



**PUDUCHERRY POWER CORPORATION LIMITED**  
**(A GOVERNMENT OF PUDUCHERRY UNDERTAKING)**

**T.R PATTINAM -609606, KARAİKAL.**

Phone No:04368- 233060, 233988 e-mail : ppcl.kkl@nic.in Telefax: 04368 - 233287.

Ref. No: CP-38/PUR/2011-12/

Dt. 07.07.2011.

ENQUIRY

To

Sub: Inviting offer for Specialty Chemicals Treatment of  
Cooling water for a period of one year - Reg.

\*\*\*\*\*

QUOTATION TO BE

Submitted on or before 28.07.2011 - 4.00 PM	Opened on 29.07.2011- 11.00 AM
Kept valid for 4 months from the date of opening	Submitted in two parts (EMD & Price Bid)

Wax Sealed quotations are invited for the package “ Treatment of Cooling water with Speciality Chemicals for a period of one year at 32.5.MW CC Gas Power Plant, located at T.R.Pattinam, Karaikal, as per the instruction, terms & conditions (10 Pages ) and as per the annexure (4 pages ) enclosed herewith.

**EXECUTIVE ENGINEER (MECH.)**

Encl. : as above - (14 Pages)





#### **1.4 Bid Submission & Opening**

Tenders duly superscribed with the Enquiry/Quotation number: CP-38/PUR/2011-12/ dt:07.07.2011 on the cover will be received by the Executive Engineer (Mech), Puducherry Power Corporation Limited, T.R.Patinam Karaikal 609 606, up to 16:00 hrs on **28.07.2011** and will be opened on the next day at 11:00 hrs in the presence of the bidder who may wish to be present. In case the due date of receipt/opening of the tender happens to be a holiday then the tenders will be opened on the next working day.

1.4.1 The tenderers shall be required to submit a bid guarantee as described in the tender document for 2 % of the Tendered Amount (Base Price) along with the bid as **earnest money deposit**.

1.4.2 Tenders received after the due date and time, without superscription or conditional/telegraphic/fax offers will summarily be rejected.

#### **1.5 Earnest Money Deposit:**

The tenderer must pay Earnest Money Deposit, for a sum equivalent to 2 % of the Basic rate quoted by him exclusive of duties, taxes and labour charges etc., by way of Demand Draft drawn on any Nationalised/Scheduled Bank in favour of the Executive Engineer (Mech), Puducherry Power Corporation Limited, T.R.Pattinam, Karaikal - 609 606 payable at Karaikal. The demand draft should be attached along with the offer.

1.5.1 Cash, Cheque or Bank Guarantee should not be sent and deposit made by Cheque will on no account be accepted. Tenders without Earnest Money Deposit or Earnest Money Deposit of less than 2 % or proof for claiming exemption from payment of Earnest Money Deposit will be rejected in the first instance. The EMD of the successful bidder will be returned after the submission of Performance Bank Guarantee as per Clause 1.10.

1.5.2 The Earnest Money Deposit will be refunded to the unsuccessful tenderers immediately after the tender has been finalised and on receipt of application (request for return of EMD), from them along with advance stamped receipt for the amount.

#### **1.6 Validity of the tender:**

Tenders should be valid for a period of at least 120 (one hundred and twenty) days from the date of opening.

#### **1.7 Deviations:**

Deviations from any standard specification or clauses of specification should be clearly pointed out. Clauses not so commented upon shall be taken as having met with the approval of the Tenderer and will be binding on him.



**1.8 The Executive Engineer (Mech), Puducherry Power Corporation Limited, T.R.Pattinam** reserves the right to reject any or all tenders, without assigning any reason thereof and at his discretion increase or decrease the quantity while ordering and during the period of contract after ordering.

**1.9 Performance Bank Guarantee:**

- (a) When a tender is to be accepted the Tenderers whose tender is under consideration, on being given written intimation to him by the Executive Engineer (Mech), Puducherry Power Corporation Limited, T.R.Pattinam for acceptance of that tender, shall execute Performance bank guarantee as per the enclosed format at tender clause 1.11 of this document from Nationalized/Scheduled bank for the amount equivalent to **10 %** of the total value quoted by the bidder inclusive of duties, taxes and **labour charges** etc, valid for a period of one year with a claim period of two months after the expiry of the contract from the date of placement of order. Failure to submit the bank guarantee as defined above, will necessarily lead to forfeiture of the Earnest Money Deposit.
- (b) The Performance bank guarantee shall be retained as Security Deposit for the due fulfillment of the contract period.
- (c) After furnishing of bank guarantee equivalent to **10 %** of the **total value** quoted by the bidder **inclusive** of duties, taxes and labour charges etc., a supply order will be placed to the supplier, which should be duly acknowledged with order Acceptance. Failure to submit the Order acceptance / Acknowledgement of the purchase order will be considered on part of the supplier, as having accepted all terms and conditions of the Supply order.
- (d) On complete fulfillment of the contract by the supplier to the entire satisfaction of the Corporation, the Performance bank guarantee shall be returned within two months after successful completion of the contract period with a request letter or in case of failure the same would be invoked.



**1.11 PROFORMA OF PERFORMANCE BANK GUARANTEE**

**Name of the Bank:** \_\_\_\_\_

**Date:**

Bank Guarantee No. \_\_\_\_\_

Guarantee Amount: Rs. \_\_\_\_\_

This deed of guarantee made on this ..... day of ..... 2011 by ..... (Name & address of the bank) hereinafter called the bank to and in favour of **Puducherry Power Corporation Limited, T.R.Pattinam, Karaikal-609 606** hereinafter called the Corporation.

WHEREAS ..... (Name & address of Contractor) hereinafter called the Contractor have by virtue of the Work Order / Supply Order entered into with the Corporation as per the LOI/Work Order / Supply Order No. .... Dated ..... agreed with the Corporation to the treatment of cooling water with Specialty chemicals in accordance with terms and conditions of the Tender document / Work Order / Supply Order.

AND WHEREAS in accordance with ...../PUR/2011-12/..... dated ..... The Contractor has to pay a sum of Rs...../- (..... only) as performance guarantee from a Nationalized / Scheduled Bank.

AND WHEREAS the Contractor has requested the Corporation to accept bank guarantee in lieu of Performance Guarantee for sum equivalent to ten percent (**10 %**) of value of the total value quoted by him, inclusive of duties, taxes and labour charges etc, of the Work Order / Supply Order towards the Performance Guarantee of the treatment of the cooling water with specialty chemicals mentioned in the Work Order / Supply Order.

AND WHEREAS the bank has at the request of the Contractor agreed to guarantee the payment of the said sum in case the supply or treatment is not performed in accordance with the specification and terms and conditions indicated in the tender document / Work Order / Supply Order of the Corporation for an amount of .....

In consideration of the above, the Bank hereby unconditionally guarantees and undertakes as a direct responsibility, to pay to the Corporation on demand any and all money payable by the Contractor to the extent of Rs..... without any demure, reservation, recourse, contest or protest and/or without reference to the Contractor.



NOW THIS DEED WITNESSES AS FOLLOWS:

In consideration of the Corporation having agreed to accept the bank guarantee from a Nationalised/Scheduled Bank towards Performance Guarantee for a sum equivalent Rs.....

the Bank do hereby guarantee that if the Contractor fails to perform the Work Order / Supply Order in accordance with scope of work of the Work Order / Supply Order, the Bank shall pay forthwith merely on demand without any demur to the Corporation such amount/amounts as the Bank may be called upon to pay by the Corporation.

The bank also agrees that the Corporation at its opinion shall be entitled to enforce this guarantee against the Bank as a principle debtor, in the first instance without proceeding against the Contractor, and notwithstanding any security or other guarantee that the Corporation may have in relation to the Contractor's liabilities.

This Bank Guarantee shall be revalidated automatically till the end of the Warranty period.

PROVIDED that the liability of the Bank under this deed shall not at any time exceed the said amount of sum Rs.....

PROVIDED further that the guarantee here under furnished should be released as soon as the Contractor has performed his part of the Work Order / Supply Order in accordance with the terms of the Work Order / Supply Order and the period of Contract is over.

The Bank further undertakes to indemnify the Corporation against any loss or damage that may be caused or suffered by the Corporation by reason of any breach of the terms and conditions in the said tender document / Work Order / Supply Order.

The guarantee hereinabove contained shall remain in force till the terms and conditions of the Enquiry/Work Order / Supply Order have been fully and properly carried out by the said Contractor and in any case the guarantee shall not hold good after.

The bank further agrees with the Corporation that the Corporation shall have the fullest liberty (without the consent of the Bank and without affecting in any manner the obligations of the Bank hereunder) to vary any of the terms and conditions of the Work Order / Supply Order or to extend the time of contract of the treatment of the cooling water by specialty chemicals by the said Contractor from time to time or to postpone from time to time any of the powers exercisable by the Corporation against the said Contractor and to forbear or to enforce any of the terms and conditions relating to the said Work Order / Supply Order and the Bank shall not be relieved of its liability by reason of any such variation, or of any forbearance, act or omission on the part of the Corporation of any indulgence



by the Corporation to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would but for those provisions have effect of so relieving the Bank.

Any account settled between the Corporation and the Contractor shall be the conclusive evidence against the Bank for the amount due and shall not be questioned by the Bank:

The expressions of Bank Corporation and Contractor herein before used shall be the conclusive evidence against the Bank for the amount due and shall not be questioned by the Bank.

The expressions of Bank Corporation and Contractor herein before used shall include their respective successor and assigns.

Notwithstanding anything contained hereinabove our liability under this guarantee is restricted to Rs.....and this guarantee is valid up to ..... and we shall be released and discharged from all liabilities hereunder unless a written claim for payment under this guarantee is lodged on us within **two** months from the date of expiry of the guarantee i.e. on or before ..... Irrespective of whether or not the original guarantee returned to us.

This Bank Guarantee shall be revalidated as desired by the Corporation at the instance of the Bidder.

For and behalf of the Bank

.....

(Signature)

in the capacity of

.....

Common seal of the Bank.

## **RATES AND CONDITIONS**

### **2.1 Rates:**

The prices quoted by the Tenderer should be firm, in all aspects for free delivery at the destination and should include all taxes and duties, transit Insurance, Freight, packing and forwarding Charges and other charges **including labour portion**, shall not be subjected to escalation or variation on any account. The Tenderer should clearly state whether 'C' form is required for the supply of materials towards availing of concessional rate of CST.

2.1.1 The breakup details of the rate quoted should be furnished in the tender separately i.e. for supply of chemicals with applicable duties and taxes, for labour charges with applicable taxes.

### **2.2 Delivery:**

The period of delivery should be specified. Ex-stock, quick and short delivery will be normally given preference. Delivery for the part supply/supplies and the period required to complete the order in full should also be specified. The delivery period should be kept up and no excuse such as lack of booking facilities etc., will be accepted. In case goods booking cannot ensure delivery within the scheduled period, booking should be done by lorry or other mode of road transport without extra cost to the Corporation and it is always the supplier's responsibility to arrange for the transport. Any delay will be viewed seriously and suitable penalty will be imposed if necessary. The Tenderers should take this into consideration while quoting. The Tenderer should clearly state the probable time for commencement of supply of materials. The delivery period specified in the tender shall be clear and specific terms should be guaranteed by the Tenderer under our penalty clause given as follows: -

2.2.1 Should delivery be delayed by strike, lockouts, fire accidents or any clauses whatsoever beyond the reasonable control of the supplier and whether such delay or impediment occur before or after the time or extended time for dispatch or completion, a reasonable extension of time may be granted.

2.2.2 If supplies to be tendered against this contract are made by the supplier beyond the delivery period stipulated in the contract and they are accepted by the PPCL, such acceptance is without prejudice to PPCL's rights to levy penalty for the delay in supply governed by penalty clauses.

**2.3 F.O.R:** 1. Free delivery at PPCL, Stores T.R.Pattinam, Karaikal.

2. Offers with shorter delivery period will be normally preferred.

### **2.4 Extension of delivery period:**

No extension of time beyond that delivery period quoted will normally be granted.



## **2.5 Loss or damage:**

Ownership of the materials will rest with the supplier until delivery in good condition to the consignee at the destination. External damages or shortages that are prima facie, the results of rough handling during transit to site or due to defective packing will be intimated to the bidder within 15 days from the date of arrival of the materials at site. Internal defects, damages etc., which cannot ordinarily be detected on superficial visual examination through due to bad handling in transit or defective packing could be intimated within two months from the date of receipt of these articles at site. In either case the damaged or defective materials, should be replaced by the supplier at free of cost.

## **2.6 Liquidated Damages:**

If the supplier fails in the due performance of his contract within the time fixed by the contract and the purchaser has suffered any loss from the delay occasioned by such failure, the contractor is liable at the discretion of the purchaser as Liquidated damages and not as penalty upto 0.5 % of the contract value of such portion of the material only that have not been delivered on the specified date for each week or part thereof delay between the appointed or extended times as the case may be and the actual time of acceptance of supply, and such Liquidated damages shall be in full satisfaction of the contractor liability for the delay but shall not in any case exceed 5 % of the contract value of such portion of the materials.

## **2.7 Payment:**

Payment will be made within 30 days on receipt of the bill along with the Advance Stamped Receipt on completion of every month after satisfactory performance of all the guarantee parameters only for the supply portion.

2.7.1 Payment will be made within 30 days on receipt of the bill along with Advance Stamped Receipt and necessary documents for compliance of ESI, EPF etc., If the documents submitted are in order then only the payment for labour portion would be released.

2.7.2 Tenders with mode of payment other than the above will be summarily rejected. Payment for the supplies will be made by Demand Draft in rupees from the Canara bank, Karaikal or IOB, T.R. Pattinam, Karaikal.

## **2.8 Termination of Contract**

Order will be cancelled, if the party fails to give satisfactory performance for three (3) consecutive months or any three months from the date of execution of order, provided PPCL maintains all the system requirements in its scope within the allowable range. The Performance Bank Guarantee submitted by the party would be invoked in that case.



**2.9 Tests:**

Bidder to give active content test procedure of the supplied chemicals once the contract is finalized.

**2.10 Guarantee:**

All the materials supplied by the contractor shall strictly adhere to the performance guarantee parameters as mentioned in specification annexure. Where test certificate is not called for in the order, written guarantee should be furnished wherever necessary guaranteeing the Corporation against defects in the goods supplied either in materials or workmanship and this being operative for a period of 18 (eighteen) months from the date of receipt of the materials at site in good condition. Any of the goods found defective within the guarantee period shall be replaced at free of cost. No payment can be claimed by the party for the month, if any of guarantee parameters for that particular month is not confirming the guarantee parameters. Also if guarantee parameters are not satisfied for any 3 months, order will be cancelled and the Performance Bank Guarantee amount will be invoked. In case of any system upset and operation without chemical dosing for reasons not on the part of PPCL scope, the Bank Guarantee amount will be invoked by PPCL.

**2.11 Income-Tax Clearance Certificate:**

Each Tenderer shall append to his tender a clearance certificate of Income Tax (latest) from the appropriate Income Tax Authorities in the form prescribed therefor. In the case of proprietary ground or Partnership firm, it will be necessary to produce the certificate before mentioned for proprietary or proprietors and for each of the partners as the case may be. If a certificate has already been produced by the Tender during the calendar year in which the tender is made in respect of previous tender to this office it will be sufficient if particulars regarding the previous occasion on which the certificate was produced are given.

**2.12 Arbitration**

If any dispute or difference of any kind whatsoever shall arise between the Corporation and the Contractor, arising out of the Contract for the treatment of Cooling water with Specialty Chemicals whether during the progress of the Contract or whether before or after the termination of the Contract order, it shall, in the first place, be referred to and settled by the Engineer, who, within a period of thirty (30) days after being requested by either party to do so, shall give written notice of his decision to the Corporation and the Contractor.

2.12.1 Such as hereinafter provided, such decision in respect of every matter so referred shall be final and binding upon the parties until the completion of the Contract and shall forthwith be given effect to by the Contractor who shall comply with all such decisions, with all due diligence, whether he or the Corporation requires arbitration as hereinafter provided or not.

- 2.12.2 If after the Engineer-in-charge has given written notice of his decision to the parties, no claim for arbitration has been communicated to him by either party within thirty (30) days from the receipt of such notice, the said decision shall become final and binding on the parties.
- 2.12.3 In the event of the Engineer-in-charge failing to notify his decision as aforesaid within thirty (30) days after being requested as aforesaid, or in the event of either the Corporation or the Contractor being dissatisfied with any such decision, or within thirty (30) days after the expiry of the first mentioned period of thirty (30) days, as the case may be, either party may require, by written notice to the other party, that the matters in dispute be referred to arbitration as hereinafter provided.
- 2.12.4 The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration Act, 1940 or any statutory modification thereof. The venue of arbitration shall be Puducherry, India.
- 2.12.5 The arbitrators shall have full powers to review and/or revise any decision, opinion, directions, certification or valuation of the Engineer-in-charge in consonance with the Contract, and neither party shall be limited in the proceedings before such arbitrators to the evidence or arguments put before the Engineer-in-charge for the purpose of obtaining the said decision.
- 2.12.6 During settlement of disputes and arbitration proceedings, both parties shall be obliged to carry out their respective obligations under the Contract.

**2.13 General Conditions:**

- (a) The supplier is responsible for all acts done either by him or by his servants or representatives.
- (b) In case of all disputes it should clearly be understood that the decision of the Executive Engineer (Mechanical), Puducherry Power Corporation Limited, T.R.Pattinam, Karaikal will be final.
- (c) Any notice to the contractor shall be deemed to be efficiently served if it is given in writing by post to his usual address or latest known place of business.
- (d) The contract once awarded is not transferable by the contractor.

**2.14 Specification:** As per the Annexure.

Sd/-

**EXECUTIVE ENGINEER (MECH)  
PUDUCHERRY POWER CORPORATION LIMITED,  
KARAIKAL.**



**ANNEXURE**  
**SPECIFICATIONS FOR THE SPECIALITY CHEMICALS FOR THE**  
**COOLING WATER**

The Specialty Chemicals treatment shall be a Package one, to take care of the following tendencies in the system

- (a). Scaling
- (b). Corrosion
- (c). Slimy Algal and Microbiological Growth.
- (d). Fouling

The Treatment Package quoted by the bidder shall be a complete Program to prevent and arrest all of the above Problems and any of the foreseen problems, which can be predicted from our raw water analysis, enclosed.

Bidder shall confirm the following points mentioned below.

- (1). Complete Product description, MSDS of the dosing Chemicals shall be provided with the quotation.
- (2). The treatment package shall not consider Biocide treatment, since effective chlorination is being given for our cooling system. However Bio-dispersant Package is a must.
- (3). The chemical treatment should be such that chemicals should not react with the parent materials.
- (4). All control parameters and dosing rate should be specified during bidding stage itself. Successful bidder shall give complete cooling water treatment procedure before start of the program.
- (5). Necessary testing Procedures for chemicals shall be provided along with enquiry, to test the quality of the chemicals supplied. Any consignment either a carboy/part consignment/total consignment is found to be contaminated/damaged during transit/not meeting the product quality will be transported to the supplier at supplier's own cost and risk. The supplier shall do replacement of the same, in good condition, within a week of the defective material dispatched from our end.
- (6). Necessary equipments for dosing of chemicals shall be supplied free of cost along with standbys and any damage to these equipments during the contract period, will be serviced by you, at our /your site, free of cost.
- (7). The following items are required to be installed and commissioned before starting of the treatment program and shall be in continuous operation during the entire period of contract:
  - (a) Bio-fouling Monitor



- (b) ASTM Corrosion rack with Corrosion Coupons
- (c) Dosing Pumps
- (d) Deposit Monitor

Any non-operation/troubleshooting of the above items shall be done by the bidder on his own cost.

- (8). Bidder at his own cost shall test the coupon for its material nature from reputed metal testing laboratories, on PPCL request, in any/all of the coupons in any/for all months.
- (9). Supplier shall supply deoiling chemicals, to remove the oil (max. 20 ppm) mixed in cooling water in case of emergency. This shall form part of contract and shall be supplied as one time minimum quantity.
- (10). Bidder shall do the passivation of cooling water system after shutdown. (Max.2 times per year). This shall form part of contract.

### **GUARANTEE**

Payment will be made to the supplier **only based on Performance** and not on supply.

- (1). (a). The Bidder shall guarantee for the following Parameters:
  - M.S. -  $\leq 3.00$  MPY
  - Cu -  $\leq 1.00$  MPY
  - Ad./Al Brass -  $\leq 0.500$  MPY
  - S.S -  $\leq 0.500$  MPY
- (b). Count of Sulfate Reducer Bacteria -  $< 1000$  Cfu/100 ml.
- (2). System should not run in chemical starved condition for want of short supply of chemical.
- (3). If any/all of the individual coupons/other guarantee parameters mentioned above are not adhered by the supplier, the payment for that particular month will not be cleared, and will be considered as a non-performance month.
- (4). Also if any of the Guarantee parameters is not satisfied for any three months, order will be cancelled and the security deposit, performance bank guarantee amount will be invoked.
- (5). The Maximum allowable limit of the critical Parameters, in the circulated water shall be mentioned by bidder and the bidder shall also suggest the necessary measures in case of any increase /decrease of the same.



- (6). The hourly leak off rate shall be mentioned. The C.O.C. shall be limited to 4. However due to water shortage, tenders are requested to give their optimum leak off rate within the specified C.O.C.
- (7). Daily and Monthly report of the performance of the system shall be submitted.
- (8). Bidders shall post a skilled Chemist, to handle the system, to test the critical parameters, on day-to-day basis, on his own with the tenderers kit and chemicals and report the same to the Engineer-in-charge on daily basis.
- (9). The Chemicals shall be supplied in Four quarters, as part supply and each supply shall be sufficient for each quarter. Any short supply will seriously affect the performance Guarantee.
- (10). The present analysis of our raw water is as below. A design cushion of 20% to be considered for all the below critical parameters

Source of water	-	Ground Water
pH	-	8.0 – 8.5
Conductivity	-	2900 Micro Siemens/Cm
Total Hardness	-	180 –250 ppm
Ca Hardness	-	70- 120 ppm
Mg Hardness	-	110-120 ppm
Alkalinity	-	250-330 ppm
FRC	-	0.1 ppm(maintained by chlorination)
TDS	-	1900 ppm
Chlorides	-	730 ppm
Sulfate	-	50 ppm

- (11). As the present system has suffered little abnormalities with respect to scaling and corrosion, tenderer shall take care to clean the same. The bidder free of cost shall do necessary cleaning and cleaning Chemicals along with supervision of the work, during initial fill.
- (12). The proposed Package system shall be designed to take care of the existing conditions of make up water along with existing system, which is corroded and scaled to some extent. Hence during the supply stage, the suppliers shall not raise concerns about the abnormalities in system, existed during pre-treatment stage. The Program package shall be designed accordingly.
- (13). The adoptable operating pH range in the cooling system, shall be mentioned clearly.



(14). The Present system operation details are as below

Recirculation rate	-	3600 Cu.M/hr
Hold up volume	-	500 Cu.M/hr
$\Delta T$ (°C)	-	10
Evaporation rate	-	60 Cu.M/hr (includes drift loss)
COC	-	3 (Presently) To be fixed by the supplier
Blow down	-	15 Cu.M/hr. (Presently)
Make up	-	50-75 Cu.M/hr (To be fixed by the supplier)

(15). The bids, will be considered only to those bidders, who have satisfactorily executed their cooling water treatment program for a minimum contract period of one year, during the past Three (3) years in at least Three (3) Process Plants and minimum one (1) Power plant with a chlorides level of above 2100 ppm in circulating water. Bidder shall submit satisfactory completion documents/ Purchase order copies, supporting the above (Along with the Contact Person name and telephone numbers).

**ANNEXURE TO COOLING TOWER SPECIALITY CHEMICAL ENQUIRY**

<b>Sl.No.</b>	<b>HEAT EXCHANGERS</b>	<b>M.O.C</b>
1	Steam Turbine Oil Cooler	Al.Brass (SB111C68700)
2	Surface Condenser (Operating Vacuum – 0.9)	Al.Brass (SB111C68700)
3	Gas Turbine Oil Cooler	Al.Brass (SB111C68700)
4	G.B.C Heat Exchanger (4 Sets)	Al.Brass (SB111C68700)
5	G.B.C Heat Exchanger (1 Set)	SA 179
6	Instrument Air Compressor Cooler	M.S.
7	Gas Turbine Atomizing Air Cooler	Al.Brass (SB111C68700)
8	Gas Turbine Generator Air Cooler	Al.Brass (SB111C68700)
9	Steam Turbine Generator Air Cooler	Al.Brass (SB111C68700)
10	Boiler Feed Pump Cooler	M.S.
11	Boiler Sample Coolers	S.S.
12	All Pipelines	M.S.