



Tender No.: 53/NITS/CE/Purchase of Equip. for WRE Lab/20-21/91

Date: 02nd March 2021

Notice Inviting Tender

The National Institute of Technology Sikkim invites tenders/bids under two bid system (Technical Bid & Financial Bid both in separate sealed envelopes) in sealed envelope for **Supply and Installation of Equipments for Water Resources Engineering Laboratory, Dept. of Civil Engineering** as per the specifications, terms and conditions given in this tender. The tender documents can be downloaded free of cost from the website www.nitsikkim.ac.in or from the Central Public Procurement Portal.

Schedule of Requirements

S.No.	Particular	Qty	Place of Delivery	Delivery Period
1	Experimental Flume - Flow Channel (As Per Technical Specification Given in this Tender Document)	As given in Annexure-I	NIT Sikkim	120 Days

Details	Information
Bidding System	Two Bid system: Technical Bid & Financial Bid (Separate Sealed)
Tender Floating Date	03 rd March 2021
Tender Closing Date & Time	24 th March 2021, 11:00 AM
Technical Bid Opening Date & Time	24 th March 2021, 03:00 PM
Financial Bid Opening Date & Time (Tentative)	25 th March 2021, 03:00 PM (Tentative)
EMD (Earnest Money Deposit)	Rs.1,50,000/- (Rupees One Lakh Fifty Thousand Only) By Demand Draft in favour of "Director, NIT Sikkim" payable at State Bank of India, Ravangla Branch (IFSC SBIN0007218).
Address for communication	The Registrar NIT Sikkim, Ravangla, South Sikkim - 737139
For any Clarification	registrar.office@nitsikkim.ac.in
Institute Website	www.nitsikkim.ac.in
Tender Submission	Tender may be deposited in the tender box or submitted in the Administrative Block at Reception/Registrar office.
Number of pages in the tender document	27

Registrar

Note Carefully: The Bidders are required to read carefully and understand all the terms and conditions, specifications, formats, instructions, etc. given in the Tender/Bid document with full understanding of its implications. Failure to furnish all information required for submission of a bid or bids not substantially responsive in every respect may result in outright rejection. The Bidder is required to give confirmation of their acceptance of all the terms and conditions mentioned in the Tender/Bid document. Failure to do so may result in rejection of Tender/Bid submitted by the Bidder.

General Terms & Conditions

1. In this tender document the Institute means “National Institute of Technology Sikkim (NIT Sikkim)”, the BUYER means NIT Sikkim and SELLER/SUPPLIER means the successful bidder awarded the Purchase Order (PO)/work order. The word “Tender” and “Bid” is used interchangeably having same meaning. Here, the word supply/agreement/contract/project mean the Purchase order for the goods/services given in the scope of the work. Goods/Items/Stores means the items/service mentioned in the scope of work. A tender/bid document means all the pages of this document consisting of terms and conditions, specifications, bid formats, undertaking, etc.

2. **Scope of Work:** Supply and installation of “**Equipments for Water Resource Engineering Laboratory**” as per specification for NIT Sikkim. Suppliers with track record of supply of similar type of goods/equipment may bid for the same.

3. **Format for submission of bid:**

The bid shall be submitted only in the *forms and formats* attached with this bid document and **each page of the bid document should be signed and stamped by the authorized person**. The bid should be forwarded by the bidder under their original memo/letter head inter alia furnishing all the required details like GST number, PAN, Bank details etc. and complete contact details (Postal address, email, fax, contact numbers) of their office. All bidding documents including technical and financial bids must be in English. One signed copy of the tender document, with bidding firm’s sign and seal, agreeing to the terms & conditions and declaration etc. must also form the part of the submitted bid.

4. **Two Bid system:**

The bidding process shall consist of **Two** bid system. The bid must be submitted in two parts comprising:

Part-I: Technical Bid [Annexure-II] & Part-II: Financial/Commercial/Price Bid (all have same meaning) [Annexure-V].

The Part-I (Technical bid) should contain the EMD, compliance/non-compliance of detailed technical specifications as per the BID/TENDER document along with other desired information/certificate, eligibility documents etc.

The Part-II (Financial Bid) shall only contain the price offered in the Bid format provided with document along with other desired information/certificate, etc, if any.

Both the Bids should be properly placed in two **separate sealed envelopes** and marked accordingly (**must super-scribed TECHNICAL BID or FINANCIAL BID on the top of each respective envelope**) for their proper identification. These should again be sealed in a third bigger **envelope super-scribing, “Bid for Supply and Installation of Equipments for Water Resource Engineering Laboratory”**.

The Part-I (Technical bid) will be opened on the date of tender opening and the Part-II (Financial Bid) after evaluation of Part-I. The Part-II (Financial Bid) of only technically qualified bidders shall be opened, as decided by the Bid Technical Evaluation Committee (TEC). The decision of the TEC

shall be final and binding on all the bidders. If both the bids (Technical Bid and Financial Bid) are sealed together in same envelop, the bids shall be rejected.

5. **Enclosures:**

The bidder must attach the suitable supporting documents. The **Technical and Financial bids** will be submitted in the specific formats enclosed with this tender document in separate sealed envelopes. All the enclosures attached with the bid shall also be signed and stamped by the bidder. Please ensure following:

(a) **Technical bid** must comprise of following:

- (i) A clause by clause compliance on Terms and Conditions of the tender and the pointwise compliance of all Technical Specifications, etc. for all the items.
- (ii) Duly filled, signed and stamped **Technical Bid (Bidder Profile)** on the **letter head of the bidder [Annexure-II]**.
- (iii) Duly filled, signed and stamped **Technical Specification Compliance Statement (Technical Criterion)** on the **letter head of the bidder [Annexure-III]**.
- (iv) Duly filled, signed and stamped **undertaking** on the **letter head of the bidder [Annexure-IV]**.
- (v) All the certificates and declarations required under the Specific Conditions of this TENDER/BID document.
- (vi) The bidder must submit supply records and satisfactory supply certificate of completing similar item to IIT's, NIT's, and Government/Public undertakings/Organizations of National Importance in last two years by the bidder or OEM.
- (vii) Income Tax Returns or Annual report/audited annual accounts showing the turnover of the bidder.
- (viii) EMD in the form of Demand Draft must be enclosed with the Technical Bid.
- (ix) **The bidder should provide complete technical details, printed literature/brochure of the manufacturer along with model/make and the same should be verifiable from the website of the vendor/OEM. Mere copying the technical specification provided in the Annexure-I will lead to rejection of the bid.**
- (x) Brief description about the company including orders executed with Government organizations/Institutions, showing size, cost and completion details of each supply.
- (xi) The **GST registration** number and photocopy of certificate.
- (xii) **The PAN number** of proprietor/firm/companies with photocopy of the PAN card.
- (xiii) **OEM certificate or authorized dealership/supplier certificate for the equipment/goods quoted in the tender.**
- (xiv) The enclosed formats in original should be used for the Bids. All sheets submitted must be signed by the authorized signatory of the company and duly affixed with firm's stamp. Additional sheets duly authenticated may be attached to elucidate specific issue, if any.
- (xv) The bidder must submit a self-certified declaration that the bidding firm/ manufacturer or the consortium (any partner of consortium) has not been blacklisted from participating in the tendering/bidding process by any Central or any State Government Institute/Organization (including autonomous Institute/ Organization) in Last Three Years.

Noncompliance of any of the above may result in rejection of the bid summarily and no query in this regard shall be entertained.

(b) Financial Bid/Price Bid:

Financial bid will comprise of duly filled, signed and stamped Financial Bid in the format given at **Annexure-V**. Financial Bid/Price Bid only and must be placed in separate envelope duly sealed and signed. This envelop must be super-scribed with "**Financial Bid for supply and Installation of Equipments for Water Resource Engineering Laboratory**". If Financial Bid is placed with the Technical Bid in the same envelop, the bid shall be rejected.

NIT Sikkim being a Public Funded Research Institution, vide Notification No. 45/2017 Central Tax (Rate) and No 47/2017-Integrated Tax (Rate) is eligible for concessional rate of GST on purchase of research items. Further concession on customs duty is also available on customs duty vide notification No. 51/96-Cus. DSIR certificate shall be provided by the Institute to claim such concessional rate. Bidders are required to take into account the said concession in the Financial Bid. The concessional rate of GST is 5%.

6. Bid Security:

The Bid Security of **Rs. 1,50,000/-** (i.e. Earnest Money Deposit, EMD) in the form of Demand draft from any scheduled bank drawn in favour of "Director, NIT SIKKIM" payable at RAVANGLA, South Sikkim-737139 must accompany with **Technical Bid**. **No interest shall be paid on the submitted EMD. The demand draft must be drawn from the bank after the date of publication of tender and must carry minimum validity of 3 months, failing which the bid shall be rejected.** Offer without EMD will be rejected summarily except in case of exempted bidders holding valid MSME/NSIC license exempting such bidders from furnishing of EMD. No exemption from the EMD (Bid Security) is allowable to the Traders/Reseller as per MSME guidelines.

The Bid Security of unsuccessful bidders shall be refunded after finalization of bid/award of contract to successful bidder. EMD of the unsuccessful Bidders will be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract in original form (i.e. Demand Draft submitted along with bid).

The Bid Security of the successful Bidder will be returned after the receipt of Performance Security as called for in the contract/adjusted towards performance security. No interest shall be payable to any bidder on the EMD with the Institute. The EMD of the technically disqualified bidders may be returned in original (i.e. the Demand Draft submitted along with bid).

The Bid Security shall be forfeited, (i) if a Bidder withdraws its bid during the period of bid validity; or (ii) if a Bidder makes any statement or submits any information which turns out to be false, incorrect and/or misleading at any time and / or conceals or suppresses material information: or (iii) in case of successful Bidder, if the Bidder fails to execute the order or withdraws the offer or uses means to secure the order which is prohibited as per the terms and conditions in this document. The decision of the Institute authorities shall be final and binding on the bidder(s).

7. Amendment in Bid/Tender Document:

At any time up to the last date of receipt of Bids, the Institute may, for any reason, whether at its own initiative or in response to a clarification requested by a Bidder, modify the Bid/tender document by an amendment. The amendment will be notified in writing through Institute website or email (if provided) to all the prospective Bidders, the same shall be binding on all the prospective bidders.

The Institute may, at its discretion, extend the last date for the receipt of Bids/cancel the Bidding process. It shall be the responsibility of the interested bidder(s) to regularly visit the website for any amendment/ information.

8. Bid Disqualification:

The proposal is liable to be disqualified in the following cases, however, the decision of the Institute committee shall be final and binding on all the bidders:

- (a) Proposal not submitted in accordance with instructions provided in this document.
- (b) Proposal is received in incomplete form.
- (c) Proposal is received after due date and time.
- (d) Proposal is not accompanied by all requisite supporting documents mentioned in the tender document.
- (e) The Financial Bid/Price Bid is placed in the same envelope as the Technical Bid.
- (f) If bid is not accomplished with EMD as per the clause given in this bid document.
- (g) Canvassing by the Bidder in any form, unsolicited letter and post-tender correction will invoke summarily rejection of the bid and may result in forfeiture of EMD.
- (h) Conditional tenders/Bids will be summarily rejected.
- (i) Any false/misleading/ incorrect information/document.
- (j) Bidder fails to deposit the Bid Security/Performance security or fails to enter into a contract within specified date of notice of award of contract or within such extended period, as may be specified by the Institute.

9. Queries and Clarification:

The queries and clarification in this Bid/Tender must be addressed to “Registrar” and the same must be sent through conventional mail as well as email/Fax in the format below:

S. No.	Clause No. (as per the Bid/Tender)	Your understanding/ interpretation	Clarification sought from Institute

10. Clarification regarding contents of the Bids:

During evaluation and comparison of bids, the Buyer (NIT Sikkim) may, at its discretion, ask the bidder for clarification of his/her bid. The request for clarification will be given in writing (post/fax/email) and no change in prices or substance of the bid will be sought, offered or permitted. The clarification must be provided within the time stipulated by the Institute else the bid submitted may be rejected. No post-bid clarification on the initiative/request of the bidder will be entertained.

11. Withdrawal of Bid Submitted:

Bidders unwilling to participate in the bidding process after submitting the bid must ensure that intimation to this effect must reached the Registrar, NIT Sikkim before the due date and time of the opening of the Bids, failing which the defaulting Bidder may be delisted and will result in forfeiture of EMD.

12. Right to Accept/ Reject Bids:

The Institute reserves the right not to accept any bid and to annul the tender/bid process and reject all bids at any stage, without thereby incurring any liability or assigning any reason to the affected Bidders or any obligation to inform the affected Bidders on the grounds for such action.

13. Only One Bid Per Bidder:

Each firm is allowed to submit only one bid either by himself or as partner in joint venture or as a member of consortium. If any firm found to submit more than one bid, all the bid shall be summarily rejected.

14. Confidentiality:

Institute and the seller (Awardee of the Contract) or their personnel shall not, either during the term or after expiration of this work order, disclose any proprietary or confidential information relating to the services, agreement or the business or operations without the prior written consent from the Institute or vice versa.

15. Force Majeure:

During the pendency of the service agreement if the performance in whole or part thereof, by either party is prevented/delayed by causes arising due to any war, hostilities, civil commotion, act of public enemy, sabotage, fire, floods, explosion, epidemics, non-availability of raw material and other consumables, or any other causes including breakdown of equipment beyond their reasonable control. Neither of the two parties shall be made liable for loss or damage due to delay or failure to perform the contract during the pendency of forced conditions provided that the happenings are notified in writing within 7 days from the date of occurrence. The work shall be resumed under the contract as soon as possible after the restoration of normalcy. The Institute reserves the right to grant time period extension on the request of bidder or otherwise.

16. Termination of Purchase Order: The Institute may, without prejudice to any other remedy for breach of agreement, may terminate the purchase order/agreement in whole or in part, by written notice of default sent to the Bidder, and the performance guarantee shall stand forfeited if:

- (a) The Bidder fails to deliver any or all of the obligations within the time period(s) specified in the purchase order/ work order/contract/agreement, or any extension thereof granted by the Institute.
- (b) The Bidder fails to perform any other obligation(s) under the work order/agreement and fails to rectify it within the notice period for the rectification of the same.
- (c) Information/document submitted in technical proposal is found to be misrepresented, incorrect or false accidentally/unwittingly or otherwise at any time during the processing of the bid/contract (no matter at what stage) or during the tenure of the contract including the extension period if any. This may also invite any action (legal/debarring future participation in the bids) against the defaulter as deemed fit by the Institute.
- (d) The loss incurred due to termination of the work and addition cost incurred in completion of the work by any other firm, selected by the Institute shall be recovered from the defaulted firm/party.

17. Termination for Insolvency:

The Institute may at any time terminate the work order by giving written notice to the Bidder without compensation, if the Bidder becomes bankrupt/insolvent, provided that such termination shall not prejudice or affect any right of action or remedy which has accrued thereafter to the Institute.

The termination shall be based on the advice of Technical Committee constituted by the Institute.

18. Bid Evaluation Criteria:

The broad guidelines for evaluation of Bids will be as follows:

- (a) Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the Bid/TENDER document, both technically and financially.
- (b) In respect of Two-Bid system, the technical Bids Submitted by the Bidders will be evaluated by the Buyer's Tender Evaluation Committee (TEC) with reference to the eligibility criteria and technical specifications of the goods as mentioned in the BID/TENDER document. The technical compliance of each bid will be determined on the basis of the parameters and specifications specified in the BID/TENDER document and as

decided by the TEC. The Financial bids of only those Bidders will be opened whose Technical Bids shall qualify the technical evaluation.

- (c) The Bidders are required to spell out the **rates of GST, etc.** in unambiguous terms; otherwise their offers will be loaded with the maximum rates of duties and taxes for the purpose of comparison of prices.
- (d) **The price bid shall be evaluated on a collective basis for all the items put together as a package. Price of individual items shall not be considered separately.**
- (e) If there is a discrepancy between the **unit price and the total price** that is determined by multiplying the unit price and quantity, the **unit price** will prevail and the total price will be corrected by the Institute Committee. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price and comparison of bids.
- (f) NIT Sikkim reserves the right to modify in exceptional case any of the stipulated terms and conditions on merit / genuine and justifying grounds if it is in the larger interest of the Institute. The final acceptance of the bid rests entirely with the NIT Sikkim who does not bind himself to accept the lowest tender. The lowest price may not be the sole criteria for deciding the successful bidder, the Institute is free to take other factors in deciding the successful bidder for award of purchase order/ work order/contract/agreement in the interest of the Institute and its stakeholders. The Institute committee reserves all rights in this regard and no query or complaints in this regard shall be entertained. The selection will be made purely on the basis of committee's recommendation, genuineness of the firm and based on the technical specification of various products as per printed catalogues, details on website and also on the basis of experience, performance, promptness of delivery and requirements of the Institute.

19. **Firms/Bidders shall be required to accept all the Terms and Conditions mentioned in this BID/TENDER or modified/amended and shall be the part of the purchase order/work order/contract/agreement.**

20. **Placement of Order:**

The **Purchase/Work Order** will be placed on successful completion of the process to the successful bidder called the "SUPPLIER/SELLER". Once the order is placed, it will be the firm/vendor's responsibility to supply the goods and complete the work awarded to the satisfaction of the Institute. It shall be the sole responsibility of the firm/vendor (Successful Bidder) to make the project functional in all respect. **Any additional cost incurred on account of this, for which the firm/vendor has not bid/quoted at the time of submission of the bid offer, will be borne by the firm/vendor. The Institute reserves the right for pre-inspection of the goods/ equipment quoted by the bidder before issue of P.O.**

21. **Arbitration:**

All disputes or differences arising out of or in connection with the purchase order/work order/contract/agreement shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Contract or relating to the performance, which cannot be settled amicably, may be resolved through arbitration. The standard clause of arbitration will be as per the Institute norms/decision. All disputes, differences, claims and demands arising under or pursuant to or touching the agreement shall be referred to the sole arbitrator to be appointed by the Institute. The award of the sole arbitrator shall be final and binding on both the parties under the provisions of the Arbitration and Conciliation Act, 1996 or by statutory modification/re-enactment thereof for the time being in force. Such arbitration will be held at NIT SIKKIM. It is clarified that Civil court shall have no jurisdiction to entertain any such disputes.

22. Jurisdiction of Courts:

In all matters and disputes arising here under, the appropriate Courts at Sikkim/New Delhi only shall have jurisdiction to entertain and try them only after the failure of arbitration process, if any.

Specific Terms & Conditions

1. The bidder must either be an Original Equipment Manufacturer (OEM) or an authorized dealer/supplier/licensed Sole distributor of the item offered in the bid. The certificate of OEM/ Authorized Dealership/supplier should be enclosed with the bid, else bid will be rejected.
2. Bidder should have valid GST registration for the current financial year. Only invoices/Bills with serial numbers and printed with GSTIN number shall be accepted.
3. The bidder/OEM should have prior experience in supply of similar type of goods/equipment in IIT's, NIT's, and Government/Public undertakings/Organizations of National Importance in last two years. The bidder must enclose purchase order or satisfactory supply certificate from the respective organization with the technical bid submitted against this tender.
4. The bidder must submit a self-certified declaration that the bidding firm/manufacturer or the consortium (any partner of consortium) has not been blacklisted from participating in the tendering/bidding process by any Central or any State Government Institute/Organization (including autonomous Institute/Organization) in **Last Three Years.**
5. The bidder must have an average turnover of **Rs.1,00,00,000/- (Rupees One Crore only)** in the related trade in each of the two previous financial years. The bidder must enclose annual report/audited annual accounts or income tax return as proof for the same.
6. Bid or order may be cancelled or delivered items may be not be accepted fully or partially at any time if it is found that **Goods** differs or deviates from the mentioned and accepted specification and quality in the bid. The decision of the committee constituted by the Institute for this purpose shall be final and binding on the supplier(s). Any action under this clause shall make the EMD/security deposit liable to be forfeited.
7. **Packing, forwarding, insurance, freight, loading, unloading, etc. charges should be inclusive in the price. Prices must be quoted on F.O.R basis.** For any damage/loss during transit, **supplier** shall be solely responsible and damaged/lost items must be replaced by supplier at his/her own cost.
8. **Validity:** Bids shall remain valid for 180 days from date of the Tender closing Date.
9. All the terms and conditions mentioned herein must be strictly adhered to by all the bidders/ firms/suppliers. Conditional tenders shall not be accepted on any ground and shall be rejected straightway.
10. The information/orders/notices, etc. communicated through **E-mail/Fax** provided to the firms/ suppliers shall be treated authentic means of communication for all purposes. Providing the **correct contact details (Telephone/mobile Nos., official E-mail ID, address, etc.)** shall be the sole responsibility of the bidders/firms/suppliers. No reason for non-receipt or non-acceptance of the information/orders, etc. through **E-mail** shall be entertained by the Institute. **The Institute may not send the above through formal postal services, if firms/suppliers so wishes may collect the Hard copy form the concern office of the Institute.** It is mandatory to sign and stamp all important documents/orders/notices, etc. to be considered valid.
11. **Delivery and Installation Period:** Total delivery period for the items shall be **120 days from date of issue of Purchase Order.** The Institute reserves the right to extend the delivery time on the request with valid reason. Liquidity damage as per the tender document shall be levied in case of failure to abide by the delivery period. If supplier fails to deliver the Goods within the delivery period, NIT Sikkim may cancel full order or parts of the order and EMD will not be returned to the

bidder. NIT Sikkim also reserves the right to place the order for the GOODS to any other bidder/firm/supplier in case of failure of the successful bidder

12. **Place of Delivery:** National Institute of Technology, Ravangla, South Sikkim, Sikkim, Pin-737139, India (**26 km from Namchi**, Sikkim, **140 km from Siliguri**, West Bengal). The consignee for the contract is Registrar/Store Officer of the Institute.
13. **Payment** shall be made in Indian Rupees as follows: Satisfactory Delivery & Inspection – 70 - 80% of total cost; Satisfactory installation and Acceptance – 20 - 30% of total cost.
14. **Advance Payments:** No advance payment(s) will be made.
15. **Paying Authority:**

The Director, NIT Sikkim shall be the payment authority. The payments shall be released on fulfilment of all obligations under the purchase order/tender/contract to the satisfaction of the Institute authorities. The Institute authority reserves the right to withhold payment. The payments of bills will be made on submission of the following documents by the seller to the paying authority;

- (a) Ink-signed copy of Commercial invoice/contingent bill/seller's bill in triplicate copy.
- (b) Exemption certificate for GST, if applicable (BY BUYER).
- (c) Details for electronic payments viz. Account holder's name, Bank name, Branch name and address, Account type, Account number, IFSC code (if these details are not incorporated in supply order/contract).
- (d) Performance Security as per the tender document.
- (e) Any other document/certificate that may be provided for in the Supply Order/Contract.

(Note: From the above list, the documents that may be required depend upon the peculiarities of the procurement being undertaken)

16. **Responsibility of ensuring quality with specification** lies with the supplier. Deviation of technical specification from the approved sample may lead to rejection of delivery or cancellation of order along with forfeiture of EMD. The specification (Annexure-I) given in the bid document shall form the integral part of this bid document and the P.O.
17. The Bidder/tenderer/OEM should have a 24 x 7 technical assistance, preferably in Eastern/Central part of India and the bidder/OEM must have service centres of their own preferably in eastern India/West Bengal with engineers qualified to handle the repair & maintenance work.
18. Bidder must quote for all the items mention in the tender otherwise bid will be rejected without assigning any reason.
19. **Warranty/Guarantee: Three (03) Years** onsite comprehensive warranty from the date of successful installation should be provided by the bidder. Certificate mentioning acceptance of this clause should be enclosed with the bid. Authorization certificate from the OEM/Principal assuring full guarantee and warrantee obligations during the liability period, for the goods offered. The supplier has to confirm supply of back up of spares for a min period of 5 years.
20. Equipment/items should be supplied with operating manual, installation manual along with having testing procedure, machine BOM, electrical connection along with foundation drawing, etc. in hard or soft copy.
21. Bidder may depute authorized representative with proper authorization letter for attending bids opening as per the schedule notified by the Institute time to time.
22. A bid submitted with false information will not only be rejected but also the bidder will be debarred from participation in future tendering process of NIT Sikkim and may even invite a legal action against such bidder(s).

23. Any type of defect pointed out by the authorized representative/committee of the Institution in the goods/items, etc. in the scope of this tender, the same shall be rectified in reasonable time as per the directions of the Institute authority. It may consist of replacement of goods/ onsite rectification at supplier's own cost. Noncompliance of the Institute directions in stipulated time may invite other clause of this bid document, such as blacklisting of the firm.
24. The bidder must enclose certificates evidencing quality, or statutory compliance along with the bid documents duly certified to be true copies. Brochures/manuals of quoted model should also be attached with the bid documents. **The bidder should provide complete technical details (printed literature of the manufacturer along with model/make) and the same should be verifiable from the website of the vendor/OEM. Mere copying the technical specification provided in the Annexure-I will lead to cancellation of the bid.**
25. NIT Sikkim may waive any minor informality or non-conformity or irregularity in a bid, which does not constitute a material deviation, provided such a waiver, does not prejudice or affect the relative ranking of any bidder.
26. The items to be supplied under this contract shall conform to the standards mentioned in the technical specifications. And when no applicable standard is mentioned, the authoritative standard appropriate to the goods' country of origin and such standards shall be the latest issued by the concerned institution/Organization in the country or otherwise.
27. NIT Sikkim reserves right to award the order to one or more bidder.
28. **Performance Security:**

Within 10 days (Ten Days) of the completion of order/ work order/contract, the successful bidder shall furnish a Performance Guarantee of an **amount equivalent to 5% of the order value or as per Govt. of India directions**. Performance Guarantee submitted shall be from a Scheduled Commercial Bank only. Performance Bank Guarantee (PBG) in the form of Demand Draft, Fixed Deposit Receipt/Bank Guarantee in the standard format from a scheduled commercial bank shall only be acceptable. Performance Bank Guarantee (PBG) should be valid upto 60 days beyond the date of warranty/last date of contract period. In case of failure to submit the performance security, equivalent amount shall be deducted from the bill payable and kept as security till the PBG is submitted.

29. Liquidated Damages (LD) and Penalty Clause for Delay:

In the event of the Suppliers/firms failure to supply the goods and conduct trials, installation of equipment, training, etc. as specified in this contract, the Buyer may, at his discretion, withhold any payment until the completion of the required work(s) to the satisfaction of the Institute. The BUYER may also deduct any amount/penalty from the SELLER/SUPPLIER (successful bidder) payment due as deemed necessary. Liquidated damages for the delayed/undelivered stores/goods/services/installation as mentioned above, subject to the maximum value of the Liquidated Damages being not higher than 15% of the total PO/contract value.

In case of delay attributed solely to the negligence of the firm (service provider) in the execution of supply of goods, service, etc., penalties at the following rates shall be imposed;

- (a) 1% of the total cost for delay up to 15 days;
- (b) 2% of the total cost for delay more than 15 days but less than 30 days;
- (c) 5% of the total cost for delay more than 30 days but less than 60 days;
- (d) 10% of the total cost for delay more than 60 days but less than 90 days;
- (e) 15% of the total cost for delay more than 90 days.

The competent authorities of the Institute reserve the right to increase the supply/installation/service etc. time period on the request of the firm or its own reasons or waive off the penalty. Maximum delay of 150 days is tolerable, beyond which the order/agreement is liable to be

cancelled. The loss incurred due to non-performance of the firm/vendor will be recovered from the firm/vendor and firm shall be blacklisted/prohibited for atleast 2 year from participation in any bid of NIT Sikkim.

30. Effective Date of the Supply Order:

The work/supply/contract Order shall come into effect from the date **three days** later of its issuance by the NIT Sikkim. The firm has to acknowledge the same and shall remain valid until the completion of the obligations of the parties under the Order. The deliveries supplies and performance of the services shall commence from the effective date of the Order. In case of nonreceipt of acknowledgement from the Bidder, effective date of the Purchase Order/Contract will be **three day from the date of signing this Order**. The information/orders/notices, etc. communicated through **E-mail** provided to the firms/suppliers shall be treated authentic means of communication for all purposes.

31. Penalty for use of Undue influence:

The Seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts/work orders or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present Contract or any other Contract with the Institute for showing or forbearing to show favour or disfavour to any person in relation to the present Contract or any other Contract with the Institute. Any breach of the aforesaid undertaking by the Seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the Seller) or the commission of any offers by the Seller or anyone employed by him or acting on his behalf shall entitle the Buyer to cancel the contract and all or any other contracts with the Seller and recover from the Seller the amount of any loss arising from such cancellation. A decision of the Buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the PBG and refund of the amounts paid by the Buyer.

32. Termination of Contract:

The Buyer shall have the right to terminate this Contract in part or in full in any of the following cases:

- (a) Contract can be cancelled/ terminated unilaterally by the buyer in case items are not received within the contracted delivery period. Extension of contracted delivery period will be at the sole discretion of the Buyer with applicability of LD (Liquidated Damages) clause mentioned above.
- (b) The Seller is declared bankrupt or becomes insolvent.
- (c) The delivery of material is delayed due to causes of Force Majeure by more than three months or as decided by the Institute.
- (d) The Buyer has noticed that the Seller has utilized the services of any Indian/Foreign agent in getting this contract and paid any commission to such individual/company etc.
- (e) As per decision of the Arbitration.

33. Notice:

Any notice required or permitted by the contract shall be written in the English language and may be delivered personally or may be sent by E-mail/FAX or registered pre-paid mail/airmail, addressed to the last known address of the party to whom it is to be sent.

34. Transfer and Sub-letting:

The Seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present Contract or any part thereof.

35. Amendments:

No provision of present Contract shall be changed or modified in any way (including this provision) either in whole or in part except by an instrument in writing made after the date of this Contract and signed on behalf of both the parties and which expressly states to amend the present Contract. However, NIT Sikkim reserves the rights to do so and bidder have to accept the same.

36. Risk and Expense Clause:

- (a) Should the stores/goods or any instalment thereof not be delivered within the time or times specified in the contract documents, or if defective delivery is made in respect of the stores or any instalment thereof, the Buyer shall after granting the Seller 30 days to cure the breach, be at liberty, without prejudice to the right to recover liquidated damages as a remedy for breach of contract, to declare the contract as cancelled either wholly or to the extent of such default.
- (b) Should the good/stores or any instalment thereof not perform in accordance with the specifications/ parameters provided by the SELLER during the check proof tests to be done in the BUYER, the BUYER shall be at liberty, without prejudice to any other remedies for breach of contract, to cancel the contract wholly or to the extent of such default.
- (c) In case of a material breach that was not remedied within 30 days, the BUYER shall, having given the right of first refusal to the SELLER be at liberty to purchase, manufacture, or procure from any other source as he thinks fit, other stores of the same or similar description to successful completion of the project in all respect.
- (d) Any excess of the purchase price, cost of manufacturer, or value of any stores procured from any other supplier as the case may be, over the contract price appropriate to such default or balance shall be recoverable from the SELLER.

37. Quality: The quality of the stores/goods delivered according to the present Contract shall correspond to the technical specifications and standards valid for the deliveries of the same stores for in Seller's country or specifications enumerated as per BID/TENDER and shall also include therein modification to the stores suggested by the Buyer.

38. Inspection Authority: The Inspection will be carried out by a Technical Committee appointed by the Institute for this purpose. The mode of Inspection will be Technical Committee Inspection/or as defined by the Institute. The committee may suggest the seller with respect to above quality clause for compliance.

39. Franking Clause: The following Franking clause will form part of the contract placed on successful Bidder:

- (a) Franking Clause in the case of Acceptance of Goods "The fact that the goods have been inspected after the delivery period and passed by the Inspecting officer/committee will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the Buyer under the terms and conditions of the contract".

- (b) Franking Clause in the case of Rejection of Goods “The fact that the goods have been inspected after the delivery period and rejected by the Inspecting officer/committee will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the contract.” In this case action will be taken as per the clause given in this bid document.

40. Claims:

The following Claims clause will form part of the contract placed on successful bidder:

- (a) The claims may be presented either;
- (i) On quantity of the stores, where the quantity does not correspond to the quantity shown in the Packing List/Insufficiency in packing.
 - (ii) On quality of the stores/goods, where quality does not correspond to the specifications/quality mentioned in the contract.
- (b) The description and quantity of the stores are to be furnished to the Seller along with concrete reasons for making the claims. Copies of all the justifying documents shall be enclosed to the presented claim. The Seller will settle the claims within 30 days from the date of the receipt of the claim at the Seller’s office. In case no response is received during this period the claim will be deemed to have been accepted.
- (c) The Seller shall collect the defective or rejected goods from the location mentioned by the Buyer and deliver the repaired or replaced goods at the same location under Seller’s arrangement.
- (d) Claims may also be settled by reduction of cost of goods under claim from Performance Security submitted by the Seller or payment of claim amount by Seller through demand draft drawn on an Indian Bank in favour of the Director/Registrar of the Institute.
- (e) The quality claims will be raised solely by the Buyer and without any certification/ countersignature by the Seller’s representative stationed in India and seller has to rectify/ replace/upgrade to ensure the same during contract liability period, i.e. warranty period.

41. After Sale Service:

The successful bidder/seller/contract Awardee has to provide the after-sale services as per the terms & conditions of this contract. Any equipment or part is found to be not adhering the quality at any stage of the contract period, the bidder/seller/contract Awardee has to rectify/replace that equipment within 15 days, else her/his firm will be blacklisted.

Note Carefully:

1. The Bidder is required to read and examine all the terms and conditions, specifications and instructions given in the TENDER/BID document with full understanding of its implications.
2. Failure to furnish any information required for submission of a bid or bids not substantially responsive in every respect may result in outright rejection.
3. The Bidder is required to give an undertaking of understanding and acceptance of all the terms and conditions mentioned in the Bid document.
4. The sole responsibility to comply with all terms and conditions, specifications and instructions in all respect lies with the bidder and NIT Sikkim shall not be held responsible in any respect in this regard.

Registrar

(Annexure-I)

The Detailed Technical Specification for Experimental Flume–Flow Channel

S. No.	Particulars	Quantity
01	<p>Experimental section lengths of 2.5 m, closed water circuit and inclination adjustment Manufactured should have CE certified.</p> <p>Features</p> <ul style="list-style-type: none"> - basic principles of open-channel flow - experimental section with transparent side walls, lengths of 2.5m. (total length along with extension element will be 5 meter) - homogeneous flow through carefully designed inlet element - models from all fields of hydraulic engineering available as accessories <p>Learning objectives/experiments together with optionally available models</p> <ul style="list-style-type: none"> -- uniform and non-uniform discharge -- flow formulae -- flow transition (hydraulic jump) -- energy dissipation (hydraulic jump, stilling basin) -- flow over control structures: weirs (sharp-crested, broad-crested, ogee-crested), discharge under gates -- flow-measuring flumes -- local losses due to obstacles -- transient flow: waves -- vibrating piles <p>Specification</p> <ul style="list-style-type: none"> • Illustrates basic principles of open-channel flow • The experimental flume should be with experimental section, inlet and outlet element and closed water circuit, length of each experimental section 2.5 meter and 5 meter with extension element. • Smoothly adjustable inclination of the experimental section • Experimental section with 10 evenly spaced threaded holes on the bottom for installing models or for water level measurement using pressure • Side walls of the experimental section are to be made of tempered glass for excellent observation of the experiments • All surfaces in contact with water are to be made of corrosion-resistant materials • Flow-optimized inlet element for low-turbulence entry into the experimental section • Closed water circuit with water tank, pump, rotameter and manual flow adjustment • Models from all fields of hydraulic engineering to be available as accessories <p>Technical data Experimental section: length: 2.5m; flow cross-section WxH: 86x300 mm; inclination adjustment: -0,5...+3%</p> <p>Tank: 280L</p> <p><u>Glass Requirement of experimental section:</u> Single pane safety glass conforming to European Standard EN 12150-1, thickness 8 mm</p> <p><u>Pump Specifications</u></p>	01 Set

- power consumption: 1.0kW
 High Pressure Centrifugal Pump, series EVMS
 Type: EVMS 10-2 N5 HQGQ1EGE/0.75M1 ~ 230V/50Hz
 H/max: 21.0 m
 Q/max: 15 m³/h
 Outer casing: 1.4301
 Lower casing: 1.4301
 Impeller: 1.4301
 Shaft: 1.4301

Sluice gate

Investigations on an undershoot weir

Features

- flow under a sluice gate

Learning objectives/experiments

- free discharge under a sluice gate
 - submerged discharge under a sluice gate
 - observation of jet contraction (vena contracta)
 - observation of downstream hydraulic jumps

Specification

- sluice gate for the experimental flume
- sluice gate with lateral sealing lips
- manual height adjustment
- scale to read the height of the gate opening

Technical data

Gate

- weir plate made of PVC; head adjustment: 0...120 mm; LxWxH: 160x120x530 mm;
 Weight: approx. 3kg

Radial gate

Investigations on a radial gate

Features

- flow under a radial gate

Learning objectives/experiments

- free discharge under a radial gate
 - submerged discharge under a radial gate
 - observation of jet contraction (vena contracta)
 - observation of downstream hydraulic jumps

Specification

- radial gate for the experimental flume
- radial gate with lateral sealing lips
- height adjustment using lever

Technical data

Gate

- weir plate made of stainless steel, width: 80 mm; radius of the segment: 298 mm;
 LxWxH: 310x160x460 mm; Weight: approx. 3kg

<p><u>Set of plate weirs, four types</u></p> <p>Flow over different sharp-crested weirs, investigations on an aerated overshoot weir</p> <p>Features</p> <ul style="list-style-type: none"> - flow over sharp-crested weirs - typical measuring weirs <p>Learning objectives/experiments</p> <ul style="list-style-type: none"> - free and submerged overfall at the sharp-crested weir - effect of aeration on flow processes at plate weirs -- nappe observation of separation at a sharp-crested weir - together with a level gauge: <ul style="list-style-type: none"> -- plate weirs as measuring weirs: determination of the discharge coefficient; comparison of the measuring weirs (Cipoletti, Rehbock, Thomson) -- determination of the discharge -- comparison of the theoretical and the measured discharge <p>Specification</p> <ul style="list-style-type: none"> [1] 4 sharp-crested weirs for the experimental flume [2] rectangular weir with optional aeration as sharp-crested weir [3] Thomson weir, Cipoletti weir and Rehbock weir as measuring weirs [4] identical weir height for all weirs [5] holder for measuring weir to be studied [6] holder and rectangular weir both with lateral sealing lips [7] weir plates made of stainless steel [8] holder and rectangular weir made of PVC <p>Technical data</p> <p>Thomson weir</p> <ul style="list-style-type: none"> - triangular weir opening <p>Rehbock weir</p> <ul style="list-style-type: none"> - rectangular weir opening <p>Cipoletti weir</p> <ul style="list-style-type: none"> - trapezoidal weir opening; LxWxH: 150x86x210 mm (holder) LxWxH: 150x86x270 mm (rectangular weir) Total weight: approx. 2kg <p>Crump weir</p> <p>Flow behavior on an underwater weir, weir according to E. S. Crump with defined inclinations both upstream and downstream</p> <p>Features</p> <ul style="list-style-type: none"> - weir according to E. S. Crump <p>Learning objectives/experiments</p> <ul style="list-style-type: none"> - free and submerged overfall at the Crump weir - observation of downstream hydraulics jumps - discharge at a sill - together with a level gauge: <ul style="list-style-type: none"> -- determination of the discharge -- comparison of the theoretical and the measured discharge <p>Specification</p> <ul style="list-style-type: none"> [1] Crump weir for the experimental flume 	
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<p>[2] weir body contour according to E. S. Crump [3] weir body with sealing lips</p> <p>Technical data Weir body - made of PVC - inclination (upstream): 1:2 - inclination (downstream): 1:5</p> <p>LxWxH: 420x84x60 mm; Weight: approx. 2kg</p> <p><u>Ogee-crested weir with pressure measurement</u></p> <p>Overflow weir with manometer board for displaying the pressure characteristic</p> <p>Features - pressure distribution along the downstream side of an ogee-crested weir</p> <p>Learning objectives/experiments - hydrodynamic overfall at the ogee-crested weir - pressure distribution along the downstream side of the weir for different discharges -- nappe separation - together with a water level and a velocity meter: -- determination of discharge and head -- comparison of the theoretical and the measured discharge</p> <p>Specification [1] ogee-crested weir for the experimental flume [2] weir crest with chute with ski jump [3] weir crest with chute [4] weir body made of PVC [5] weir body with sealing lips</p> <p>Technical data Weir with chute • LxWxH: 172x84x160 mm Weir with chute with ski jump • LxWxH: 210x84x160 mm Total weight: approx. 4kg</p> <p><u>Venturi flume</u></p> <p>Flow rate measurement in rivers and channels with a typical flow-measuring flume</p> <p>Features - typical flow-measuring flume</p> <p>Learning objectives/experiments - together with a level gauge: -- discharge measurement in open channels</p> <p>Specification [1] venturi flume for the experimental flume [2] venturi flume consisting of a base plate and 2 side elements [3] side elements with sealing lips</p> <p>Technical data</p>	
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<p>Venturi flume - narrowest cross-section, WxH: 42x240 mm</p> <p>Side element - material: PMMA</p> <p>LxWxH: 450x84x260 mm; Weight: approx. 2kg</p> <p><u>Vibrating piles</u></p> <p>Vibrations of a single pile in a flow, observation of a Karman vortex street</p> <p>Features - vibrations of a single pile in a flow</p> <p>Learning objectives/experiments - vibration of a single pile -- observation of a Karman vortex street -- effect of the rod diameter -- effect of additional masses</p> <p>Specification [1] rods as vibrating piles for the experimental flume [2] 3 single rods with different diameters [3] weight holder with weights as additional masses for the single rod to be studied [4] single rod to be studied fastened on the flume bottom</p> <p>Technical data Single rods: 420mm long, made of PVC - Ø 4mm - Ø 6mm - Ø 8mm</p> <p>Weights - 3x 50g - 1x 20g (holder)</p> <p>Weight: approx. 1kg</p> <p><u>Broad Crested Weir</u> Learning objectives:</p> <ul style="list-style-type: none"> ▪ free and submerged overfall at the broad-crested weir ▪ effect of the weir edges on flow processes <ul style="list-style-type: none"> ▪ sharp-edged contour ▪ rounded contour ▪ together with a level gauge: <ul style="list-style-type: none"> ▪ determination of the discharge coefficient ▪ determination of the discharge ▪ comparison of the theoretical and the measured discharge <p>Specification</p> <ol style="list-style-type: none"> 1. weir with sharp edges 2. 2 additional elements for rounded edges 3. weir body with sealing lips <p>Technical data Weir body <ul style="list-style-type: none"> ▪ material: PVC Dimensions and weight LxWxH: 260x96x120mm (weir body)</p>	
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<p>LxWxH: 40x86x120mm (element for rounded edges) Weight: approx. 5kg</p> <p><u>Elements for energy dissipation</u></p> <p>Learning objectives:</p> <ul style="list-style-type: none"> ▪ comparison of the effect of different elements for energy dissipation <ul style="list-style-type: none"> ▪ chute blocks ▪ baffle blocks ▪ end sills ▪ observation of the hydraulic jump with and without end sills respectively baffle blocks <p>Specification</p> <ol style="list-style-type: none"> 1. All elements made of PVC 2. 1 weir with chute block, 2 baffle blocks with 5 rectangular blocks, 1 baffle block with 5 triangular blocks, 2 end sills with different height <p>Technical data</p> <p>Weir with chute block</p> <ul style="list-style-type: none"> ▪ LxWxH: 172x84x160 mm <p>End sill</p> <ul style="list-style-type: none"> ▪ LxWxH: 84x25x25 mm ▪ LxWxH: 84x25x50 mm <p>Baffle blocks</p> <ul style="list-style-type: none"> ▪ LxWxH: 84x25x25 mm ▪ blocks, WxH: 14x14 mm <ol style="list-style-type: none"> 3. Dimensions and weight <p>LxWxH:1000x84x10 mm (base plate); Total weight: approx. 3kg</p> <p><u>Digital level gauge</u></p> <p>Measurement of discharge depths with probe tip or hook, both vertically travelling, carrier for level gauge can be placed upon and fixed to any position of the experimental section</p> <p>Features</p> <p>- accessory for measuring water levels</p> <p>Specification</p> <ol style="list-style-type: none"> [1] device for measuring discharge depths in the experimental flume [2] measurement either with probe tip or hook [3] vertically travelling probe tip or hook [4] digital display to indicate the discharge depth [5] use of corrosion resistant materials <p>Technical data</p> <p>Scale: - measuring range: 0...300 mm; graduation: 0.01mm; Max. travel: 300 mm LxWxH: 150x120x380 mm; Weight: approx. 2kg</p> <p><u>Velocity Meter</u></p> <p>Determination of discharge velocity, holder with vertical scale to indicate the position of the impeller</p> <p>Features</p> <p>- determination of discharge velocity</p> <p>Specification</p> <ol style="list-style-type: none"> [1] determination of discharge velocity in the experimental flume [2] holder with vertical scale to indicate the position of the impeller [3] battery-operated digital display of the flow velocity <p>Technical data</p> <p>Scale</p>	
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	<p>- 0...300 mm - graduation: 1mm Measuring ranges - flow velocity: 0.04...5 m/s LxWxH: 150x120x380 mm (holder with impeller) LxWxH: 70x40x200 mm (holder with digital display) Weight: approx. 2kg</p> <p><u>Pitot static tube</u> Determination of discharge velocity in the experimental flume, pressure measurement (digital display)</p> <p>Features - determination of discharge velocity using a pitot static tube</p> <p>Specification [1] determination of discharge velocity in the experimental flume [2] determination of velocity via differential pressure [3] holder with vertical scale to indicate the position of the pitot static tube [4] hoses connect the pitot static tube and the twin tube manometers</p> <p>Technical data Scale (vertical position) - 0...240mm - graduation: 1mm Measuring ranges - pressure: 2x 0...350mm WS LxWxH: 250x180x510mm Weight: approx. 3kg</p> <p><u>Ten tube manometers</u> Simultaneous display on tube manometers of up to ten discharge depths along the experimental section</p> <p>Features - simultaneous display of ten discharge depths along the experimental section</p> <p>Specification [1] simultaneous display on tube manometers of up to ten discharge depths along the experimental section of experimental flume [2] manometer holding device mounted directly at the experimental section of experimental flume [3] holding device fitted with screws and spirit level to compensate for the inclination of the experimental section [4] set of hoses to connect measuring points of the experimental section and tube manometers</p> <p>Technical data Measuring ranges - 0... 300mmWC, graduation: 1 mm LxWxH: 240x90x430 mm Weight: approx. 3kg (without hoses)</p>	
02	<p><u>Hydraulic Bench Touch Screen Based</u></p> <p>Features - intuitive experiment execution via touch screen (HMI) - integrated WLAN router for operation and control via an end device and for screen mirroring on up to 10 end devices: PC, tablet, smartphone - network capability: access to ongoing experiments from external workstations via the local network - automatic identification of accessories via RFID technology - water and energy saving technics, space-saving setup</p>	

<p>Learning objectives/experiments</p> <ul style="list-style-type: none"> - Software content adapted to the specific accessories with -- info: device description and learning module with theoretical fundamentals -- experiment preparation: guided experimental setup and automatic bleeding of the experimental section -- experiment overview: digital recording of measured values with graphical representation -- taking screenshots -- detailed help function for execution of the experiments -- data transfer via USB for versatile external use of measured values and screenshots - screen mirroring, mirroring of the user interface on up to 10 end devices -- menu navigation independent of the user interface shown on the touch screen of the base module -- different user levels should be available on the end device: <ul style="list-style-type: none"> for observing the experiments or for operation and control of the experimental unit with display of additional values <p>Specification</p> <ol style="list-style-type: none"> [1] base module for experimental setup of basic experiments in fluid mechanics [2] automatic identification and configuration of accessories via a contactless, electronic RFID interface [3] automatic bleeding of the experimental sections [4] plant control with PLC, operation via touch screen or an end device [5] screen mirroring: possible to mirror the user interface on up to 10 end devices [6] network capability: access to ongoing experiments and their results from up to 10 external workstations simultaneously via the local network [7] water and energy saving technology, space-saving setup [8] closed water circuit with integrated heater and storage tank, submersible pump and measurement and control equipment [9] storage tank with foam insert for calming the water movement [10] connections for water cooling available, water supply provided by the laboratory required [11] worktop with internal edge for safe positioning of the individual accessories and for collecting dripping water [12] extensive accessories available <p>Technical data</p> <p>Pump</p> <ul style="list-style-type: none"> - power consumption: 50W - max. flow rate: 15L/min - max. head: 12m <p>Pump, bleeding</p> <ul style="list-style-type: none"> - power consumption: 25W - max. flow rate: 10L/min - max. head: 5m <p>Heater</p> <ul style="list-style-type: none"> - power consumption: 800W <p>Storage tank</p> <ul style="list-style-type: none"> - content: approx. 10L <p>Measuring ranges</p> <ul style="list-style-type: none"> - flow rate: 0...15L/min - temperature: 0...70°C - pressure: 1x 0...1bar, 1x 0...200mbar, 1x 0...50mbar <p>230V, 50Hz, 1 phase; 230V, 60Hz, 1 phase</p>	
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120V, 60Hz, 1 phase
UL/CSA optional

LxWxH: 730x610x680mm
Weight: approx. 42kg

Different Obstacles Analysis Setup

Flow around various drag bodies and incident flow of weirs

Features

- effects of different obstacles on open-channel flow
- intuitive experiment execution via touch screen (HMI)
- integrated WLAN router for operation and control via an end device and for screen mirroring on up to 10 end devices: PC, tablet, smartphone
- network capability: access to ongoing experiments from external workstations via the local network
- automatic identification of accessories via RFID technology

Learning objectives/experiments

- energy levels of the water when flowing through a flume with different obstacles
- investigation of the hydraulic jump
- Venturi flow rate measurement
- energy dissipation in the flume

- Software specifically adapted to the accessories used
 - learning module with theoretical fundamentals
 - device description
 - guided experiment preparation
 - execution of the experiment
 - graphical representation of pressure curves
 - data transfer via USB for versatile external use of measured values and screenshots e.g. evaluation in Excel
 - different user levels must be available

Specification

- (i) open flume with different magnetic obstacles for demonstration of the flow
- (ii) transparent experimental flume
- (iii) demonstration of energy levels and losses with different weirs and piers
- (iv) demonstration of energy dissipation in the stilling basin with end sill and dentated sill as well as ogee-crested weir with ski jump
- (v) water level regulation with siphon weir
- (vi) determination of flow rates with Venturi flume
- (vii) flow rate in experimental flume can be adjusted base module
- (viii) determination of water levels (energy levels) via digital pressure measurement
- (ix) automatic identification of accessories via RFID technology and use of the corresponding software
- (x) experiment execution and display of the measured values via touch screen (HMI)
- (xi) Network capability: access to ongoing experiments and their results from up to 10 external workstations simultaneously via the local network
- (xii) water supplied via base module

Technical data
Experimental flume

<p>- WxH: 50x75mm - length between measuring points: 390mm - nozzle, open cross-section: 50x3mm</p> <p>5x Weirs, magnetic, LxW 50x80mm - broad-crested weir, sharp-edged, H 30mm - broad-crested weir, rounded edges, H 30mm, R 10mm - ogee-crested weir, 37°, R 10mm - ogee-crested weir with ski jump, 37°, R 10mm - siphon, 5°, H 58mm</p> <p>2x Piers, magnetic - rounded end R 10mm / pointed end 53° - both ends rectangular</p> <p>4x Obstacles for energy dissipation, magnetic - LxWxH: 50x20x15mm - 1x end sill - 3x dentated sills</p> <p>1x Venturi flume, magnetic - length: 130mm - narrowest cross-section: 12mm - inlet contour: L 37,3mm, R 20mm - outlet angle: 16° each</p> <p>Measuring ranges - indicated measuring range pressure: 0...80mmWC - indicated measuring range flow rate: 0...15L/min</p> <p>LxWxH: 650x260x210mm Weight: approx. 9,7kg</p>	
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Note:

- 01.** It shall be the responsibility to supply complete set of Equipments/items/parts/accessories necessary for installation and working of the Experimental Flume – Flow Channel in all respect. And if anything is missing from the specification the bidder must quote the same and may bring to the notice of the Department.
- 02.** The material of the flow channel surge tank must be made of Glass reinforced plastic and the bed of the flume must comprise of stainless steel.
- 03.** At the time of Technical Evaluation, the Evaluation Committee may take online demonstration of that equipment or may visit the place of bidder/OEM for the physical verification of the equipment.

Registrar

(Annexure-II)

Part-I: Format for Submission of Technical Bid (Bidder Profile)

(To be enclosed with Technical Bid)

S. No.	Particulars	Fill-in Details	Ref No/ remarks, if any
01	Name and address of the Firm/Agency		
02	Whether the firm is Proprietary/Partnership Firm/Private Ltd./Public Ltd./ Others.		
03	Name of Proprietor/Partner of the firm/Agency		
04	Name & contact detail of Authorized representative: (Designation, Address, Mobile No., E-mail ID)		
05	Month and Year of Establishment of Firm		
06	Number of years of experience in this field		
07	Registration Number of the Firm		
08	Valid GSTIN Number		
09	PAN of the firm or Proprietor		
10	Showroom/Outlet/service center Address		
11	Turnover of the firm	2019-20: 2018-19:	
12	OEM/Authorized Dealership/Supplier certificate from OEM		
13	Detail of Demand Draft submitted for EMD of Rs.	DD No. Date:	
14	Relevant documents as in the Tender Document		

**All fields are mandatory to fill with the copy of duly signed and stamped proof. These above points together constitute eligibility criteria.*

(Annexure-III)

COMPLIANCE STATEMENT

(Technical Criterion)

The following is the Model Quoted against the mentioned Specification:

S. No.	Item	Make and Model No.	Detailed technical specification (Write Attached or Not attached)	OEM or Authorized Dealership (Write Attached or Not attached)
1	As mentioned in Detailed Technical Specification (Annexure-I)			

S. No.	Following Equipment as per the specifications given in this Bid	Brochure page no. and OEM weblink to verify the detailed specification along with operation, procedure, etc.
1	Glass Requirement of Experimental Section	
2	Pump	
3	Sluice Gate	
4	Radial Gate	
5	Set of Plate Weirs (Four Types)	
6	Ogee-crested weir with pressure measurement	
7	Venturi Flume	
8	Vibrating Piles	
9	Broad Crested Weir	
10	Elements for energy dissipation	
11	Digital Level Gauge	
12	Velocity Meter	
13	Pitot-Static Tube	
14	Ten Tube Manometers	
15	Hydraulic Bench Touch Screen Based (Pump, Heater, Storage Tank, etc. or given in the detailed technical specification)	
16	Different Obstacles Analysis Setup	

(Annexure-IV)

Undertaking

(On the letter head of the bidder)

To,**The Registrar
National Institute of Technology Sikkim
Ravangla, South Sikkim-737139**Sub.: Undertaking for *Tender No:* *Date:*

Dear Sir,

This is to undertake that I/We, owner(s)/authorized signatory of M/s, of ...<name of city>... have read all the terms and conditions, specifications etc. of this Tender document and I/We fully understood all of them and I/We are fully aware of their implications. We undertake that if I/We were given the Purchase Order (PO), will abide by all the terms and conditions of the Tender document and provide all the goods/items to the satisfaction of the Institute authorities.

I further undertake that after reading and understanding all and their implications, all the pages of this tender document are signed and stamped by the authorized person of the firm.

The undersigned further certify and undertake that the bidding firm/manufacturer or the consortium (any partner of consortium) has not been blacklisted from participating in the tendering/bidding process by any Central or any State Government Institute/Organization (including autonomous Institute/Organization) in Last Three Years.

The documents and information furnished by the firm/undersigned (on behalf of the firm) are correct in all respect and if anything found incorrect, I shall be liable for the action as per the terms and conditions given in this tender document.

Signed by

(Name)

Authorized Signatory of M/s

Official Stamp Date:

Place:

(Annexure-V)

PART-II: Financial Bid

(To be sealed in a separate envelope duly signed)

S. No.	Name of items	Unit Price (Rs.)	GST (@ %)	Qty	Total Unit Price (Rs.)	Total (Rs.) inclusive all taxes
01	Water Resources Engineering Laboratory Equipment - Experimental Flume – Flow Channel as per the specifications given in the bid document			01 Set		

Total Amount (In figure):

(In words):

Total unit quoted price should be inclusive all charges (taxes, transportation, etc.). No extra charges will be paid. Rate quoted must be F.O.R. NIT Sikkim.

##NIT Sikkim being a Public Funded Research Institution vide Notification No. 45/2017-Central Tax (Rate) and No 47/2017-Integrated Tax (Rate) is eligible for concessional rate of GST on purchase of research items. Further concession on customs duty is also available on customs duty vide notification No. 51/96-Cus. DSIR certificate shall be provided by the Institute to claim such concessional rate. Bidders are required to take into account the said concession in the Financial Bid. The concessional rate of GST is 5%.

Bank Account Details for Direct Payment

(To be submitted by the Bidder)

S. No.	Particulars	Details
01	Firm (Beneficiary) Name	
02	Please enclose a cancelled cheque	
03	Complete Bank Account No. of the Firm [beneficiary]	
04	Bank Name & Address	
05	IFS Code No.	
06	Mobile No.& Email ID for information	

We undertake that all information provided above is correct and NIT Sikkim will not be responsible in case of any error on the part of firm.

(Signature & Seal of the Company/Firm/Agency)