed water line and condensate line.(NON IBR)				-
	<u>Item</u>				-
a	50 NB Brass Ball Valve S/E	3	Nos		
b	50 NB GM Y Strainer S/E	2	Nos		
c	80 NB Cast Steel Globe Valve F/E		Nos		
d	65 NB Cast Steel Globe Valve F/E		Nos		
e	50 NB Cast Steel Globe Valve F/E	3	Nos		
f	40 NB Cast Steel Globe Valve F/E	1	Nos		
g	25 NB Cast Steel Globe Valve S/W		Nos		
h	20 NB Cast Steel Globe Valve S/W		Nos		
i	15 NB FS Globe Valve S/W	6	Nos		
9	Fixing of Steam Stop Valves for Steam lines (IBR)				-
	<u>Item</u>				-
a	80 NB Cast Steel Globe Valve F/E	1	Nos		
b	65 NB Cast Steel Globe Valve F/E		Nos		
c	50 NB Cast Steel Globe Valve F/E	3	Nos		
d	40 NB Cast Steel Globe Valve F/E				
e	25 NB Cast Steel Globe Valve S/W				
f	20 NB Cast Steel Globe Valve S/W				
g	15 NB FS Globe Valve S/W	6	Nos		
10	Providing, fixing, testing & commissioning of IBR				

	approved Steam Trap Assembly comprising of Steam trap, stop valves ,disc check valve, strainer complete with by-pass arrangement, flange, tee, elbowetc,				
	Thermo dynamic trap assly.				
a	25 MM				
b	20 MM	1	Nos		
c	15MM	2	Nos		
	Float trap assembly		Nos		
a	15 MM	3	Nos		
b	20 MM		Nos		
c	25MM		Nos		
11	Fabrication and erection of structural supports/ platforms for Steam lines and Water lines and welding consumables and painting .	100 0	Kgs		
12	Fabrication and erectionof 10000 Ltrs Feed Water Tank made of 8mm thk MS Sheet for bottom , 6mm thick for sides and top including all required fittings like airvent, drain , inlet and outlet connections, manhole with cover, level gage glass tube,necessary ladder,platform, including welding and cutting consumables. All complete with one coat of metal primer and one coat of enamel paint and insulated with 50mm thick mineral wool and covered with 24g aluminium sheet.	1	No		
13	Supply, Fixing and alignment of factory fabricated IBR Pressure Reducing station with following specifications : Inlet pressure 10 Kg/cm2 Outlet pressure 3 Kg/cm2 Flow rate - 3000 Kg/hr all complete with moisture separator, strainer, Pressure reducing valve, safety valves, isolating and bypass line pressure gauges etc.	1	set		
14	Supply, installation, testing and commissioning of water softner Plant of 4m3/hr flow at an OBR of 90m3@ 200 ppm hardness.All complete with brine ejector,brine tank,and pump for regeneration with inlet and outlet connections up to feed water tank	1	No.		
15	supply installation of pH correction system including one number electronic dosing pump with suitable dosing tank.	1	No.		
16	Fabrication and fixing of Mineralwool covered with chicken mesh and cladded with aluminium sheet of 22 gaugeand insulation thickness of 50mm for pipelines, valves and flanges.				-
a	80 NB	75	Mtrs		
b	65 NB		Mtrs		
c	50 NB	60	Mtrs		
d	40 NB	24	Mtrs		
e	25 NB	12	Mtrs		
f	20 NB	12	Mtrs		
g	15 NB	40	Mtrs		
	TOTAL		-		