



BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
HIGH PRESSURE BOILER PLANT
PURCHASE DEPARTMENT - FOSSIL BOILERS
THIRUCHIRAPALLI - 620014
TAMILNADU (INDIA)

PHONE :0431-2574111
GRAMS : BHARATELEC
FAX NO: 0431-2520719
E-mail:
Web:

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Enquiry No	Enquiry Date	Due Date for Quotation
1801700330 - 14	24.03.2017	10.05.2017
Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order. Bid should be submitted in two parts. 1.Techno-commercial bid (Part-I) and 2.Price bid(Part-II) in a separate sealed cover and both covers must be placed in a third cover and sealed. Our Enquiry No., Enq. date & Enq. Due date must be written on all three covers.		

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	L00610SR20001001 SELECTIVE CATALYTIC REDUCTION SYSTEM Complete Selective Catalytic Reduction (SCR) system for One Steam Generator project DN101 using Anhydrous Ammonia as reagent inclusive of Ammonia Unloading, Storage, Handling & Preparation systems, Reactor chambers with Catalyst Modules, Ammonia injection system, De-dusting system, Flue Gas mixing devices and Flow model study as per Technical specification TDN:SCR:001/Rev.00 and Division of Work document for Mechanical portion TDN:DOW/Rev.00 and C&I Portion CI:DOW/Rev.01 Guarantee Terms Technical Guarantee Terms are defined in the Technical specification. Documents attached 1. Technical Specification TDN:SCR:001/Rev.00 comprising of Part-I, Part-II and Part-III. 2. Part-III documents includes Parameters for design/selection of SCR systems/equipment, P&IDs of SCR system, General Arrangement drawings and Guarantee Requirements. 3. List of Mandatory spares. 4. Pre-Qualification Requirements. 5. Division of Work TDN:DOW/Rev.00 and CI:DOW/Rev.01	NO	1.000	1.00	31.07.17
20	L00620SR20001001 SELECTIVE CATALYTIC REDUCTION SYSTEM Complete Selective Catalytic Reduction (SCR) system for One Steam Generator Project DN102 using Anhydrous Ammonia as reagent inclusive of Ammonia Unloading, Storage, Handling & Preparation systems, Reactor chambers with Catalyst Modules, Ammonia injection system, De-dusting system, Flue	NO	1.000	1.00	31.07.17

The offers should reach us 30 minutes before the time of opening of tenders. The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening.Late and delayed offers are liable to be rejected.

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

H. V. Kumar 24/3/17
MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,
BHEL THIRUCHIRAPALLI



429-002/A

BHARAT HEAVY ELECTRICALS LIMITED

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Gas mixing devices and Flow model study as per Technical specification
 TDN:SCR:001/Rev.00 and Division of Work document for Mechanical portion
 TDN:DOW/Rev.00 and C&I Portion
 CI:DOW/Rev.01

Guarantee Terms Technical Guarantee Terms are defined in the Technical specification.

Documents attached

1. Technical Specification TDN:SCR:001/Rev.00 comprising of Part-I, Part-II and Part-III.

2. Part-III documents includes Parameters for design/selection of SCR systems/equipment, P&IDs of SCR system, General Arrangement drawings and Guarantee Requirements.

3. List of Mandatory spares.

4. Pre-Qualification Requirements.

5. Division of Work TDN:DOW/Rev.00 and CI:DOW/Rev.01

30 L00630SR20001001 NO 1.000 1.00 31.07.17

SELECTIVE CATALYTIC REDUCTION SYSTEM

Complete Selective Catalytic Reduction (SCR) system for One Steam

Generator Project DN 103 using Anhydrous Ammonia as reagent inclusive of Ammonia

Unloading, Storage, Handling & Preparation systems, Reactor chambers

with Catalyst Modules, Ammonia injection system, De-dusting system, Flue

Gas mixing devices and Flow model study as per Technical specification

TDN:SCR:001/Rev.00 and Division of Work document for Mechanical portion

TDN:DOW/Rev.00 and C&I Portion

CI:DOW/Rev.01

Guarantee Terms Technical Guarantee Terms are defined in the Technical specification.

Documents attached

1. Technical Specification TDN:SCR:001/Rev.00 comprising of Part-I, Part-II and Part-III.

2. Part-III documents includes Parameters for design/selection of SCR systems/equipment, P&IDs of SCR system, General Arrangement drawings and Guarantee Requirements.

3. List of Mandatory spares.

4. Pre-Qualification Requirements.

5. Division of Work TDN:DOW/Rev.00 and CI:DOW/Rev.01

40 L00640SR20001001 NO 1.000 1.00 31.07.17

SELECTIVE CATALYTIC REDUCTION

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Yours faithfully,
 For **BHARAT HEAVY ELECTRICALS LIMITED**

K. SOAYAN MANAGER / PURCHASE
 Sr. Engineer (FOSSIL BOILERS)
 Technical Manager
 Yours faithfully,

24/3/12



429-002/A

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SYSTEM

Complete Selective Catalytic Reduction (SCR)
system for Two Steam

Generators project DN104 using Anhydrous
Ammonia as reagent - inclusive
of Common

Ammonia Unloading, Storage, Handling &
Preparation systems, Reactor
chambers with Catalyst Modules, Ammonia
injection system, De-dusting
system, Flue Gas mixing devices and Flow
model study as per Technical
specification

TDN:SCR:001/Rev.00 and Division of Work
document for Mechanical portion

TDN:DOW/Rev.00 and C&I Portion

CI:DOW/Rev.01

Guarantee Terms Technical Guarantee Terms are
defined in the Technical
specification.

Documents attached

1. Technical Specification TDN:SCR:001/Rev.00
comprising of Part-I,
Part-II and Part-III.

2. Part-III documents includes Parameters for
design/selection of SCR
systems/equipment, P&IDs of SCR system,
General Arrangement drawings and
Guarantee Requirements.

3. List of Mandatory spares.

4. Pre-Qualification Requirements.

5. Division of Work TDN:DOW/Rev.00 and
CI:DOW/Rev.01

This Enquiry shall be monitored by Independent External Monitor

Mrs. Pravin Tripathi, IA & AS (Retd.)

D-243, Anupam Gardens, Lane IB, Neb Sarai,
Sainik Farms,

New Delhi - 110 068

Ph : +91 11 29533206 / 29531715.

pravin.tripathi@gmail.com

General Note:

1) The offer to be submitted in two part bid system:

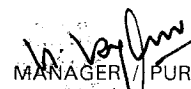
- a) Technical offer with filled Tender terms and conditions
- b) Price bid separately

2) Vendors are requested to submit all the documents for supporting Pre
Qualification Requirements(PQR) along with Technical Offer .

3) All the Tender Terms and conditions are to addressed in Technical
offer .

The offers should reach us 30 minutes before the time of opening of tenders.
The offers will be opened at 14.30 hrs on the due date of tender in the presence of
tenderers who have submitted their offer and who may like to be present for the tender
opening.Late and delayed offers are liable to be rejected.

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**


MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,



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4) Price Bid shall be submitted as per format provided in Tender documents.

All the tenders may be addressed to the following address:

**The Tender Opening Cell / MM
Room No: 26, Building 24, Ground Floor
Bharat Heavy Electricals Limited
TIRUCHIRAPALLI 620014**

In case personal delivery of the offer, it shall be dropped into the respective box kept in Room No: 26, after duly entering the data in the system.

Offers will be accepted only up to 14.00 Hrs on the due date. Therefore, vendors shall ensure to submit the offers well before this time. All due date extension requirements should be addressed to the respective Purchase mail IDs. All the due date extension requests from vendors will be considered only up to 48 hours before the due date and time.

Vendors are requested to avoid submission of offers through e mail / fax. In case of any unavoidable situation, offers shall be sent through e mail to the following mail ID only tender_cell@bheltry.co.in.

As tenders are being opened by Common Tender Opening Cell, offer covers should be sealed with tenderer's distinctive seal and super scribed with correct Tender No. item of supply and due date of opening.

The offers will be opened at 14.30 hrs on the due date of the tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

The bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL fraud prevention policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.

The supplier shall submit EI/EII forms to BHEL time to time as indicated by the BHEL and in case of inordinate delay in issuing EI/EII forms, then BHEL reserves the right to deduct 5% of the value of the supplied items against which EI/EII forms pending to be issued

Enclosures:

1. Specification and Drawing for all four Project
2. Tender Enquiry Documents
3. Deviation of works (DOW)

The offers should reach us 30 minutes before the time of opening of tenders. The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED


MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,



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"LD clause has to be confirmed without fail."

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The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

[Signature]
MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,
24/3/17

TENDER ENQUIRY DOCUMENT

**FOR THE PURCHASE OF
SELECTIVE CATALYTIC REDUCTION SYSTEM
(SCR)**

**BY BHEL TRICHY
FOR VARIOUS PROJECTS**

ENQUIRY NO:



**BHARAT HEAVY ELECTRICALS LTD,
TIRUCHIRAPALLI-14**

(A GOVERNMENT OF INDIA UNDERTAKING)

PHONE: 0431 257 7457

FAX: 0431 2520719

EMAIL: rksamy@bheltry.co.in

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SECTION I**NOTICE INVITING TENDER (NIT)**

From

BHARAT HEAVY ELECTRICALS LTD, TIRUCHIRAPALLI-14

(A GOVERNMENT OF INDIA UNDERTAKING)

PHONE: 0431 2577457

FAX: 0431 2520719

EMAIL: rksamy@bheltry.co.in

FOR

THE PURCHASE OF

SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR) FOR VARIOUS
PROJECTS**NOTICE INVITING TENDERS (NIT)**

- 1) Material Management/BOI, invites tenders from eligible and qualified tenderers for Design, Engineering and Supply of Selective Catalytic Reduction system for Various Project.

Sr. NO	Enquiry No	Item Name	Department	Quantity	EMD
1	1801700330-14	SCR	MM/BOI	4 Set	Nil

- 2) Enquiry No:

Sr. No	Description	Schedule
1	Cost of the Tender Enquiry Document	NIL
2	Pre-bid meeting date, time& Venue	NIL
3	Closing date & time for submission of tender fee and EMD in physical form	NA
4	Closing date & time for submission of bids	10.05.2017 @ 14.00 Hrs(IST)
5	Time and date of opening of online bids	10.05.2017@14.30 Hrs (IST)

SECTION - II

GENERAL INSTRUCTIONS TO TENDERERS (GIT)

1. Definitions and Abbreviations

The following definitions and abbreviations, which have been used in these documents shall have the meanings as indicated below:

a. Definitions:

- i. **“Purchaser”** means BHEL Trichy.
- ii. **“e-Tender”** means Bids / Quotation / Tender received from a Firm / Tenderer / Bidder online. And **“Tenderer”** means Bidder/ the Individual or Firm submitting tenders/ Bids / Quotation / e-Tenders.
- iii. **“Supplier”** means the individual or the firm supplying the goods and services as incorporated in the contract.
- iv. **“Goods”** means the articles, material, commodities, livestock, furniture, fixtures, raw material, spares, instruments, machinery, equipment, industrial plant etc. which the supplier is required to supply to the purchaser under the contract.
- v. **“Services”** means services allied and incidental to the supply of goods, such as transportation, installation, commissioning, provision of technical assistance, training, after sales service, maintenance service and other such obligations of the supplier covered under the contract.
- vi. **“Earnest Money Deposit”** (EMD) means Bid Security/ monetary or financial guarantee to be furnished by a tenderer along with its tender.
- vii. **“Contract”** means the written agreement entered into between the purchaser and/or consignee and the supplier, together with all the documents mentioned therein and including all attachments, annexure etc. therein.
- viii. **“Performance Security”** means monetary or financial guarantee to be furnished by the successful tenderer for due performance of the contract placed on it. Performance Security is also known as Security Deposit.
- ix. **“Consignee”** means the site/stores/ person to whom the goods are required to be delivered as specified in the Contract. If the goods are required to be delivered to a person as an interim consignee for the purpose of dispatch to another person as provided in the Contract then that “another” person is the consignee, also known as ultimate consignee.
- x. **“Specification”** means the document/standard that prescribes the requirement with which goods or service has to conform.
- xi. **“Inspection”** means activities such as measuring, examining, testing, gauging one or more characteristics of the product or service and comparing the same with the specified requirement to determine conformity.
- xii. **“Day”** means calendar day.

b. Abbreviations:

- (i) “TE Document” means Tender Enquiry Document
- (ii) “NIT” means Notice Inviting Tenders.
- (iii) “GIT” means General Instructions to Tenderers

- (iv) "SIT" means Special Instructions to Tenderers
- (v) "GCC" means General Conditions of Contract
- (vi) "SCC" means Special Conditions of Contract
- (vii) "DGS&D" means Directorate General of Supplies and Disposals
- (viii) "NSIC" means National Small Industries Corporation
- (ix) "PSU" means Public Sector Undertaking
- (x) "CPSU" means Central Public Sector Undertaking
- (xi) "LSI" means Large Scale Industry
- (xii) "SSI" means Small Scale Industry
- (xiii) "LC" means Letter of Credit
- (xiv) "DP" means Delivery Period
- (xv) "BG" means Bank Guarantee
- (xvi) "ED" means Excise Duty
- (xvii) "CD" means Custom Duty
- (xviii) "VAT" means Value Added Tax
- (xix) "CENVAT" means Central Value Added Tax
- (xx) "CST" means Central Sales Tax
- (xxi) "RR" means Railway Receipt
- (xxii) "BL" means Bill of Lading
- (xxiii) "FOB" means Free on Board
- (xxiv) "FCA" means Free Carrier
- (xxv) "CIF" means Cost, Insurance and Freight
- (xxvi) "CIP (Destinations)" means Carriage and Insurance Paid up to named port of destination. Additionally the Insurance (local transportation and storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery.
- (xxviii) "DDP" means Delivery Duty Paid named place of destination (consignee site)
- (xxix) "INCOTERMS" means International Commercial Terms as applicable on the date of Tender Opening
- (xxx) "EPS" – BHEL's e-procurement system (<https://bheleps.buyjunction.in>)

2. **Introduction**

2.1 The Purchaser has issued these TE documents for purchase of goods and related services as mentioned in Section – V – "List of Requirements", which also indicates, *interalia*, the required delivery schedule, Quantity and place of delivery.

2.2 This section (Section II - "General Instruction to Tenderers") provides the relevant information as well as instructions to assist the prospective tenderers in preparation and submission of tenders. It also includes the mode and procedure to be adopted by the purchaser for receipt and opening as well as scrutiny and evaluation of tenders and subsequent placement of contract.

2.3 Before formulating the tender and submitting the same to the purchaser, the tenderer should read and examine all the terms, conditions, instructions, checklist etc. contained in the TE documents. Failure to provide and/or comply with the required information, instructions etc. incorporated in these TE documents may result in rejection of your offer.

3. **Availability of Funds**

3.1 Expenditure to be incurred for the proposed purchase will be met from the funds available with the purchaser/consignee.

4. Language of Tender

4.1 The tender submitted by the tenderer and all subsequent correspondence and documents relating to the tender exchanged between the tenderer and the purchaser, shall be written in the English language, unless otherwise specified in the Tender Enquiry. However, the language of any printed literature furnished by the tenderer in connection with its tender may be written in any other language provided the same is accompanied by an English translation and, for purposes of interpretation of the tender, the English translation shall prevail.

4.2 The tender submitted by the tenderer and all subsequent correspondence and documents relating to the tender shall be in English.

5. Eligible Tenderers

5.1 This invitation for tenders is open to all Indigenous and Import suppliers who fulfil the eligibility criteria specified in these documents.

6. Eligible Goods and Services

6.1 All goods and related services to be supplied under the contract shall have their origin in India or any other country with which India has not banned trade relations. The term “origin” used in this clause means the place where the goods are mined, grown, produced, or manufactured or from where the related services are arranged and supplied.

7. Tendering Expense

7.1 The tenderer shall bear all costs and expenditure incurred and/or to be incurred by it in connection with its tender including preparation, mailing and submission of its tender and for subsequent processing the same. The purchaser will, in no case be responsible or liable for any such cost, expenditure etc regardless of the conduct or outcome of the tendering process.

8. Content of Tender Enquiry Documents

Section I	Notice Inviting e-tender
Section II	General Instructions to Tenderers (GIT)
Section III	General conditions of contract (GCC)
Section IV	Special conditions of contract (SCC)
Section V	List of Requirements
Section VI	Technical and Quality Specifications
Section VII	Tender Form
Section VIII	Price bid Formats
Section IX	Bank Guarantee Format for Performance (PBG)
Section X	Loading Criteria
Section XI	Special & Commercial terms
Section XII	Supplier Registration Form
Section XIII	MSE Clause
Section XIV	Third Party Non-Disclosure Agreement
Section XV	Pre- Qualification Requirement (PQR)

8.2 The relevant details of the required goods and services, the terms & conditions and procedure for tendering, tender evaluation, placement of contract, the applicable contract terms and, also, the standard formats to be used for this purpose are incorporated in the above-mentioned documents. The interested tenderers are expected to examine all such details etc to proceed further.

9. Amendments to TE documents

9.1 At any time prior to the deadline for submission of tenders, the purchaser may, for any reason deemed fit by it, modify the TE documents by issuing suitable amendment(s) to it.

9.2 Such an amendment will be notified only online on BHEL (www.bhel.com) / government (www.tenders.gov.in) tenders website.

9.3 In order to provide reasonable time to the prospective tenderers to take necessary action in preparing their tenders as per the amendment, the purchaser may, at its discretion extend the deadline for the submission of tenders and other allied time frames, which are linked with that deadline.

10. Clarification of TE documents

10.1 A tenderer requiring any clarification or elucidation on any issue of the TE documents may take up the same with the purchaser in writing. The purchaser will respond in writing to such request provided the same is received by the purchaser ON OR BEFORE THE PRE BID MEETING (unless otherwise specified in the GIT). Representation sent after the pre bid meeting date will not be taken into cognizance.

11. Documents Comprising in Tender

11.1 The tender shall be submitted in physical form as mentioned below:

- (i) **Techno-commercial (un-priced Bid)**
- (ii) **Price Bid**

A) Techno-commercial (un-priced Bid)

Techno-commercial bid shall be submitted with complete description of the equipment specification compliances to the tendered specification and all the commercial terms & conditions indicated in TE documents. Any other enclosures, which the supplier wishes to submit like product catalogue, technical literature etc. to submit in a sealed envelope super scribed clearly as “**TECHNO COMMERCIAL BID**” with **RFQ NO and DUE DATE**. Un-priced bid (without Price) shall also be enclosed with the techno commercial bid.

Confirmation to BHEL Specification shall be indicated by the vendor in the respective columns provided in the purchase specification wherever applicable. Normally deviations to BHEL Specification is not acceptable. If in case of deviations to the specification / item description if any shall be brought out clearly indicating “**DEVIATION TO BHEL SPECIFICATION**” without fail as a part of technical offer.

Compliance to prequalification criteria shall also be enclosed with the Techno Commercial bid.

Manufacturer's name, their trade mark and brand, part number, alternate material to the one asked in enquiry, if any should be mentioned in quotation and illustrative leaflets giving technical particulars etc. are to be attached to facilitate consideration and technical evaluation the quotation.

B) Price Bid:

Price bid should contain basic Unit Prices, discount if any, applicable taxes & duties, packing & forwarding charges , Freight & Insurance , FOB Charges , in a sealed envelope superscripted clearly as “ **PRICE BID** “ with **RFQ NO and DUE DATE**.

Supervision of Installation and commissioning, start-up and training charges shall be indicated in the price bid. It is preferred to indicate the rates in both figures and words.

12. Tender currencies

12.1 The tenderer supplying indigenous goods or already imported goods shall quote only in Indian Rupees (INR).

12.2 For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, GBP or Japanese Yen. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only (INR), if such services are to be performed /undertaken in India. Exchange rate for converting such offers to INR will as SBI TT selling rate as on the date of Techno commercial (Un-priced bid) opening date.

13. Tender Prices

13.1 The Tenderer shall indicate on the Price bid format provided under Section VIII all the specified components of prices shown therein including the unit prices and total tender prices of the goods and services it proposes to supply against the requirement. All the columns shown in the price bid should be filled up as required. If any column does not apply to a tenderer, same should be clarified as "Not Applicable" by the tenderer.

13.2 While filling up the columns of the Price Schedule, the following aspects should be noted for compliance:

13.3.1 For domestic goods or goods of foreign origin located within India, the prices in the corresponding price schedule shall be entered separately in the following manner:

- a. The price of the goods, quoted ex-factory/ ex-showroom/ ex-warehouse/ off-the-shelf, as applicable, including all taxes and duties like Sales tax, CST , VAT, CENVAT, Custom Duty, Excise Duty etc. already paid or payable on the components and raw material used in the manufacture or assembly of the goods quoted ex-factory etc. or on the previously imported goods of foreign origin quoted ex-showroom etc;
- b. Any sales or other taxes and any duties including excise duty, which will be payable on the goods in India if the contract is awarded;
- c. Charges towards Packing & Forwarding, Inland Transportation, Insurance (local transportation and storage), and Loading & Unloading etc. would be borne by the Supplier from ware house to the consignee site.

13.3.2 For goods offered from abroad, the prices in the corresponding price schedule shall be entered separately in the following manner.

- a. The price of goods quoted for CIF Chennai Sea port of shipment, as indicated in the list of requirements and Price Schedule.
- b. Freight and insurance charges.
- c. The charges for Insurance (local transportation and storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery. Other local costs and Incidental costs, as specified in the list of Requirements and Price Schedule;
- d. The charges for Incidental Services, as in the list of requirements and Price Schedule;

13.4 Additional information and instruction on Duties and Taxes:

13.4.1 If the Tenderer desires to ask for excise duty, sales tax/VAT, Service Tax, Works Contract Tax etc. to be paid extra, the same must be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such duties and taxes and no claim for the same will be entertained later.

13.4.2 Excise Duty:

- a) If reimbursement of excise duty is intended as extra over the quoted prices, the supplier must specifically say so also indicating the rate, quantum and nature of the

duty applicable. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of excise duty will be entertained after the opening of tenders.

- b) If a Tenderer chooses to quote a price inclusive of excise duty and also desires to be reimbursed for variation, if any, in the excise duty during the time of supply, the tenderer must clearly mention the same and also indicate the rate and quantum of excise duty included in its price. Failure to indicate all such details in clear terms may result in rejection of offers.
- c) Subject to sub clauses **13.4.2** (a) & (b) above, any change in excise duty upward/downward as a result of any statutory variation in excise duty taking place within contract terms shall be allowed to the extent of actual quantum of excise duty paid by the supplier. In case of downward revision in excise duty, the actual quantum of reduction of excise duty shall be reimbursed to the purchaser by the supplier. All such adjustments shall include all reliefs, exemptions, rebates, concession etc. if any obtained by the supplier.

13.4.3 Sales Tax:

If a tenderer asks for sales tax/ VAT, Service Tax and Works Contract Tax to be paid extra, the rate and nature of sales tax applicable should be shown separately. The sales tax / VAT, Service Tax and Works Contract Tax will be paid as per the rate at which it is liable to be assessed or has actually been assessed provided the transaction of sale is legally liable to sales tax / VAT, Service Tax and Works Contract Tax and is payable as per the terms of the contract. If any refund of Tax is received at a later date, the Supplier must return the amount forth-with to the purchaser.

13.5.4 Octroi Duty and Local Duties & Taxes: Normally, goods to be supplied to government departments against government contracts are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies. However, if such taxes/duties are applicable same shall be clearly mentioned in the price bid/offer.

14. Payment of Agency Commission to Indian Agent (for foreign purchase):

- I. BHEL shall deal directly with foreign vendors, wherever required, for procurement of goods. However, if the foreign principal desires to avail of the services of an Indian agent, then the foreign principal should ensure compliance to regulatory guidelines - which require mandatory submission of an Agency Agreement.
- II. It shall be incumbent on the Indian agent and the foreign principal to adhere to the relevant Guidelines of Government of India, issued from time to time.
- III. The Agency Agreement should specify the precise relationship between the foreign OEM / foreign principal and their Indian agent and their mutual interest in the business. All services to be rendered by agent/ associate, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign supplier/ Indian agent. Any payment, which the agent or associate receives in India or abroad from the OEM, whether as commission or as a general retainer fee should be brought on record in the Agreement and be made explicit in order to ensure compliance to laws of the country.
- IV. Any agency commission to be paid by BHEL to the Indian agent shall be in Indian currency only.
- V. Tax deduction at source is applicable to the agency commission paid to the Indian agent as per the prevailing rules.
- VI. In the absence of any agency agreement, BHEL shall not deal with any Indian agent (authorized representatives / associate / consultant, or by whatever name called) and shall deal directly with the foreign principal only for all correspondence and business purposes.
- VII. The supply and execution of the Purchase Order (including indigenous supplies/ service) shall be in the scope of the OEM/ foreign principal. The OEM/ foreign principal should submit their offer inclusive of all indigenous supplies/ services and evaluation

will be based on 'total cost to BHEL'. In case OEM/ foreign principal recommends placement of order(s) towards indigenous portion of supplies/ services on Indian supplier(s)/ agent on their behalf, the credentials/ capacity/ capability of the Indian supplier(s)/ agent to make the supplies/ services shall be checked by BHEL as per the extant guidelines of Supplier Evaluation, Approval & Review Procedure (SEARP), before opening of price bids. It will be the responsibility of the OEM/ foreign principal to get acquainted with the evaluation requirements of Indian supplier/ agent as per SEARP available on www.bhel.com OR <http://vis.bheltry.co.in/olsa>.

VIII. The responsibility for successful execution of the contract (including indigenous supplies/ services) lies with the OEM/ foreign principal. All bank guarantees to this effect shall be in the scope of the OEM/ foreign principal.

15. **Firm Price**

15.1 Unless otherwise specified in the GIT, prices quoted by the tenderer shall remain firm and fixed during the currency of the contract and not subject to variation on any account.

15.2 However, as regards taxes and duties, if any, chargeable on the goods and payable, will be paid extra as applicable on the date of dispatch.

16. **Earnest Money Deposit (EMD)**

Not applicable for this tender.

17. **Tender Validity**

17.1 If not mentioned otherwise in the GIT, the tenders shall remain valid for acceptance for a period as mentioned in the commercial terms later in this document, after the date of tender opening prescribed in the TE document. Any tender valid for a shorter period shall be treated as unresponsive and rejected.

17.2 In exceptional cases, the tenderers may be requested by the purchaser to extend the validity of their tenders up to a specified period. Such request(s) and responses thereto shall be conveyed by e-mail/fax/ telex/cable. The tenderers, who agree to extend the tender validity, are to extend the same without any change or modification of their original tender.

17.3 In case the day up to which the tenders are to remain valid falls on/ subsequently declared a holiday or closed day for the purchaser, the tender validity shall automatically be extended up to the next working day.

18. **Submission of Tenders**

Tender shall be submitted in a sealed envelope superscripted with **RFQ NO and DUE DATE** on it and same must reach our office on or before the due date and time.

19. **Late Tender**

Tender received after due date and time will be rejected.

20. Alteration and Withdrawal of Tender The tenderer, is permitted to change, edit or withdraw its bid on or before the due date & time only.

21. **Opening of Tenders**

22.1 The purchaser will open the tenders at the specified date and time and at the specified place as indicated in the NIT. In case the specified date of tender opening falls on / is subsequently declared a holiday or closed day for the purchaser, the tenders will be opened at the appointed time and place on the next working day.

22.2 Authorized representatives of the tenderers, who have submitted tenders on time may attend the tender opening provided they bring with them letters of authority from the corresponding tenderers.

22.3 Two - Tender system will be as follows. The Techno - Commercial Tenders are to be opened in the first instance, at the prescribed time and date as indicated in NIT. These Tenders shall be scrutinized and evaluated by the competent committee/ authority with reference to parameters prescribed in the TE document. During the Techno - Commercial Tender opening, the tender opening official(s) will read the salient features of the tenders like brief description of the goods offered, delivery period, Earnest Money Deposit (if any) and any other special features of the tenders, as deemed fit by the tender opening official(s). Thereafter, in the second stage, the Price Tenders of only the Techno - Commercially acceptable offers (as decided in the first stage) shall be opened for further scrutiny and evaluation on a date notified after the evaluation of the Techno – Commercial tender. The prices, special discount if any of the goods offered etc., as deemed fit by tender opening official(s) will be read out.

22. Basic Principle for Tender evaluation

23.1 Tenders will be evaluated on the basis of the terms & conditions already incorporated in the TE document, based on which tenders have been received and the terms, conditions etc. mentioned by the tenderers in their tenders.

23. Scrutiny of Tenders

24.1 The Purchaser will examine the Tenders to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed stamped and whether the Tenders are generally in order.

24. Discrepancies in Prices

- i If, in the price structure quoted for the required goods, services works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.
- ii If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- iii If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (i) and (ii) above.
- iv If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.

SECTION - III**GENERAL CONDITIONS OF CONTRACT (GCC)****25. 1. Application**

25.1 The General Conditions of Contract incorporated in this section shall be applicable for this purchase to the extent the same are not superseded by any Special Conditions of Contract prescribed anywhere in this TE document.

26. Use of contract documents and information

26.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract or any provision thereof including any specification, drawing, sample or any information furnished by or on behalf of the purchaser in connection therewith, to any person other than the person(s) employed by the supplier in the performance of the contract emanating from this TE document. Further, any such disclosure to any such employed person shall be made in confidence and only so far as necessary for the purposes of such performance for this contract.

26.2 Further, the supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC sub-clause 26.1 above except for the sole purpose of performing this contract.

26.3 Except the contract issued to the supplier, each and every other document mentioned in GCC sub-clause 26.1 above shall remain the property of the purchaser and, if advised by the purchaser, all copies of all such documents shall be returned to the purchaser on completion of the supplier's performance and obligations under this contract.

27. Intellectual Property Rights

27.1 The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.

28. Country of Origin

28.1 Kindly refer clause 6.1

28.3 The country of origin shall be specified in the Price bid format.

29. Technical Specifications and Standards

29.1 The Goods & Services to be provided by the supplier under this contract shall conform to the technical specifications and quality control parameters mentioned in Technical Specification and Quality Control Requirements as mentioned in this document.

30. Packing and Marking

30.1 The packing for the goods to be provided by the supplier should be strong and durable enough to withstand, without limitation, the entire journey during transit including transshipment (if any), rough handling, open storage etc. without any damage, deterioration etc. As and if necessary, the size, weights and volumes of the packing cases shall also take into consideration, the remoteness of the final destination of the goods and availability or

otherwise of transport and handling facilities at all points during transit up to final destination as per the contract.

30.2 The quality of packing, the manner of marking within & outside the packages and provision of accompanying documentation shall strictly comply with the requirements as provided in Technical Specifications and Quality Control Requirements. In case the packing requirements are amended due to issue of any amendment to the contract, the same shall also be taken care of by the supplier accordingly.

30.3 Packing instructions: Unless otherwise mentioned in the Technical Specification and Quality Control Requirements, the supplier shall make separate packages for each consignee (in case there is more than one consignee mentioned in the contract) and mark each package on three sides with the following with indelible paint of proper quality:

- a. Purchase Order number and date
- b. brief description of goods including quantity
- c. packing list reference number
- d. country of origin of goods
- e. consignees name and full address
- f. suppliers name and address
- g. Any other information as per Purchase order/dispatch instructions.

31. Inspection, Testing and Quality Control

31.1 Goods/Materials shall be made ready as per the specifications mentioned in the purchase order and approved quality plan shall be followed in each stage of manufacturing the ordered materials. Ready materials shall be inspected by BHEL/BHEL approved third part inspection agency (TPIA) or BHEL Customer as per the purchase order. Tenderer shall inform well in 45 days advance the readiness of the materials so that the purchaser can arrange for Inspection, Testing and Quality evaluation of the ready materials. BHEL representative from unit or Corporate Quality is authorized to carry out audits along with TPIA at vendor's works before clearing the items for dispatch.

31.2 Goods accepted by the purchaser/consignee and/or its inspector at initial inspection and in final inspection in terms of the contract shall in no way dilute purchaser's/consignee's right to reject the same later, if found deficient in terms of the warranty clause of the contract, as incorporated under GCC Clause 33.

32. Terms of Delivery

32.1 Goods shall be delivered by the supplier in accordance with the terms of delivery and as per the delivery period specified in the schedule of requirement. Please note that the time shall be the essence of the contract.

33. WARRANTY

33.1 The supplier warrants comprehensively that the goods supplied under the contract is new, unused, free from defects in material and workmanship and incorporate all recent improvements in design and materials unless prescribed otherwise by the purchaser in the contract. The supplier further warrants that the goods supplied under the contract shall have no defect arising from design, materials, manufacturing or workmanship or from any act or omission of the supplier that may develop under normal use of the supplied goods under the conditions prevailing in India

33.2 The warranty shall remain valid for the period as mentioned in the list of requirement/ General Technical specification, after the goods or any portion thereof as the case may be, have been delivered, installed and commissioned at the final destination.

- a. No conditional warranty will be acceptable.
- b. Replacement and repair will be under taken for the defective goods.

- c. Proper marking has to be made for all spares for identification like printing of installation and repair dates.

33.3 In case of any claim arising out of this warranty, the Purchaser/Consignee shall promptly notify the same in writing to the supplier within stipulated time from the date of delivery as mentioned contract. The period of the warranty will be as per G.C.C clause number 33.2 above irrespective of any other period mentioned elsewhere in the bidding documents.

33.4 Upon receipt of such notice, the supplier shall respond to take action to repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The supplier shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/goods thereafter. The penalty clause for non-rectification will be applicable as per tender conditions

33.5 In the event of any rectification of a defect or replacement of any defective goods during the warranty period, the warranty for the rectified/replaced goods shall be extended till the completion of the original warranty period of the main equipment.

33.6 If the supplier, having been notified, fails to respond to take action to repair or replace the defect(s), the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, including rejection of goods/services at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser have against the supplier

34. ASSIGNMENT

34.1 The Supplier shall not assign, either in whole or in part, its contractual duties, responsibilities and obligations to perform the contract, except with the Purchaser's prior written permission.

35. PRICES

35.1 Prices to be charged by the supplier for supply of goods and provision of services in terms of the contract shall not vary from the corresponding prices quoted by the supplier in its tender and incorporated in the contract.

36. TAXES AND DUTIES

36.1 Supplier shall be entirely responsible for all taxes, duties, fees, levies etc. incurred until delivery of the contracted goods to the purchaser.

37. TERMINATION FOR DEFAULT

37.1 The Purchaser/Consignee, without prejudice to any other contractual rights and remedies available to it (the Purchaser/Consignee), may, by written notice of [15] days of default sent to the supplier, terminate the contract in whole or in part, if the supplier fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Purchaser or if the goods/services supplied by the Supplier is defective .

37.2 In the event of the Purchaser/Consignee terminates the contract in whole or in part, pursuant to GCC sub-clause 37.1 above, the Purchaser/Consignee may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the supplier shall be liable to the Purchaser/Consignee for the extra expenditure, if any, incurred by the Purchaser/Consignee for arranging such procurement.

37.3 Unless otherwise instructed by the Purchaser/Consignee, the supplier shall continue to perform the contract to the extent not terminated.

38. FORCE MAJEURE

38.1 Notwithstanding the provisions contained in GCC clauses 37, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure

38.2 For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of , the party claiming to be affected by such event and which has caused the non – performance or delay in performance. Such events may include, but are not restricted to, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees , lockouts excluding by its management, freight embargoes and Acts of God.

38.3 If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser/Consignee in writing of such conditions and the cause thereof within twenty one days of occurrence of such event. Unless otherwise directed by the Purchaser/Consignee in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

38.4 If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.

39.5 In case due to a Force Majeure event the Purchaser/Consignee is unable to fulfil its contractual commitment and responsibility, the Purchaser/Consignee will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs.

39. TERMINATION FOR CONVENIENCE

39.1 The Purchaser/Consignee reserves the right to terminate the contract, in whole or in part for its (Purchaser's/Consignee's) convenience, by serving written notice of 15 days on the supplier at any time during the currency of the contract. The notice shall specify that the termination is for the convenience of the Purchaser/Consignee. The notice shall also indicate interalia, the extent to which the supplier's performance under the contract is terminated, and the date with effect from which such termination will become effective.

39.2 The goods and services which are complete and ready in terms of the contract for delivery and performance before the supplier's receipt of the notice of termination shall be accepted by the Purchaser/Consignee as per the contract terms, conditions and prices. For the remaining goods and services, the Purchaser/Consignee may decide at its discretion:

a) To get any portion of the balance completed and delivered at the contract terms, conditions and prices; and / or

b) To cancel the remaining portion of the goods and services and compensate the supplier by paying an agreed amount for the cost incurred by the supplier towards the remaining portion of the goods and services.

40. GOVERNING LANGUAGE

40.1 The contract shall be written in English language following the provision as contained in GIT clause 4. All correspondence and other documents pertaining to the contract, which the parties exchange, shall also be written accordingly in that language.

41. Notices

41.1 Notice, if any, relating to the contract given by one party to the other, shall be sent in writing or by cable or telex or facsimile and confirmed in writing. The procedure will also provide the sender of the notice, the proof of receipt of the notice by the receiver. The addresses of the parties for exchanging such notices will be the addresses as incorporated in the contract.

41.2 The effective date of a notice shall be either the date when delivered to the recipient or the effective date specifically mentioned in the notice, whichever is later.

42. RESOLUTION OF DISPUTES

42.1 Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference arising out of the formation, breach, termination, validity or execution of the Contract, or the respective rights and liabilities of the Parties, or, in relation to interpretation of any provision of the Contract, or, in any manner touching upon the contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the BHEL, Trichy Unit issuing the Contract.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act, 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be office of BHEL, Trichy (the place from which the contract is issued).

The cost of arbitration shall be borne as per the award of the Arbitrator.

42.2 Subject to the arbitration in terms of Clause 42.1 above, the Courts at Trichy shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.

42.3 Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

43. APPLICABLE LAW

The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force.

44. Withholding and Lien in respect of sums claimed

Whenever any claim for payment arises under the contract against the supplier the purchaser shall be entitled to withhold and also have a lien to retain such sum from the security deposit or sum of money arising out of under any other contract made by the supplier with the purchaser, pending finalization or adjudication of any such claim. It is an agreed term of the contract that the sum of money so withheld or retained under the lien referred to above, by the purchaser, will be kept withheld or retained by the Purchaser till the claim arising about of or under the contract is determined by the Arbitrator or by the competent court as the case may be, and the supplier will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention.

45. Replacement of defective work or material

If during the progress of the work, the Purchaser or his representative shall decide and notify in writing to the contractor that the contractor has executed any unsound or imperfect work or has supplied any plant or material inferior in quantity or quality to those specified, the contractor on defects or deficiency shall, at his own expense, within fifteen days' of his receiving the notice, or otherwise within such time as may be reasonably necessary for making in good, proceed to alter, reconstruct, or remove such work, or supply fresh materials up to the standard of the particulars and in case the Contractor shall fail to do so, the Purchaser may, on giving the Contractor fifteen days' notice in writing of his intention to do so, proceed

to remove the work or materials complained of, and at the cost of the Contractor perform all such work or supply all such materials, provided that nothing in this clause shall be deemed to deprive the purchaser of or affect, any rights under the contract which he may otherwise have in respect of such defects or deficiencies. BHEL reserves the discretion to levy storage charges for material not lifted within the reasonable period.

46. Rectification of Defects

Any defects which in the opinion of the Inspector, who is an official of BHEL or an Inspection Agency appointed by BHEL, may be apparent after erection and testing as mentioned in the specification, shall be rectified by the Contractor to the satisfaction of the Inspector at the expense of the Contractor and it shall be in his power to direct that further test shall be made at the expense of the Contractor after the said defects have been rectified to the satisfaction of the Inspector. If, after a reasonable time for rectifying defects shall have been allowed to the contractor the Inspector shall be of opinion that the defect cannot satisfactorily be rectified, and that the material/component/machinery supplied is unsuited for or incapable of performing the work required, the Purchaser may, if he shall think fit (without prejudice, and in addition to any other remedy he may have in the premises) determine this contract, and thereupon all money paid to the Contractor under the contract in respect thereof shall upon demand be repaid by them to the purchaser, and they shall be liable for all damages heretofore provided for non-fulfilment of contract

47. SECRECY

The contractor shall take all reasonable steps necessary to ensure that all persons employed in any work in connection with the contract, have full knowledge of the Official Secrets Act and any Regulations framed thereunder and shall comply with the terms and conditions stipulated in the Non-Disclosure Agreement Any information obtained in the course of the execution of the contract by the contractor, his servants or Agents or any person so employed, as to any matter whatsoever; which would or might be directly or indirectly of use to any competitor of BHEL or enemy of India must be treated as Secret and shall not at any time be communicated to any person. Any breach of the aforesaid condition shall entitle BHEL to cancel the contract and to purchase or authorize the purchase of the materials/goods at the risk and cost of the contractor invoking risk purchase clause.

48. Fraud Prevention

The bidder along with its associate / collaborators / sub-contractors / sub-vendors/consultants/service providers shall strictly adhere to BHEL Fraud prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

49. Document submission & Signing

Documents submitted with the offer shall be signed and stamped in each page by authorized representative of the bidder. Documents not signed & stamped by the authorized signatory of the bidder shall not be accepted and considered for registration / evaluation of the bid etc and the same will be rejected.

50. Vendor Works/Location

Bidders/Vendors having multiple works/locations shall indicate in the technical bid the location from where there are going execute the order if placed, and the said works/location must be approved by BHEL/BHEL 's customer as may be the case

SECTION – IV**SPECIAL CONDITIONS OF CONTRACT (SCC)****51. SPECIAL CLAUSES**

- i Any Purchase Order resulting from this enquiry shall be governed by these general terms and conditions listed above (1 to 50) and special terms and conditions, if any, along with this enquiry of Bharat Heavy Electricals Limited, BHEL HPBP, Trichy-620014 (hereinafter referred to as BHEL Trichy).
- ii Any of the terms and conditions not acceptable to supplier, shall be explicitly mentioned in the quotation. Otherwise, it will be treated as that all terms and conditions of this enquiry are acceptable.
- iii If counter terms and conditions are offered by supplier, BHEL Trichy shall not be governed by such terms and conditions, unless it is agreed and incorporated in the Purchase Order of BHEL Trichy.
- iv Any deviation to the terms and conditions not mentioned in the quotation by supplier in response to this enquiry will not be considered, if put forth subsequently or after issue of order, unless clarification is sought for by BHEL TRICHY and agreed upon in the Purchase Order of BHEL TRICHY.
- v BHEL TRICHY reserves the right to adopt Reverse Auction for the enquiry sent, at its discretion.
- vi BHEL TRICHY shall be at liberty to cancel the tender at any time, before ordering, without assigning any reason. BHEL TRICHY shall be at liberty to place the order for only few package / single package / All packages to respective L1 bidder.
- vii The correspondence exchanged against the tender from both tenderer and BHEL through email are considered as valid document legally though it is not signed. It is treated as valid confirmations made on behalf of the respective company and very much comes under the legal ambit of the business transaction and hence it is binding on both the parties to the business.
- viii Banned Firms - The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com.
- ix Bidders participating in the tender should declare in their technical bid that whether they have been black-listed / kept on hold for a specified period / given Business holiday for a specified period by any Public sector undertaking or Government departments. The reasons for such action with details and the current status of such hold shall be clearly furnished to BHEL. If no such details are mentioned in the offer then it will be construed that the subject bidder is not under any such hold. But at a later date if it comes to the notice of BHEL about any such hold under enforcement on the subject bidder, BHEL will have every right to reject the offer of such vendors at any point of time and also under any stage of the finalization of the subject tender irrespective of the status of the subject bidder in that tender. Such bidders will not be permitted to participate in the further tender proceedings and will be communicated suitably. They will not be also considered for any ongoing tenders even if participated till the hold is officially lifted and confirmed in writing.
- x Risk purchase: - If the supplier fails to deliver the goods within the delivery specified in the Purchase Order, BHEL will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part

which the supplier has failed to deliver or dispatch within the delivery period mentioned in the Purchase Order. Any extra cost incurred in the procurement of the material from alternative source will be recovered from the Security Deposit / Bank Guarantee /Pending bills of the defaulting vendor.

- xi The court of the place from where the purchase order is issued shall alone have jurisdiction to decide any dispute arising out of or in connection with the purchase order.
- xii Cartel Formation: - All the firms should desist from forming cartel as the practice is prohibited under Section 3(3) (a) & (d) of the competition Act 2002. If any such instance is observed during this tender will attract disciplinary action as per BHEL policies.
- xiii Tender Evaluation Method

Tender will be operated in two part system basis. All tenders are requested to submit the Techno commercial unpriced bid and Price bid in separate sealed cover.

After valuation of technical offer inline to tender specification, data sheet, drawing, Pre-qualification criteria and other terms & conditions of tender, price bid technically qualified vendor offer will be opened.

Each project requirement will be considered as package for evaluation and ordering of L1 vendor.

XXXXXXXXXX

SECTION – V**List of Requirements**

Sr. No	Item	Qty (Nos)
Package 1	Design , Engineering and Supply of Selective Catalytic Reduction System for DN-101 (1 x800MW) Project	1 Set
Package 2	Design , Engineering and Supply of Selective Catalytic Reduction System for DN-102 (1 x800MW) Project	1 Set
Package 3	Design , Engineering and Supply of Selective Catalytic Reduction System for DN-103 (1 x 800 MW) Project	1 Set
Package 4	Design , Engineering and Supply of Selective Catalytic Reduction System for DN-104 (2 x 800MW) Project	1 Set

SECTION – VI**Technical and Quality Specifications**

Sr. No	Item	Qty (Nos)
Package 1	Design, Engineering and Supply of Selective Catalytic Reduction System for DN101 (1 x800MW) Project. Applicable Technical Documents 1. Specification: TDN: SCR: 001 Rev 00 page 1 to 32. (Part-I & Part-II) 2. Specification: TDN:SCR:001 Rev 00 Page 1 to 86 (Part-III) 3. Drawings : 1-SR-DNX-00001 to 00005 Rev 00 4. SCR Arrangement Drawing : 0-SK-SCR-00001 Rev 00 5. List of mandatory Spares for SCR system 6. Division of work: TDN: DOW /Rev 00.	1 Set
Package 2	Design , Engineering and Supply of Selective Catalytic Reduction System for DN-102 (1 x800MW) Project Applicable Technical Documents 1. Specification: TDN: SCR: 001 Rev 00 page 1 to 32. (Part-I & Part-II) 2. Specification: TDN:SCR:001 Rev 00 Page 1 to 87 (Part-III) 3. Drawings : 1-SR-DNX-00001 to 00005 Rev 00 4. SCR Arrangement Drawing : 0-SK-SCR-00002 Rev 00 5. List of mandatory Spares for SCR system 6. Division of work: TDN: DOW /Rev 00.	1 Set

Package 3	Design , Engineering and Supply of Selective Catalytic Reduction System for DN-103 (1 x 800 MW) Project Applicable Technical Documents 1. Specification: TDN: SCR: 001 Rev 00 page 1 to 32. (Part-I & Part-II) 2. Specification: TDN:SCR:001 Rev 00 Page 1 to 110 (Part-III) 3. Drawings : 1-SR-DNX-00002 to 00005 Rev 00 4. SCR Arrangement Drawing : 0-SK-SCR-00003 Rev 00 5. List of mandatory Spares for SCR system 6. Division of work: TDN: DOW /Rev 00.	1 Set
Package 4	Design , Engineering and Supply of Selective Catalytic Reduction System for DN-104 (2x 800MW) Project Applicable Technical Documents 1. Specification: TDN: SCR: 001 Rev 00 page 1 to 32. (Part-I & Part-II) 2. Specification: TDN:SCR:001 Rev 00 Page 1 to 108 (Part-III) 3. Drawings : 1-SR-DNX-00001 to 00006 Rev 00 4. SCR Arrangement Drawing : 0-SK-SCR-00004 Rev 00 5. List of mandatory Spares for SCR system 6. Division of work: TDN: DOW /Rev 00.	1 Set

SECTION – VII

Tender Form

(to be submitted on company letterhead)

To

GM/MM

BHEL Trichy

Ref. Your REF NO: ----- dated -----

We, the undersigned have examined the above mentioned TE document, including amendment/corrigendum No. _____, dated _____ (if any), the receipt of which is hereby confirmed.

We now offer to supply and deliver SCR system in conformity with your above referred document for the sum as shown in the price schedules attached herewith and made part of this tender. If our tender is accepted, we undertake to supply the goods and perform the services as mentioned above, in accordance with the delivery schedule specified in the List of Requirements. We further confirm that, if our tender is accepted, we shall provide you with a performance guarantee or warranty certificate in an acceptable form as specified in tender documents.

We agree to keep our tender valid for acceptance as required in the GIT clause 17, read with modification, if any as per clause 9 of GIT or for subsequently extended period, if any, agreed to by us. We also accordingly confirm to abide by this tender up to the aforesaid period and this tender may be accepted any time before the expiry of the aforesaid period.

We further confirm that, until a formal contract is executed, this tender read with your written acceptance thereof within the aforesaid period shall constitute a binding contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive against your above-referred tender enquiry. We confirm that we do not stand deregistered/banned/blacklisted by any (GOI) Govt. Authorities/PSUs.

We confirm that we fully agree to the terms and conditions specified in above mentioned TE document, including amendment/ corrigendum if any

(Signature with date)

(Name and designation)

Enquiry No:

Item: Selective Catalytic Reduction System

SECTION – VIII (PRICE BID FORMAT)

Sl.No	Item Descriptions	Qty	Unit Rates	Total Value
01	Design, Engineering and supply of Selective Catalytic Reduction System for DN-101 (1 x800MW) Project.	1 Set		
02	Mandatory Spares	1 Set		
Total Exworks Value				A
Packing and Forwarding Charges				B
Total FOB Value				C=A+B
Sea Freight Charges				D
Total CFR Chennai Value				E=C+D
Insurance Charges if any				F
Total CIF Value				G=E+F
Landing Charges @ 1% on CIF Value / if applicable				H
Assessable Value				I=H+G
Custom Duty on Assessable Value				J
Incidental Charges on Total FOB Value if any				K
Total Cost to BHEL for SCR System @ Chennai Sea Port				L=G+J+K
Inland Transportation from Chennai Sea Port to Project Site –DN-101 @				M
Erection and Commission Supervision Charges as per our Tender Specification (Lumpsum)				N
Training Charges as per our Tender Specification (Lumpsum)				O
TOTAL COST TO BHEL				L+M+N+O

- Please mention the FOB Port Name
- One copy of this format to be attached with technical bid without prices
- Details BOM for SCR along with Items descriptions , Qty and Unit rates to be provided for complete system
- Unit Rates of Mandatory Spares are to be provided for the all item listed in tender documents. Items SL No: 1, 2, and 5 of Mandatory spares list only will be considered for price evaluation for arriving L1.
- @ Distance from Chennai Sea Port to Project Site –DN-101 : 750 Kms

Vendor Sign & Seal

Enquiry No:

Item: Selective Catalytic Reduction System

SECTION – VIII (PRICE BID FORMAT)

Sl.No	Item Descriptions	Qty	Unit Rates	Total Value
01	Design, Engineering and supply of Selective Catalytic Reduction System for DN-102 (1 x800MW) Project.	1 Set		
02	Mandatory Spares	1 Set		
Total Exworks Value				A
Packing and Forwarding Charges				B
Total FOB Value				C=A+B
Sea Freight Charges				D
Total CFR Chennai Value				E=C+D
Insurance Charges if any				F
Total CIF Value				G=E+F
Landing Charges @ 1% on CIF Value / if applicable				H
Assessable Value				I=H+G
Custom Duty on Assessable Value				J
Incidental Charges on Total FOB Value if any				K
Total Cost to BHEL for SCR System @ Chennai Sea Port				L=G+J+K
Inland Transportation from Chennai Sea Port to Project Site –DN-102 @				M
Erection and Commission Supervision Charges as per our Tender Specification (Lumpsum)				N
Training Charges as per our Tender Specification (Lumpsum)				O
TOTAL COST TO BHEL				L+M+N+O

- Please mention the FOB Port Name
- One copy of this format to be attached with technical bid without prices
- Details BOM for SCR along with Items descriptions , Qty and Unit rates to be provided for complete system
- Unit Rates of Mandatory Spares are to be provided for the all item listed in tender documents. Items SL No: 1, 2, and 5 of Mandatory spares list only will be considered for price evaluation for arriving L1.
- @ Distance from Chennai Sea Port to Project Site –DN-102 : 190 Kms

Vendor Sign & Seal

Enquiry No:

Item: Selective Catalytic Reduction System

SECTION – VIII (PRICE BID FORMAT)

Sl.No	Item Descriptions	Qty	Unit Rates	Total Value
01	Design, Engineering and supply of Selective Catalytic Reduction System for DN-103 (1 x800MW) Project.	1 Set		
02	Mandatory Spares	1 Set		
Total Exworks Value				A
Packing and Forwarding Charges				B
Total FOB Value				C=A+B
Sea Freight Charges				D
Total CFR Chennai Value				E=C+D
Insurance Charges if any				F
Total CIF Value				G=E+F
Landing Charges @ 1% on CIF Value / if applicable				H
Assessable Value				I=H+G
Custom Duty on Assessable Value				J
Incidental Charges on Total FOB Value if any				K
Total Cost to BHEL for SCR System @ Chennai Sea Port				L=G+J+K
Inland Transportation from Chennai Sea Port to Project Site –DN-103 @				M
Erection and Commission Supervision Charges as per our Tender Specification (Lumpsum)				N
Training Charges as per our Tender Specification (Lumpsum)				O
TOTAL COST TO BHEL				L+M+N+O

- Please mention the FOB Port Name
- One copy of this format to be attached with technical bid without prices
- Details BOM for SCR along with Items descriptions , Qty and Unit rates to be provided for complete system
- Unit Rates of Mandatory Spares are to be provided for the all item listed in tender documents. Items SL No: 1, 2, and 5 of Mandatory spares list only will be considered for price evaluation for arriving L1.
- @ Distance from Chennai Sea Port to Project Site –DN-103 : 40 Kms

Vendor Sign & Seal

Enquiry No:

Item: Selective Catalytic Reduction System

SECTION – VIII (PRICE BID FORMAT)

Sl.No	Item Descriptions	Qty	Unit Rates	Total Value
01	Design, Engineering and supply of Selective Catalytic Reduction System for DN-104 (2x800MW) Project.	1 Set		
02	Mandatory Spares	1 Set		
Total Exworks Value				A
Packing and Forwarding Charges				B
Total FOB Value				C=A+B
Sea Freight Charges				D
Total CFR Chennai Value				E=C+D
Insurance Charges if any				F
Total CIF Value				G=E+F
Landing Charges @ 1% on CIF Value / if applicable				H
Assessable Value				I=H+G
Custom Duty on Assessable Value				J
Incidental Charges on Total FOB Value if any				K
Total Cost to BHEL for SCR System @ Chennai Sea Port				L=G+J+K
Inland Transportation from Chennai Sea Port to Project Site –DN-104 @				M
Erection and Commission Supervision Charges as per our Tender Specification (Lumpsum)				N
Training Charges as per our Tender Specification (Lumpsum)				O
TOTAL COST TO BHEL				L+M+N+O

- Please mention the FOB Port Name
- One copy of this format to be attached with technical bid without prices
- Details BOM for SCR along with Items descriptions , Qty and Unit rates to be provided for complete system
- Unit Rates of Mandatory Spares are to be provided for the all item listed in tender documents. Items SL No: 1, 2, and 5 of Mandatory spares list only will be considered for price evaluation for arriving L1.
- @ Distance from Chennai Sea Port to Project Site –DN-104 : 500 Kms

Vendor Sign & Seal

SECTION – IX**Bank Guarantee Format for Performance (PBG)**

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT AND THE EXPIRY DATE OF BG MUST BE AFTER 60 DAYS FROM THE DATE OF COMPLETION OF WARRANTY PERIOD)

In accordance of M/s. Bharat Heavy Electricals Limited (A Government of India undertaking, a company incorporated under the Companies Act 1956 having its Registered Office at “BHEL House”, SIRI Fort, New Delhi 110 049) through its High Pressure Boiler

Plant Division located at Tiruverumbur, Tiruchirapalli- 620 014 (hereinafter called ‘the Company’) having entered into a contract withhereinafter called ‘ the said contractor ‘ which term includes ‘suppliers’ for the purpose of this Bond and under the terms and conditions of the contract No..... Dt Between BHEL, Trichy and as per the contract, the contractor / supplier is to furnish a performance Bank guarantee for Rs. for the due performance of the equipment to be supplied under the above referred contract and for the fulfillment of all the terms and conditions of the contract, We(indicate the name of the bank) (herein after referred to as the bank) at the request of (Contractor(s)) do here by undertake to pay the company an amount not exceeding Rs.....against any loss or damage caused to or suffered or would be caused to or suffered by the company by reason of any breach by the said contractor (s) of any of the terms and conditions contained in the said agreement.

2. We(indicate the name of the bank with full address), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s) of any of the terms and conditions contained in the said Agreement or by the reason of the contractor(s) ‘failure to perform’ the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs._____.

3. We undertake to pay unconditionally to the Company any money so demanded notwithstanding any dispute(s) raised by the Contractor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or before any other authority relating thereto our liability under this present being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the arbitration proceedings or by any other authority. The payment so made by us under this Bond shall be a valid discharge of liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We.....(indicate the name of Bank), further agree that the guarantee herein contained shall remain in full force and effect during the period that would

be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till _____ Office / Department/ Division of the Company certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. (I) Unless a demand or claim under this guarantee is made on us in writing on or before the _____ we shall be discharged from all the liability under this guarantee thereafter. But where such claim or demand has been preferred by the Company with the Bank before the expiry of the said date, the claim shall be enforceable notwithstanding the fact that the said enforcement is effected after the said date.

(ii) For the purpose of this clause, any letter making demand on the Bank by M/s. BHEL dispatched by Registered Post with Ack.Due or by Telegram or by any Electronic media addressed to the above mentioned address of the Bank shall be deemed to be the claim / demand in writing referred to above irrespective of the fact as to whether and when the said letter reaches the Bank, as also any letter containing the said demand or claim is lodged with the bank personally.

6. We(indicate the name of Bank), further agree with the company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the company or any indulgence by the company to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating would, but for this provision, have effect of not so relieving us.

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

8. It shall not be necessary for the company to proceed against the contractor before proceeding against the guarantor-bank and the guarantee herein contained shall be enforceable against them notwithstanding any security, which the company may have obtained or obtain from the Contractor shall, at the time when proceedings are taken against the guarantor hereunder be outstanding or unrealised.

9. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Tiruchirapalli.

10. The guarantor hereby declare that it has power to execute this guarantee and the executant has full powers to do so on its behalf under the proper authorities granted to him/them by the guarantor.

11. We(indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing.

In witness whereof we....., (indicate the name of Bank) have hereunto setout Bank Seal the _____ day _____ month 200

BANK E-MAIL ID:

BANK PHONE NO.

BANK FAX NO:

SECTION – X**MAJOR TERMS AND CONDITIONS, LOADING CRITERIA**

1	Payment Terms (IMPORT VENDOR) PART-1. After supply of SCR system to project site, 75% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account. PART-II After receipt of Materials at BHEL project site, 10% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account. PART-III Successful completion of SCR system along with protocol from project for completion of SCR system , 5% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account. PART-IV After provenness of Contact requirement, 10% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.
2	Payment Terms Loading (IMPORT VENDOR) If any deviation on payments will attract landing on basis Exworks value. - In the case of Usance LCs the loading will be considered @ 1.5% on the offered Basis Value. - For LC at sight the loading will be considered @ 3.5% on the offered Basis Value - Any deviation on % of payment (PART-I to IV) is not acceptable to BHEL.
3	Payment Terms (INDIAN VENDOR) PART-1. After supply of SCR system to project site, 75% payment after 45 days from the date of receipt of documents as specified in PO PART-II After receipt of Materials at BHEL project site, 10% payment after 45 days from the date of receipt of documents specified in PO. PART-III

	Successful completion of SCR system along with protocol from project for completion of SCR system, 5% payment after 45 days from the date of receipt of documents specified in PO. PART-IV After provenness of Contact requirement, 10% payment after 45 days from the date of receipt of documents specified in PO		
4	Payment Terms Loading (INDIAN VENDOR) If any deviation on payments will attract landing on basis Exworks value. a. LC will not be operated for Indigenous vendors. Offers with payment terms as LC from indigenous vendors will be rejected. b. Payment through bank is not acceptable. If still demanded by vendor, loading will be 5% on the offered Basis material value. c. Any deviation on % of payment (PART-I to IV) is not acceptable to BHEL		
Loading Factor for Bid Evaluation			
5	For increase in ammonia consumption rate (in Kg/hr/unit, 99.5wt%) at 100% TMCR load	US \$ 53,682 (US Dollar Fifty Three Thousand Six Hundred Eighty Two only) per 1 kg/hr increase in Ammonia Consumption Rate.	
Penalty For Applicable Guarantee			
Guarantee		Rate of Liquidated Damages (LD)	Acceptable Shortfall with LD
SCR Efficiency for Control of NOx Emission For shortfall in SCR efficiency for control of NOx emission in percentage point under condition stipulated in SCR Selection on Technical Specification		US \$ 136,643(US Dollar One hundred thirty six thousand six hundred forty three only) for every 1% point shortfall in SCR efficiency from the guaranteed value	(-) 10% points from the Guaranteed value
Shortfall in Catalyst Life For shortfall in catalyst life in hrs under condition stipulated in SCR Selection on Technical Specification		US \$ 40,976(US Dollar Forty thousand nine hundred seventy six only) for every 100 hours shortfall in catalyst life from the guaranteed value	(-) 15% from the guaranteed value
Ammonia Consumption Rate For increase in ammonia consumption rate (in Kg/hr/unit, 99.5wt %) at 100% TMCR measured during the test for SCR efficiency for control of NOx emission.		US \$ 74,521(US Dollar Seventy four thousand five hundred twenty one only) for every 1 Kg/hr increase in ammonia consumption rate from the guaranteed value	(+) 10% of the guaranteed ammonia consumption

SECTION – XI
COMMERCIAL TERMS AND CONDITIONS

Sl.no	Details
1	<u>Offer Validity:</u> 180 days minimum from Techno commercial bid opening (Part-1)
2	<u>Delivery Requirement:</u> SCR system shall be Designed, Engineering, and Supplied within 12 Months from Purchase order date along Techno commercial clearance from BHEL.
3	<u>Performance Bank Guarantee</u> BHEL require a performance Bank Guarantee to a value of 10% of Purchase Order value covering the guarantee period as mentioned in technical specification. The PBG shall be in BHEL format (Format attached) which is to be opened in any one of the first class India banks. All banks charges shall be to vendor account only. If still vendor offered any deviation on PBG leads to rejection of offer.
4	<u>Guarantee / Warranty Period:</u> No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period leads to rejection of offer
5	<u>Liquidated damages:</u> Delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in the time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional LD at the rate of ½% of the value of goods/ Service for each week of delay subject to a maximum of 10% of the total ordered Purchase Order value on part there off.
6	<u>Loading Criteria for Liquidated damages</u> LD / Penalty: Any deviation on BHEL LD / Penalty clause, loading (Basic material Value) will be applied to the extent to which it is not agreed by the bidder.

Vendor Seal & Sign

SECTION – XII

Supplier Registration Form

Supplier should submit the filled in supplier registration forms (SRF) available in the BHEL website - <https://suppliers.bheltry.co.in> and the other required documents called for in the SRF. Application number of submitted SRF to be quoted in the offer submitted.

ii. The hard copy of the submitted SRF shall be submitted to SDC dept. before enquiry due date without fail. The same shall be scrutinized as per BHEL evaluation procedures.

iii. The contact details of SDC are as below:

Ms. Nalini Subramanian,
SDC / MM,
4th Floor, Building 24,
BHEL, Trichy – 620014
Ph. No.: 0431-2577301, 0431-2574215
nalini@bheltry.co.in
ebi@bheltry.co.in

SECTION – XIII**MSE clause****Clause: Special Provisions for Micro and Small Enterprises (MSE):**

- i. If L1 vendor is an MSE vendor entire project package will be ordered on L1 vendor.
- ii. If a Non MSE vendor is coming as L1, then L1 prices will be counteroffered on MSE vendor who is quoting price within the price band L1+15% and if they are agreeing purchase order will be awarded for full/complete supply of total tendered value to MSE.
- iii. If more than one MSE vendors are available in the L1+15% price band then lowest of the MSE vendor will be selected for counteroffering. If lowest MSE vendor is not accepting it will be counteroffered to the next MSE vendor in the price band and so on.
- iv. Finally if none of the MSE vendor in the price band is not accepting it will be ordered on L1 non MSE vendor.

MSE suppliers can avail the intended benefits only if they submit along with the offer, attested/notarized copies of either

1. EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or
2. Valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limits as per the act for relevant status (MICRO or SMALL) where the deemed validity of EM II is over.

Date to be reckoned for determining the deemed validity will be the last date of technical bid submission (Part 1 in case of two part bid).

Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry, in case of any deficiency in the above required documents or in case the documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal even if submitted earlier.

Documents should be notarized or attested by a Gazetted officer.

Definitions of MSEs owned by SC/ST is under:

- In case of proprietorship firm, proprietor must be SC/ST.
- In case of partnership firm, the SC/ST partners must be holding at least 51% shares in the unit.
- In case of private limited companies, at least 51% share must be held by SC/ST promoters.

Authorised Offices to Issue SC/ST certificate.

The caste/Tribe/Community certificate issued by the following authorities in the prescribed form for SCs/STs can be considered.

- District Magistrate / Additional District Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / 1st class stipendiary magistrate / Sub divisional Magistrate / Taulka Magistrate / Executive magistrate / Extra Assistant commissioner.
- Chief Presidency magistrate / Additional chief presidency magistrate/Presidency magistrate.
- Revenue Officer not below the rank of thasildar.
- Sub-Divisional officer of the area where the individual and / or his family normally resides.

To avail the benefits of MSE under SC/ST category, the related documents as stated above should be submitted along with tender documents.

Certificate by Chartered Accountant on letter head

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
..... is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part-II) dtd:.....,
Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:
Rs.....Lacs

(Strike off whichever is not applicable)

The above investment of Rs.....Lacs is within permissible limit of Rs.....Lacs forMicro / Small (Strike off which is not applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (Strike off which is not applicable) and the date of graduation of such enterprise from its original category is (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

SECTION – XIV

THIRD PARTY NON-DISCLOSURE AGREEMENT

I, _____, on behalf of the _____ (Name of Company), acknowledge that the information received or generated, directly or indirectly, while working with BHEL, Trichy on contract is confidential and that the nature of the business of the BHEL, Trichy is such that the following conditions are reasonable, and therefore:

I warrant and agree as follows:

I, or any other personnel employed or engaged by our company, agree not to disclose, directly or indirectly, any information related to the BHEL, Trichy Without restricting the generality of the foregoing, it is agreed that we will not disclose such information consisting but not necessarily limited to:

- Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques, inventions, computer programs/data/configuration and research projects.
- Business information: Customer lists, project schedules, pricing data, estimates, financial or marketing data,

On conclusion of contract, I, or any other personnel employed or engaged by our company shall return to BHEL, Trichy all documents and property of BHEL, Trichy, including: drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other materials and all copies thereof relating in any way to BHEL, Trichy's business, or in any way obtained by me during the course of contract. I further agree that I, or any others employed or engaged by our company shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidence shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL, Trichy and are reasonable given the nature of the business carried on by the BHEL, Trichy I agree that this agreement shall be governed by and construed in accordance with the laws of country.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Place:- _____

Date:- _____

Name

Company

Signature

SECTION – XV**Pre - Qualification Requirements (PQR)****1. Selective Catalytic Reduction (SCR) System Manufacturer/Supplier:**

The Bidder/Bidder's sub-vendor should have designed, engineered, manufactured/got manufactured/supplied, erected/supervised erection and commissioned/supervised commissioning of at least one (1) no. of ammonia based SCR System, consisting of SCR reactor & Ammonia injection system, with NO_x reduction efficiency of not less than 75%, operating in conjunction with pulverized coal fired steam generator for 250MW or higher capacity unit or having minimum 810T/hr steaming capacity. Further, such SCR System should have been in successful operation for a period not less than one (1) year.

2. Provenness criteria for critical equipment(s) and bought out items for SCR system**2.1 Ammonia handling and storage system for SCR**

The Bidder/Bidder's sub-vendor should have designed, engineered, manufactured/ got manufactured/ supplied, erected/ supervised erection and commissioned / supervised commissioning of at least one (1) no. of anhydrous ammonia storage and handling system for SCR system operating in conjunction with coal fired steam generating units, rated for a minimum of 250MW unit size or minimum 810T/hr steaming capacity. The above System should have been in successful operation for a period not less than one (1) year.

2.2 Catalyst for SCR system

Catalyst for SCR system shall be supplied only from such catalyst manufacturer who has designed, engineered, manufactured, supplied type of catalyst quoted/proposed for SCR system which is operating in conjunction with pulverised coal fired steam generator for 250MW or higher capacity unit or with steam generator having minimum 810T/hr steaming capacity. Further, such type of catalyst in a SCR System should have been in successful operation for a period of at least 16000hrs without any replacement during this period.

NOTE:

The Bidder/ Bidder's sub-vendor shall also be considered qualified, in case the award for executing the reference works (SCR system) has been received by the Bidder/ Bidder's sub-vendor either directly from owner of plant or any other intermediary organization. However, a certificate from such owner of plant or any other intermediary organization shall be required to

be furnished by the Bidder/ its sub-vendor in support of Bidder/ Bidder's sub vendor claim of meeting the qualification requirement as per Clause 1 above. Further, certificate from owner of the plant shall also be furnished by the Bidder/ Bidder's sub-vendor for the successful operation of the SCR System as specified at clause above, whichever is applicable.

Whenever the term 'coal fired' is appearing above, "Coal" shall be deemed to also include bituminous coal/brown coal/lignite.

XXXXXXXXXX

DOW BETWEEN BHEL AND VENDOR FOR C&I AND ELECTRICALS FOR THE SCR SYSTEM

S No.	Description	BASIC ENGINEERING	DETAILED ENGINEERING	SUPPLY	ERECTION	COMMISSIONING	Notes
1	Controls & Instrumentation						
1.01	Field gauges (For pressure, differential pressure, temperature, level etc.)	*	*	*	BHEL	BHEL	* By respective main equipment/pipeline supplier
1.02	Remote field instruments/transmitters (For pressure, differential pressure, temperature, level, flow etc), temperature transmitters, flow meters, flow elements	*	*	*	BHEL	BHEL	* By respective main equipment/pipeline supplier
1.03	Analysers required for SCR system (NOX at SCR inlet and outlet, O2 at SCR inlet and outlet, SOX at SCR inlet and outlet, NH3 at SCR outlet) and other special instruments (if any)	Vendor	Vendor	Vendor	Vendor	Vendor	Minimum requirement is indicated in P&ID. Other analysers as required by the process shall be included. Vendor to note that all consumables shall be sent to site only at the time of commissioning.
1.04	Local control panels	Vendor	Vendor	Vendor	Vendor	Vendor	
1.05	Ammonia leak detector system	Vendor	Vendor	Vendor	Vendor	Vendor	
1.06	Pneumatic/Electric actuators required for regulating and open/close valves/dampers	*	*	*	BHEL	BHEL	* By respective agency supplying the valves/dampers
1.07	Compressors and associated controls	Vendor	Vendor	Vendor	Vendor	Vendor	
1.08	SCR DCS /Remote PLC system (including I/Os, controllers, etc.) for remote control operation and monitoring	Vendor	BHEL	BHEL	BHEL	BHEL	Control Schematics / Logics by Vendor
1.09	Instrumentation and control cables from Field equipments/instruments to Local JB's/Local control panels	*	*	*	BHEL	BHEL	* By respective field instrument/equipment supplier
1.10	Field junction boxes/marshalling cabinets	*	*	*	BHEL	BHEL	* By respective field instrument/equipment supplier

Shil

1. ELABORATING ANY CHANGES

5/10/2014

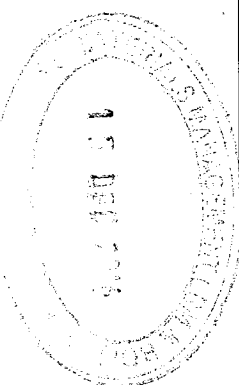
Controls & Instrumentation / FB
PREPARED
5/10/2014 - 020 014

V.M. Selvaraj

V.M. SELVARAJ, Tech., M.I.E.,

Senior Manager

Controls & Instrumentation / FB
BHEL / Tiruchy - 620 014
CHECKED



DOW BETWEEN BHEL AND VENDOR FOR C&I AND ELECTRICALS FOR THE SCR SYSTEM

S No.	Description	BASIC ENGINEERING	DETAILED ENGINEERING	SUPPLY	ERECTION	COMMISSIONING	Notes
1.11	Instrumentation and control cables from Local JB's/Local control panels to SCR DCS/Remote PLC system etc	BHEL	BHEL	BHEL	BHEL	BHEL	* Signal Exchange list & List of electric loads by respective equipment supplier.
1.12	Instrumentation and control cables from SCR DCS/Remote PLC system/Local control panels to switchgears/station C&I	*	BHEL	BHEL	BHEL	BHEL	* By the Respective Field equipment supplier
1.13	Operator and Engineering Station, HMI, Laptops, Printers, Data communication system (including Bus system, soft links bet. PLCs, LAN etc.), Telecom, Control room equipment - furniture	BHEL	BHEL	BHEL	BHEL	BHEL	Part of Main DCS
1.14	Vibration monitoring system for HT drives (if applicable)	Vendor	BHEL	BHEL	BHEL	BHEL	
1.15	Instrument installation materials (Impulse pipings, fittings, root valves etc.)	*	*	*	BHEL	BHEL	* By Respective Field instrument supplier
1.16	Local instrument enclosure(LIE) and Local instrument racks(LIR)	*	*	*	BHEL	BHEL	* By Respective Field instrument supplier
2	Electricals						
2.01	LT/HT motors and drives	*	*	*	BHEL	BHEL	* By respective equipment supplier
2.02	LT/HT switchgears	BHEL	BHEL	BHEL	BHEL	BHEL	Load data to be provided by vendor
2.03	Emergency Power Control Center (MCC)/ Distribution boards	BHEL	BHEL	BHEL	BHEL	BHEL	Load data to be provided by vendor

Shil

1. MESSRS JAY CHANDRA

Engineer

Controls & Instrumentation / FB
BHEL, Tiruchy - 620 014

V.M. Selvaraj

V.M. SELVARAJ, M.Tech., M.I.E.,
Senior Manager
Controls & Instrumentation / FB
BHEL / Tiruchy - 620 014

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DOW BETWEEN BHEL AND VENDOR FOR C&I AND ELECTRICALS FOR THE SCR SYSTEM

S No.	Description	BASIC ENGINEERING	DETAILED ENGINEERING	SUPPLY	ERECTION	COMMISSIONING	Notes
2.04	Complete lighting system including lighting distribution boards, lighting equipments and accessories	BHEL	BHEL	BHEL	BHEL	BHEL	Area layout Dwg. To be provided by vendor
2.05	Complete 220VDC system including distribution boards	BHEL	BHEL	BHEL	BHEL	BHEL	Load data to be provided by vendor
2.06	LT/HT power cables from LT/HT switchgear/Emergency MCC/ Lighting DBs/220V DCDB/Other DBs to Field equipments/drives/local control panels	BHEL	BHEL	BHEL	BHEL	BHEL	
2.07	LT/HT power cables from Local control panels to Field equipments/drives (if applicable)	*	*	*	BHEL	BHEL	* By respective agency supplying the equipment
2.08	Local push button boxes/ Emergency push buttons for LT/HT drives	BHEL	BHEL	BHEL	BHEL	BHEL	
2.09	UPS System and Distribution board	*	BHEL	BHEL	BHEL	BHEL	* UPS Load data to be provided by vendor
2.10	UPS distribution power cables and accessories	BHEL	BHEL	BHEL	BHEL	BHEL	
2.11	24VDC system and Distribution board	*	BHEL	BHEL	BHEL	BHEL	* 24VDC Load data to be provided by vendor
2.12	24VDC distribution power cables and accessories	BHEL	BHEL	BHEL	BHEL	BHEL	
2.13	Complete Above and below ground Earthing, grounding system (including embedded parts)	BHEL	BHEL	BHEL	BHEL	BHEL	
2.14	Complete lightning protection system (including embedded parts)	BHEL	BHEL	BHEL	BHEL	BHEL	
2.15	Complete corrosion protection equipments like Cathodic Protection, Grounding Grid, Ground Rods, etc	*	*	*	BHEL	BHEL	* By the respective main equipment supplier

Signature

J. M. SELVARAJ, M.Tech., M.I.E.,

Engineer

Controls & Instrumentation / FB

BHEL TRUICHY - 620 014

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BHEL / Truichy - 620 014

Senior Manager

Controls & Instrumentation / FB

DOW BETWEEN BHEL AND VENDOR FOR C&I AND ELECTRICALS FOR THE SCR SYSTEM

S No.	Description	BASIC ENGINEERING	DETAILED ENGINEERING	SUPPLY	ERECTION	COMMISSIONING	Notes
2.16	Any special type of cable like compensating, coaxial, prefab, MICC, fibre optics etc.	*	*	*	BHEL	BHEL	* - By respective equipment supplier
3	Misc						
3.01	Conduits	*	*	*	BHEL	BHEL	* By respective agency supplying the cables
3.02	Cable trays and accessories (From field to Local IBs/local control panels) - Branch trays	*	*	*	BHEL	BHEL	* By respective agency supplying the cables
3.03	Cable trays and accessories (From Local IBs/local control panels to remote) - Main trays	BHEL	BHEL	BHEL	BHEL	BHEL	
3.04	Cable tray routing and cable tray layout	Vendor / BHEL	BHEL	BHEL	BHEL	BHEL	Vendor to provide tentative cable tray layout
3.05	Erection materials (angles, channels, flats etc.)	*	*	*	BHEL	BHEL	* For respective scope
3.06	Cable glands and lugs for LT motors, Servo motors, panels, IBs etc.	*	*	*	BHEL	BHEL	* Shall be in the scope of respective equipment supplier. For IBs the same shall be by cable supplier.
3.07	Instrument air distribution tubing and fittings	*	BHEL	BHEL	BHEL	BHEL	* Instrument air requirement list by Vendor
3.08	Special tools	*	*	*	BHEL	BHEL	* For respective scope
3.09	Laboratory equipment	*	*	*	BHEL	BHEL	* For respective scope
3.10	Commissioning spares	*	*	*	BHEL	BHEL	* For respective scope
3.11	Air conditioned room for analysers, local control panels etc	*	BHEL	BHEL	BHEL	BHEL	* Panel dimensions, heat loading data by Vendor

Note :- All erection & commissioning supervision of vendor engineered/supplied items shall be in vendor's scope.

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V.M. Selvaraj

V.M. SELVARAJ, M.Tech., M.I.E.,

Senior Manager

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**Standard SCR Scope Split
Mechanical**

TDN: DOW/Rev.00.

Code	Description	Conceptual Design/ Specification	Detailed Design/ Specification	Procurement/ Fabrication/ Delivery to Site	Installation/ Execution	Startup/ Commissioning	Remarks
General Requirements and Scope of Work							
DE-01-00	Process - CFD Modeling and Report for SCR / SNCR/ COMBINATION	VENDOR	N/A	N/A	N/A	N/A	
DE-01-01	Process - Physical Flow Model and Report	VENDOR	N/A	N/A	VENDOR *	N/A	
DE-01-02	Technical Advice and Guidance During Installation	VENDOR	N/A	N/A	VENDOR *	N/A	
DE-01-03	Drawings - Update and Revision of Existing Plant Drawings	TRY	TRY	N/A	N/A	N/A	DeNOx system arrangement drawing (editable) to be given by Vendor
DE-01-04	Engineering and Drawings - Equipment P&IDs	VENDOR	N/A	N/A	N/A	N/A	Includes all drawings for the equipments supplied by Vendor
DE-01-05	Engineering and Drawings - Equipment General Arrangement and Component Layout on Site	VENDOR	N/A	N/A	N/A	N/A	
DE-01-06	Engineering and Drawings - SCR System	VENDOR	VENDOR	N/A	N/A	N/A	Includes reactor, inlet and outlet duct and transitions, load points, casing, stiffeners, internal catalyst support steel, hoist, platforms, inspection doors, catalyst loading doors, sonic horns / soot blowing system, ash screen, AIG, static mixers, gas sampling ports and grid, etc. as required
DE-01-07	Engineering and Drawings - Construction	VENDOR	VENDOR	N/A	N/A	N/A	
DE-01-08	Engineering and Drawings - Concrete	VENDOR	VENDOR	N/A	N/A	N/A	
DE-01-09	Electrical Load List	-	-	-	-	-	Refer C&I scope split
DE-01-10	Instrument ISA data sheets	-	-	-	-	-	Refer C&I scope split
DE-01-11	Data Base of I/O points	-	-	-	-	-	Refer C&I scope split
DE-01-12	Equipment Lifting Plan	VENDOR	VENDOR	N/A	N/A	N/A	Equipment related to Vendor
DE-01-13	Field Supervision for Installation	VENDOR	N/A	N/A	VENDOR *	N/A	
DE-01-14	Coordination of structural and foundation tie-ins	VENDOR	N/A	N/A	RR	VENDOR	
DE-01-15	Coordination of mechanical tie-ins	VENDOR	N/A	N/A	RR	VENDOR	
DE-01-16	Coordination of electrical and controls tie-ins	VENDOR	N/A	N/A	RR	VENDOR	
DE-01-17	Cranes and Hoists for Catalyst handling	VENDOR	VENDOR	N/A	RR	N/A	For engineering and equipment furnished by Vendor
DE-01-18	Quality Control Documents	VENDOR	N/A	N/A	VENDOR *	N/A	For engineering and equipment furnished by Vendor
DE-01-19	Quality Control Verification	VENDOR	N/A	N/A	VENDOR *	N/A	For engineering and equipment furnished by Vendor
DE-01-20	QA/QC Program	VENDOR	VENDOR	N/A	VENDOR *	N/A	For equipment furnished by Vendor
DE-01-21	Inspection and Test Plan	VENDOR	VENDOR	N/A	VENDOR *	N/A	For equipment furnished by Vendor



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Addl. General Manager
Marketing (FB)
BHEL, TRICHY - 620 014.

**Standard SCR Scope Split
Mechanical**

TDN:DOV/Rev:00.

Code	Description	Conceptual Design/ Specification	Detailed Design/ Specification	Procurement/ Fabrication/ Delivery to Site	Installation/ Execution	Startup/ Commissioning	Remarks
DE-01-41	Equipment Commissioning - Checkout	VENDOR	VENDOR	N/A	VENDOR *	VENDOR	For equipment and systems design or furnished by Vendor
DE-01-42	Equipment Commissioning - Startup and Tuning	VENDOR	VENDOR	N/A	VENDOR *	VENDOR	For equipment and systems design or furnished by Vendor
DE-01-44	Operation of Equipment and Systems Until Final Acceptance	VENDOR	VENDOR	N/A	N/A	VENDOR	
DE-01-48	Testing - Flushing and Pressure (Hydrostatic) Testing of Mechanical Distribution Systems	VENDOR	VENDOR	N/A	VENDOR *	VENDOR	
DE-01-52	Training - Customer Personnel Training	VENDOR	N/A	N/A	VENDOR	N/A	
DE-01-53	Manuals - O&M Manuals including: > Spare parts list > Performance test report(s)	VENDOR	N/A	N/A	VENDOR *	N/A	
DE-01-54	Manuals - Training Manuals including: > Catalyst management plan > Catalyst disposal plan	VENDOR	N/A	N/A	VENDOR *	N/A	
DE-01-55	Turnover Package - Equipment Commissioning, Startup, and Optimization Report	VENDOR	N/A	N/A	VENDOR *	N/A	
DE-02-00							
DENOX EQUIPMENT							
DE-02-01	Shop testing and calibration of equipment	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	
DE-02-02	Mating Flange, Gaskets, Nuts, Bolts	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	
DE-02-03	Reagent Forwarding/Circulation equipment	VENDOR	VENDOR	VENDOR	VENDOR *	RR	
DE-02-04	SCR NOx Reactor	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	
DE-02-05	Catalyst lifting yoke (lifting beam) for catalyst module	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	
DE-02-06	Catalyst trolley/cart	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	If Applicable
DE-02-07	Catalyst hoist	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	
DE-02-08	Reactor internal catalyst handling monorails	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	
DE-02-09	Reactor external platforms	VENDOR	VENDOR	TRY	VENDOR *	N/A	
DE-02-10	Reactor Inlet Duct Transition	VENDOR	VENDOR	TRY	VENDOR *	N/A	Fabrication and Installation Drawings with BoM shall be furnished by Vendor
DE-02-11	Reactor Outlet Duct Transition	VENDOR	VENDOR	TRY	VENDOR *	N/A	Fabrication and Installation Drawings with BoM shall be furnished by Vendor
DE-02-12	Reactor Inlet and Outlet Expansion Joints	VENDOR	VENDOR	TRY	VENDOR *	N/A	Fabrication and Installation Drawings with BoM shall be furnished by Vendor
DE-02-13	Static Mixers	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	If Applicable
DE-02-14	Duct-Mounted Flow Straightening/Control Vanes	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	If Applicable
DE-02-15	Ammonia Injection Grid (AIG)	VENDOR	VENDOR	VENDOR	VENDOR *	VENDOR	

Standard SCR Scope Split
Mechanical

TDN: DOW/Rev:00.

Code	Description	Conceptual Design/ Specification	Detailed Design/ Specification	Procurement/ Fabrication/ Delivery to Site	Installation/ Execution	Startup/ Commissioning	Remarks
DE-02-16	Large Partical Ash (LPA) Screen	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	If Applicable
DE-02-17	Reactor Instrumentation	-	-	-	-	-	Refer C&I scope split
DE-02-18	Catalyst - NOx Catalyst and Sampling Coupons	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	
DE-02-19	Sonic Horns	VENDOR	VENDOR	VENDOR	VENDOR *	VENDOR	If applicable
DE-02-20	Soot blowers	VENDOR	VENDOR	VENDOR	VENDOR *	VENDOR	If applicable
DE-02-21	Ash Sweepers	VENDOR	VENDOR	VENDOR	VENDOR *	VENDOR	If applicable
DE-02-22	Gas Sampling Test Grid	VENDOR	VENDOR	VENDOR	VENDOR *	N/A	
DE-02-23	NOx Analyzer	-	-	-	-	-	Refer C&I scope split
DE-02-24	Equipment sound insulation	VENDOR	VENDOR	VENDOR	VENDOR *	VENDOR	If Applicable
DE-02-25	Inlet duct to SCR from Economiser outlet, Eco Bypass Duct	VENDOR	TRY	TRY	RR	N/A	Based on Vendor's Input (Flow Modelling)
DE-02-26	Outlet duct from SCR to APH	VENDOR	TRY	TRY	RR	N/A	Based on Vendor's Input (Flow Modelling)
DE-02-27	SCR flue gas bypass duct	VENDOR	TRY	TRY	RR	N/A	Based on Vendor's Input (Flow Modelling)
DE-02-28	SCR Inlet and Outlet gates and/or dampers, Eco Bypass Gate and/or Damper	VENDOR	VENDOR	VENDOR	RR	N/A	
DE-02-30	Catalyst Monitoring System	VENDOR	VENDOR	VENDOR	RR	N/A	If Applicable
DE-04-00	Structural Steel Supports for SCR along with platforms						
DE-04-01	Tie-in to Boiler steel and Support Construction	VENDOR	TRY	TRY	RR	N/A	Includes structural and non-structural steel
DE-04-02	Structural Steel Supports for SCR	VENDOR	TRY	TRY	RR	N/A	
DE-04-03	Additional steel supports	VENDOR	TRY	TRY	RR	N/A	Includes structural and building steel, buckstays, platforms, decking, stairs, ladders, handrails, toe-kicks, walls, roofs, etc to accommodate new installation
DE-04-04	New platform structures to existing structures	VENDOR	TRY	TRY	RR	N/A	
DE-04-05	Equipment Platforms, Toe-kicks, Handrails, Ladders, Stairs, etc.	VENDOR	TRY	TRY	RR	N/A	
DE-04-06	Foundation load data for SCR system	VENDOR	TRY	TRY	N/A	N/A	Detailed Engineering by BHEL-TRY based on Vendor's Input
DE-04-07	Anchor bolts in foundations and/or supports	VENDOR	TRY	TRY	RR	N/A	Base plates alongwith Anchor/foundation bolts are always in the scope of steel structure engineering agency viz. scope in Boiler structure.
DE-04-08	Reactor steel Structural Stiffeners	VENDOR	VENDOR	VENDOR	RR	N/A	Casing stiffeners



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**Standard SCR Scope Split
Mechanical**

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Code	Description	Conceptual Design/ Specification	Detailed Design/ Specification	Procurement/ Fabrication/ Delivery to Site	Installation/ Execution	Startup/ Commissioning	Remarks
Thermal and Moisture Protection							
DE-05-00							
DE-05-01	Building Penetration Weatherproofing	VENDOR	TRY	TRY	RR	N/A	Detailed Engineering by BHEL-TRY based on Vendor's Input
DE-05-02	Insulation and Lagging - SCR Equipment	VENDOR	TRY	TRY	RR	N/A	Detailed Engineering by BHEL-TRY based on Vendor's Input
Finishes							
DE-06-00							
DE-06-01	Primer Paint - Shop Applied	VENDOR	VENDOR	VENDOR	RR	N/A	For respective equipments supplied by Vendor
DE-06-02	Prime Paint - Field Applied	VENDOR	N/A	RR	RR	N/A	
DE-06-03	Finish Paint and Field Touch-up	VENDOR	N/A	RR	RR	N/A	
AMMONIA SYSTEM (ANHYDROUS AMMONIA)							
DE-07-00							
DE-07-01	Ammonia Storage Tank	VENDOR	VENDOR	TRY	RR	VENDOR	
DE-07-02	Electric Heater or Steam Heaters (along with necessary temperature control & flow control valves and isolation valves).	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-03	Roof above storage incl. supporting structure	VENDOR	PEM	PEM	RR	N/A	
DE-07-04	Supporting structures including foundation for storage tank	VENDOR	VENDOR	TRY	RR	N/A	Vendor to furnish all civil inputs to BHEL-TRY
DE-07-05	Stairs and platforms Storage area	VENDOR	VENDOR	TRY	RR	N/A	
DE-07-06	Ammonia Vaporiser	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-07	Ammonia Unloading Compressors or Pumps	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-08	Ammonia Accumulators	VENDOR	VENDOR	VENDOR	RR	VENDOR	If applicable
DE-07-09	Waste Ammonia Dilution System With two Sump Pumps	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-10	Ammonia Dilution Air Skid (ADAS)	VENDOR	VENDOR	VENDOR	RR	VENDOR	Skid consists of Structural skid, Centrifugal Blowers, Flame Proof Motors, Electrical heaters, NH3/Air mixers, Ammonia Flow meter, Flow Control valve for ammonia, Manual Valves, Air Flow meters, Inter connecting Piping only.
DE-07-11	Internal piping from ammonia accumulator to ammonia dilution skid	VENDOR	VENDOR	VENDOR	RR	VENDOR	If applicable
DE-07-12	Structure racks for Ammonia pipe line	VENDOR	VENDOR	PEM	RR	VENDOR	From ammonia storage tank area to ammonia dilution skid
DE-07-13	Air / NH3 piping from ADAS to AIG	VENDOR	VENDOR	PC	RR	VENDOR	From ammonia dilution air skid to injectors in SCR reactors

**Standard SCR Scope Split
Mechanical**

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DE-07-14	Cable trays/racks	-	-	-	-	-	Refer C&I scope split
DE-07-15	Fire hydrant system	VENDOR	PE&SD	PE&SD	RR	N/A	
DE-07-16	Automatic water deluge system	VENDOR	VENDOR	PC	RR	VENDOR	If required
DE-07-17	Earthing	-	-	-	-	-	Refer C&I scope split
DE-07-18	Hot surface insulation for vapouriser	VENDOR	TRY	TRY	RR	VENDOR	
DE-07-19	Ammonia unloading Hose from ammonia tanker	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-20	Piping from ammonia tanker outlet hose to storage tank	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-21	Piping from storage tank to vaporizers	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-22	Piping from vaporizers to ADAS	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-23	Piping from vaporizers to accumulators	VENDOR	VENDOR	VENDOR	RR	VENDOR	If applicable
DE-07-24	Field piping	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-25	Safety and protection equipment for ammonia system (Eye showers, emergency shower), Safety relief valves wherever applicable	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-26	Ammonia Waste disposal	VENDOR	VENDOR	VENDOR	RR	VENDOR	
DE-07-27	Nitrogen Piping for Unloading & storage area and Nitrogen piping for Ammonia dilution skid for each boiler	VENDOR	VENDOR	VENDOR	RR	VENDOR	

* Supervision Only

Note: The Vendor shall provide all accessories and appurtenances which are required for complete, reliable and safe SCR operation whether or not specified in the document.



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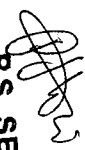
Standard SCR Scope Split
Mechanical

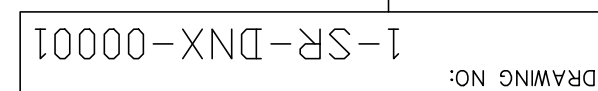
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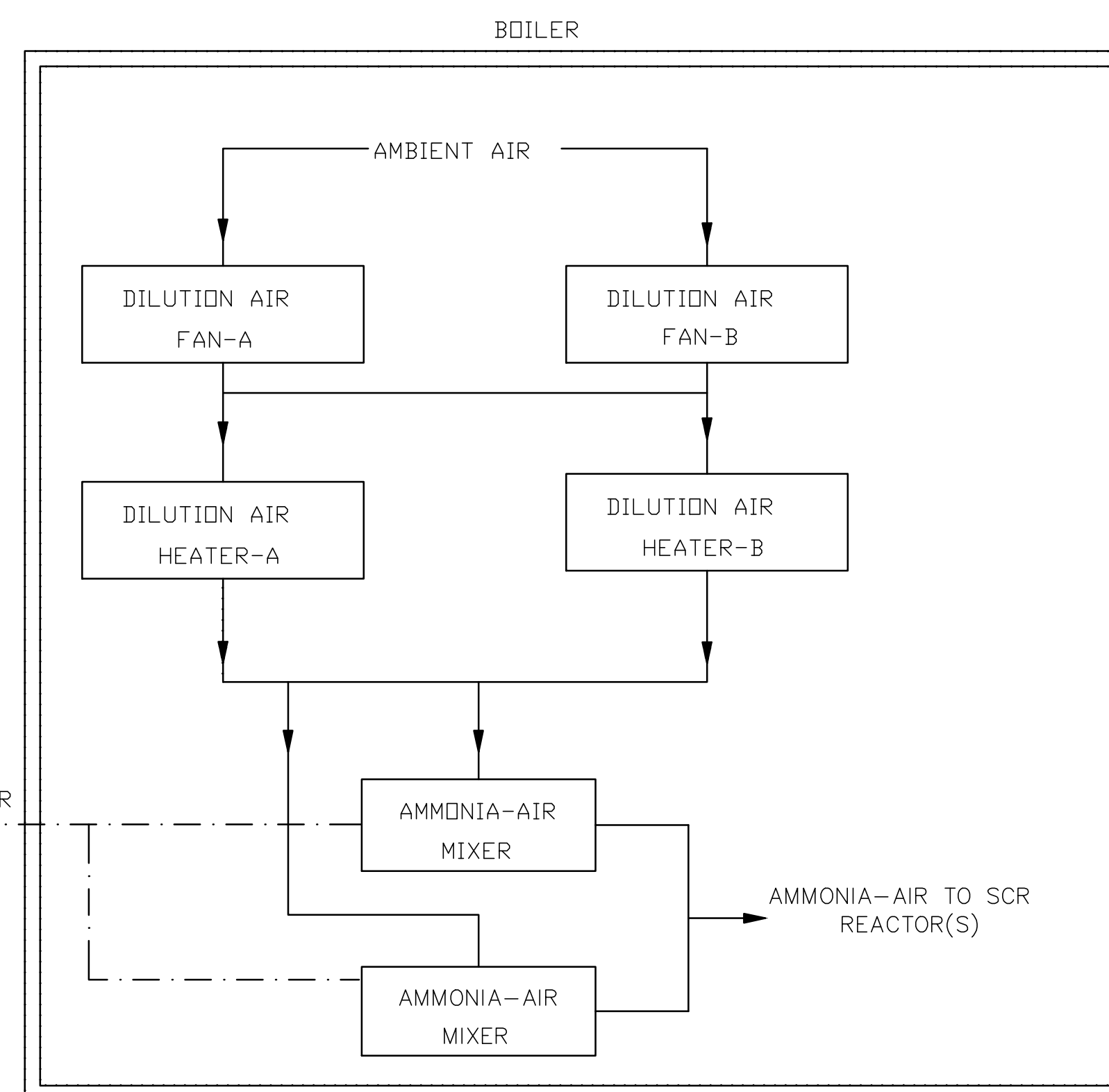
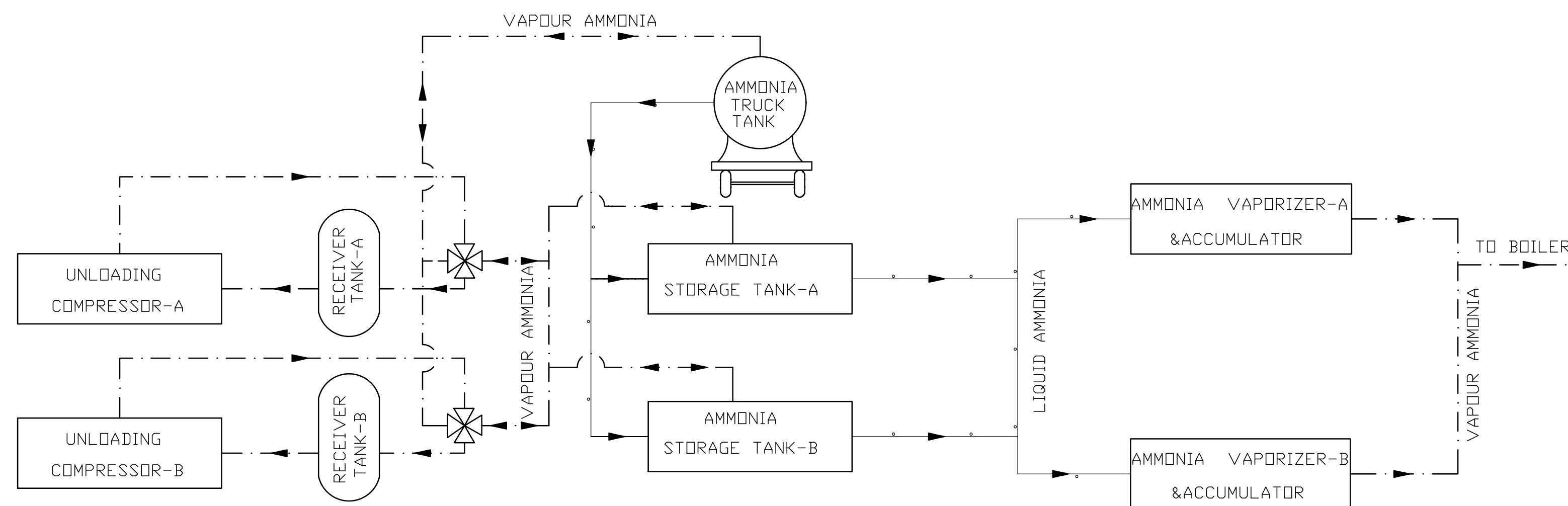
LEGEND:

Vendor : DeNOx Vendor
Vendor* : Supervision Only
PEM : BHEL Project Engineering Management
TRY : BHEL Trichy
RU : BHEL Respective Units
RR : BHEL Respective Regions
PE & SD : BHEL Project Engineering & Systems Division

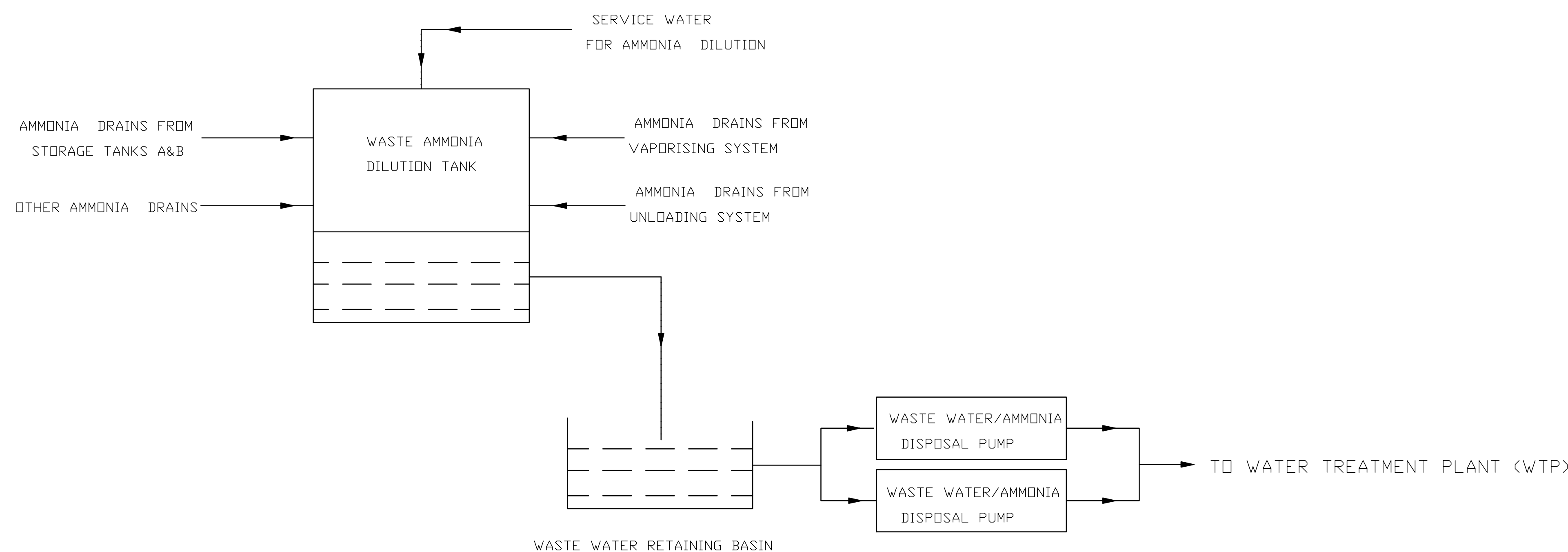
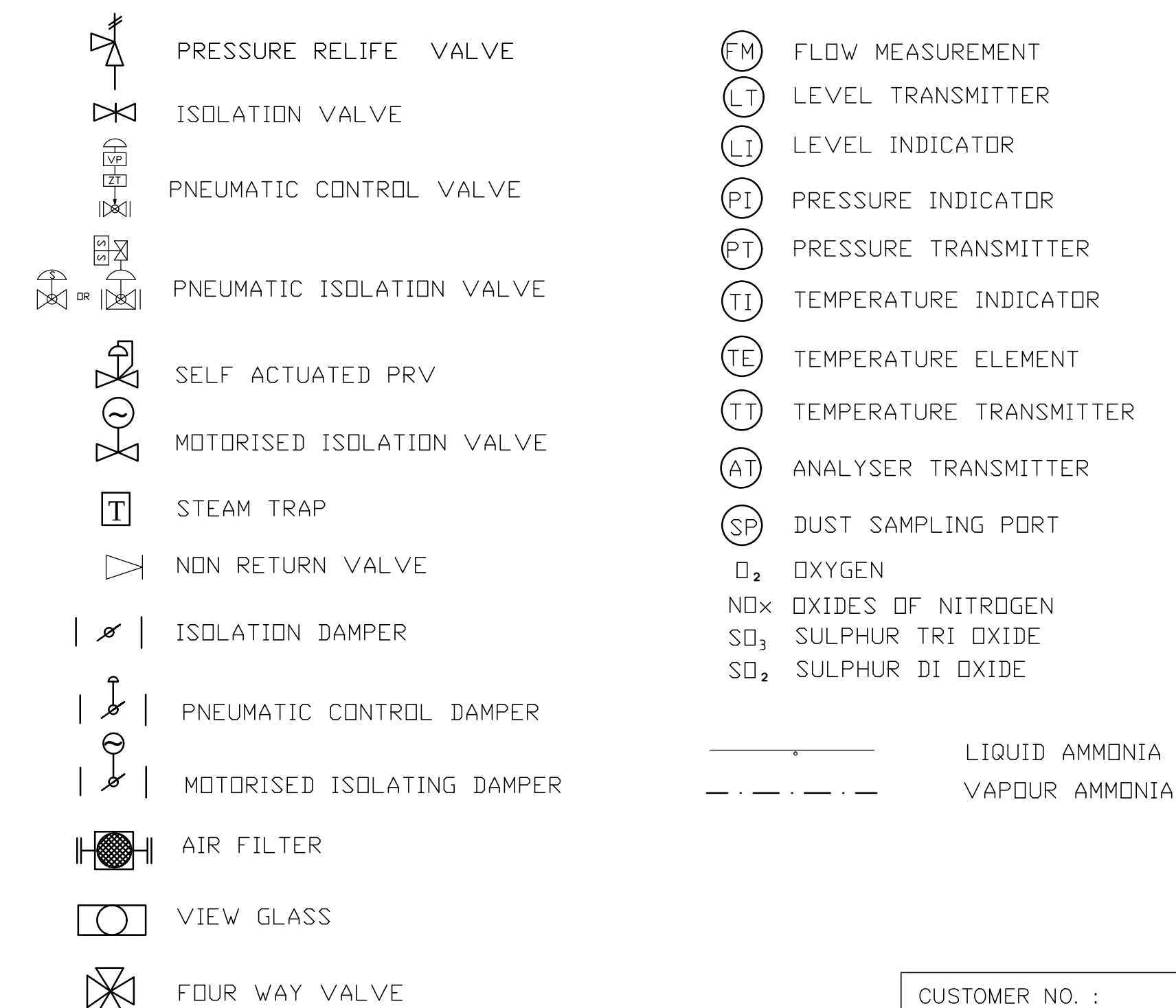

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FOR TOLERANCES OF UNTOLERANCED
DIMENSIONS DURING MANUFACTURE
REFER PLANT STD. NO TP 023 0299

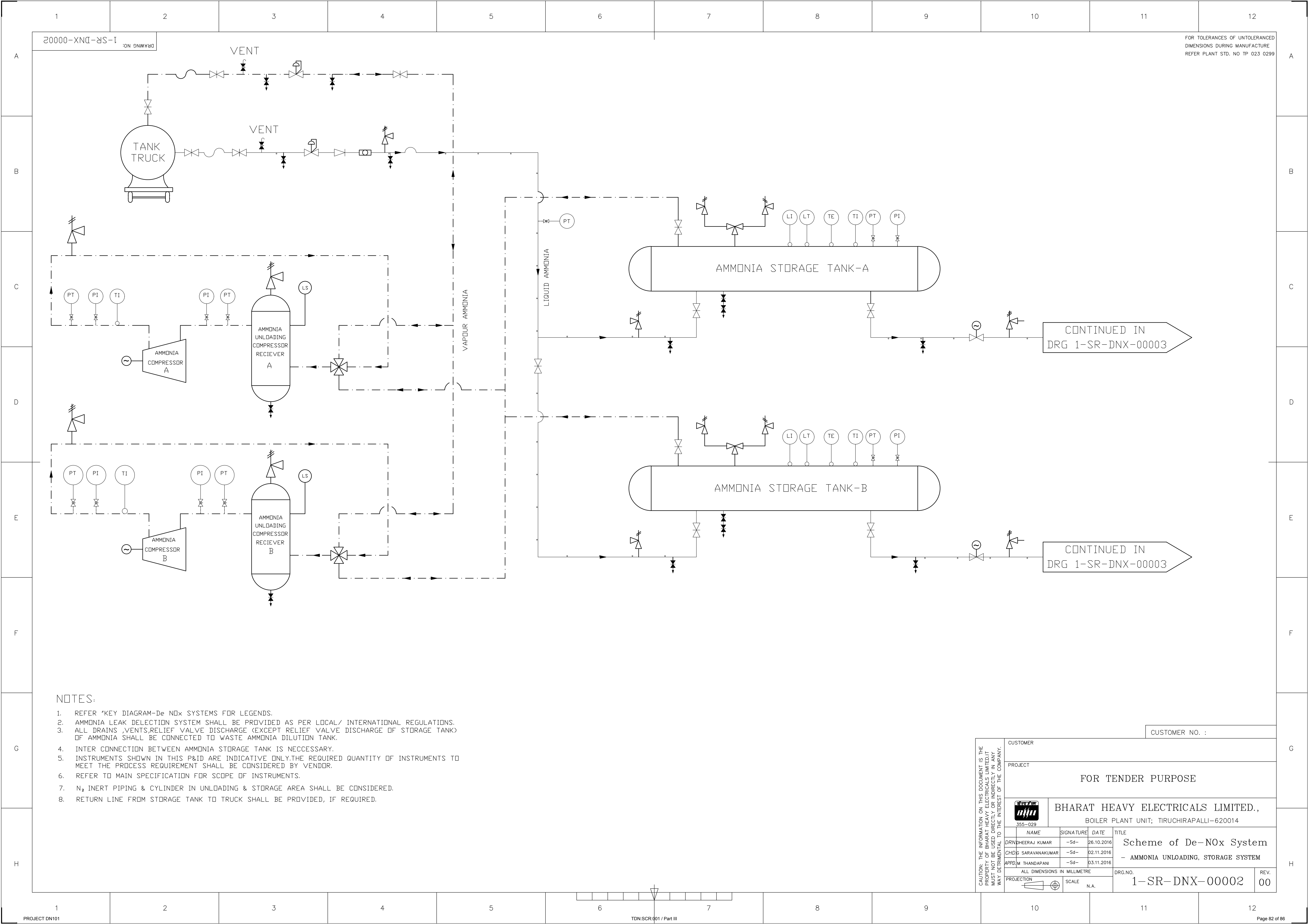


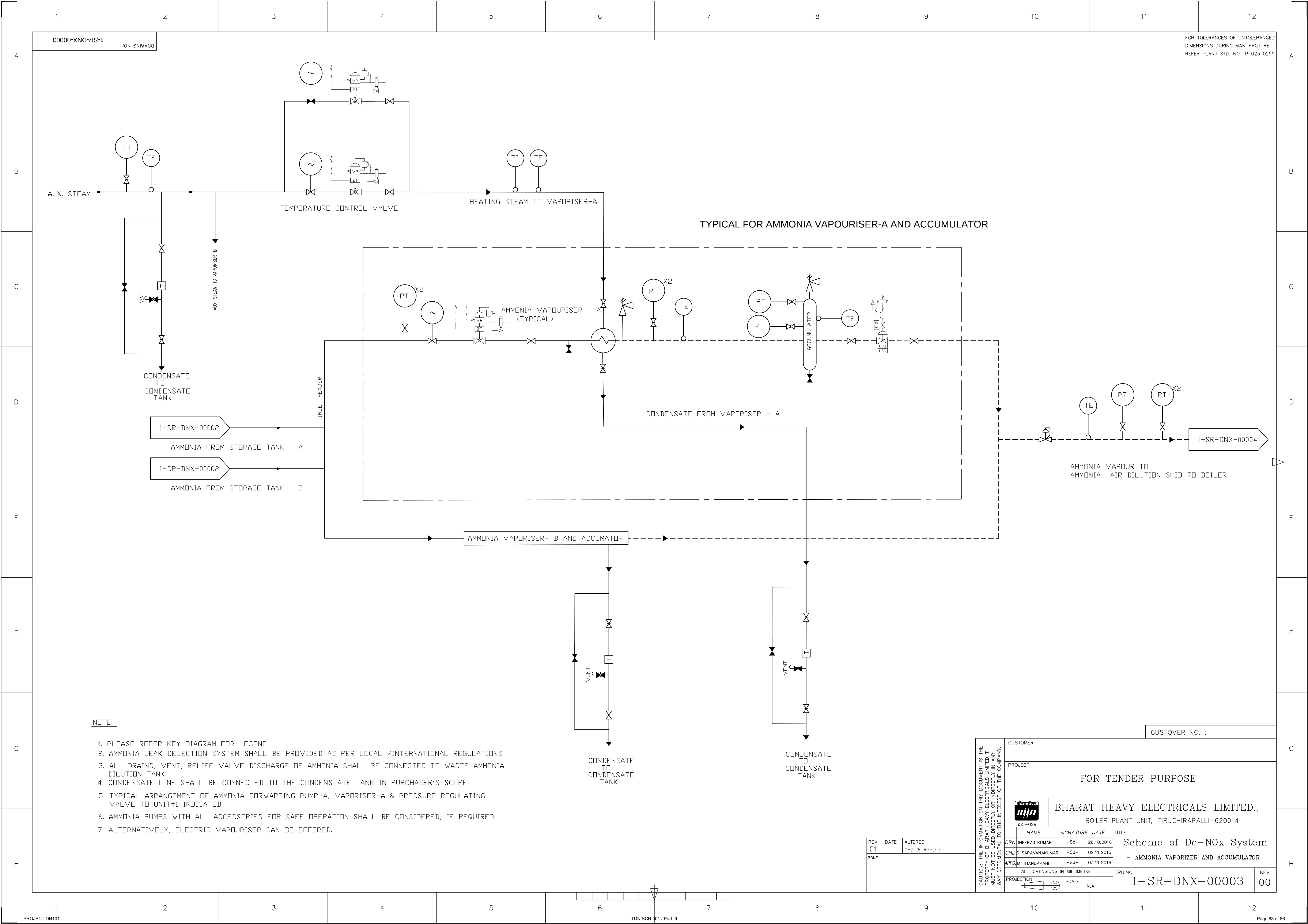
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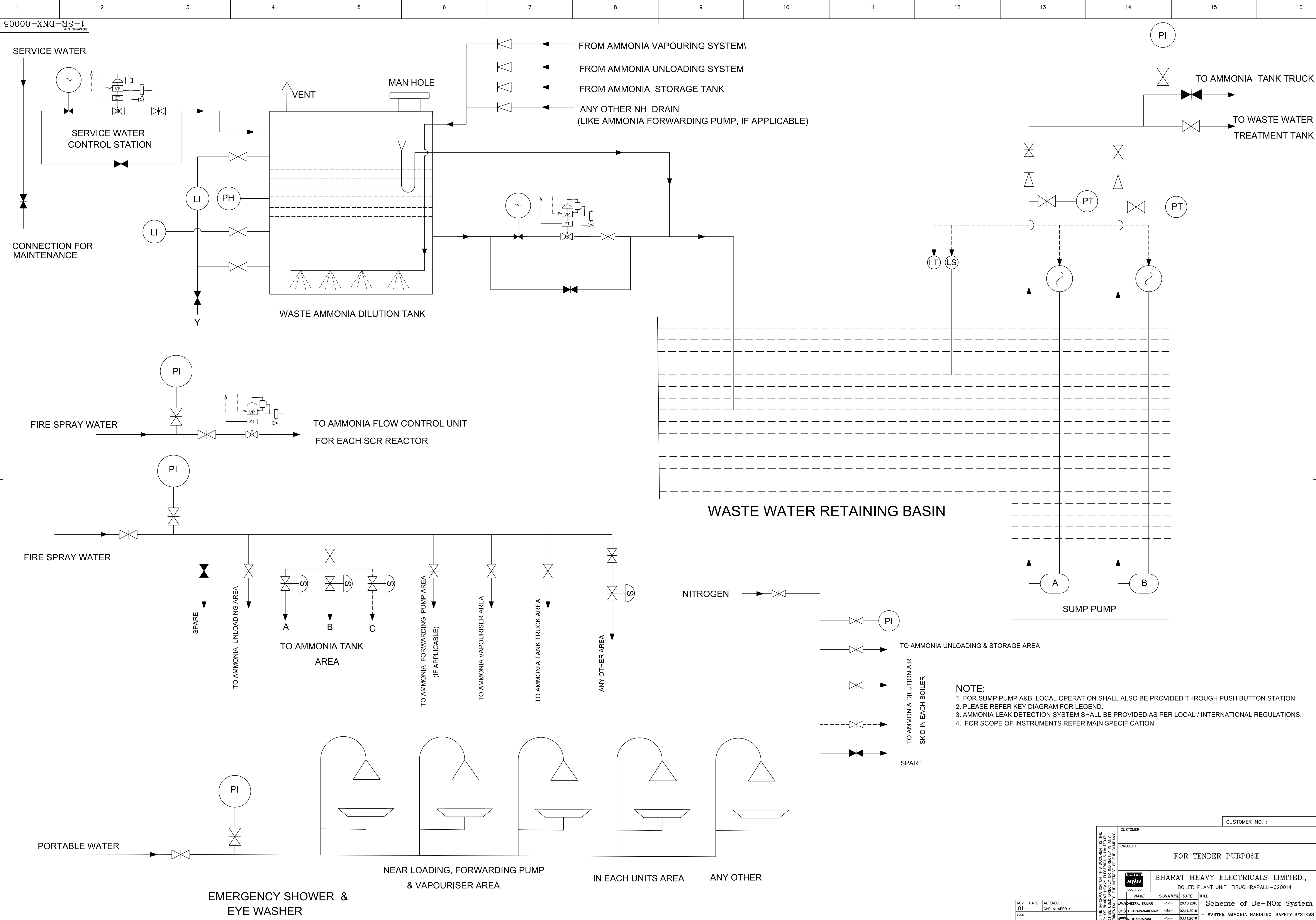


NOTES:

1. EXCESS FLOW CONTROL VALVES SHALL BE PROVIDED IN ALL STORAGE TANK NOZZLES.
2. BALL VALVE SHALL BE PROVIDED IN AMMONIA LINES.
3. READ ALONG WITH DRAWINGS 1-SR-DNX-00002 TO 1-SR-DNX-00005.







REV	DATE	ALTERED :	
01		CHD & APPD :	
ZONE			

CAUTION: THE NUCLEAR PROPERTY OF THIS DRAWING MUST NOT BE USED IN ANY WAY DETRIMENTAL TO THE SAFETY OF THE REACTOR.

DR/DH/NEERAJ KUMAR	-Sd-	26.10.2016
CHD/ SARA/VANAKUMAR	-Sd-	02.11.2016
APPD/ N. NANDANAN	-Sd-	03.11.2016

Scheme of De-Nox System

- WASTER AMMONIA HANDLING, SAFETY SYSTEMS

ALL DIMENSIONS IN MILLIMETRE

PROJECTION

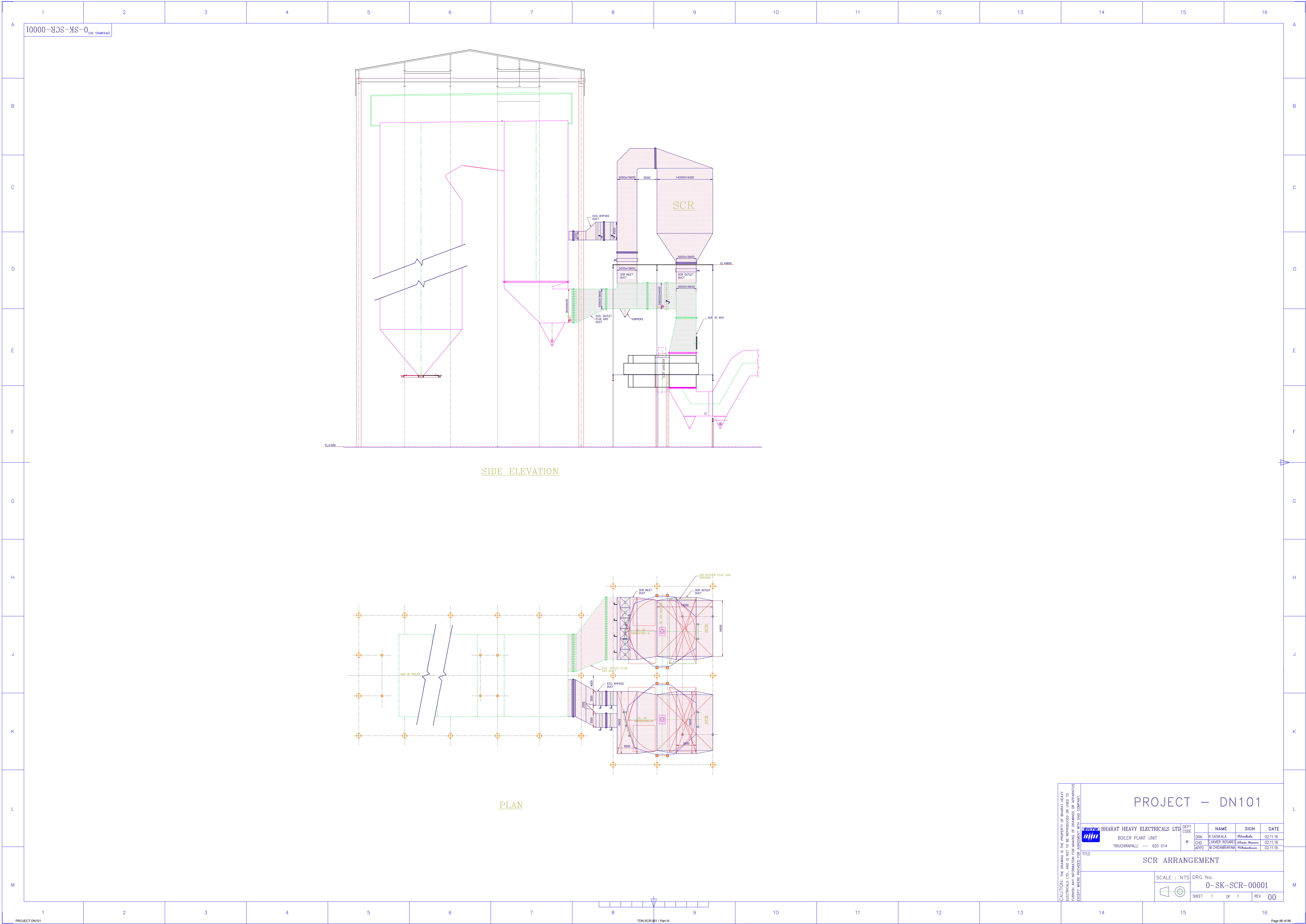
SCALE

N.A.

DRG.NO.

1-SR-DNX-00005

REV. 00



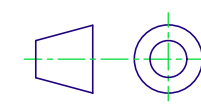
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PROJECT – DN101

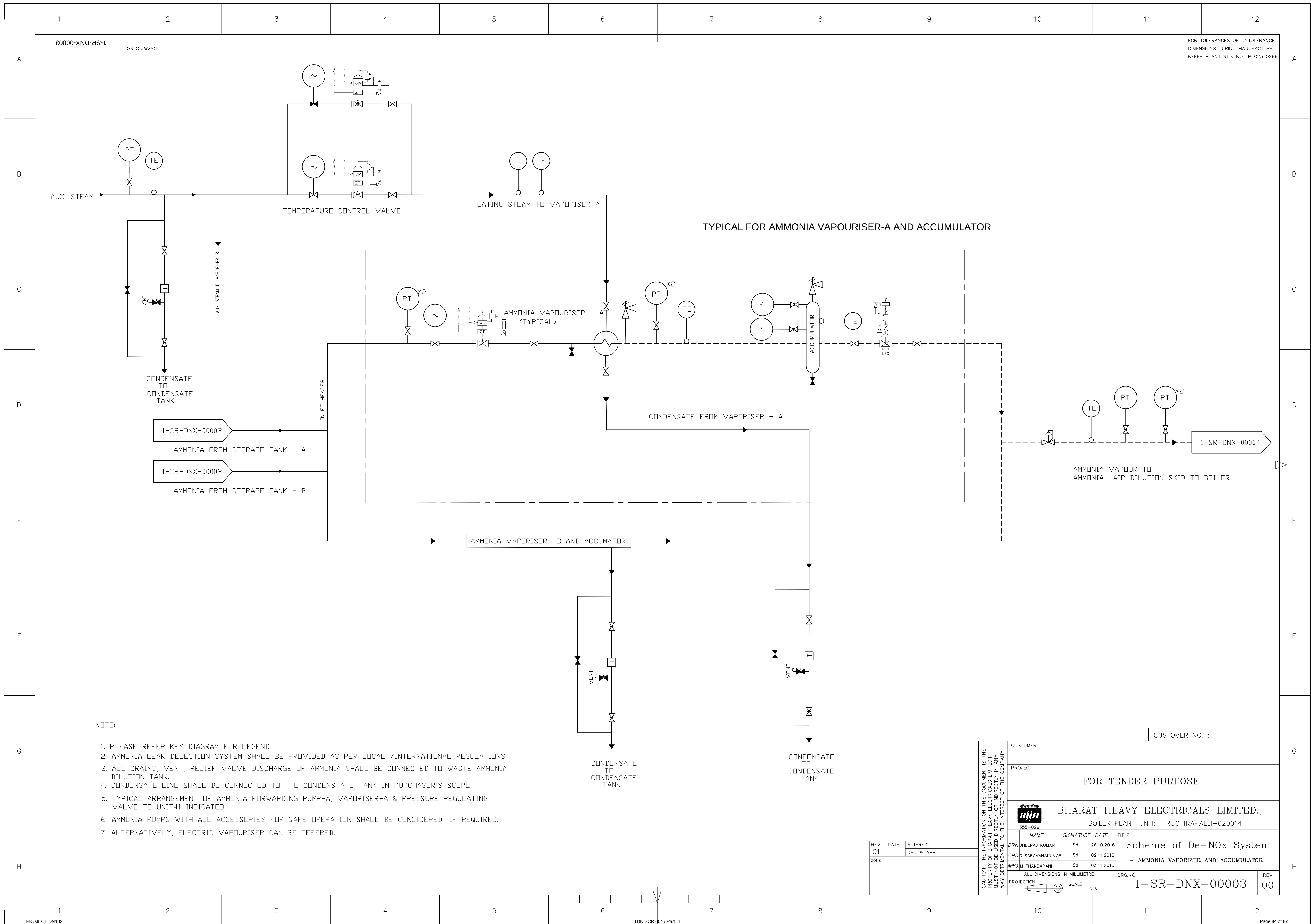
		BHARAT HEAVY ELECTRICALS LTD		DEPT CODE				
BOILER PLANT UNIT				M	NAME	SIGN	DATE	
TIRUCHIRAPPALLI -- 620 014					DRN	R.SASIKALA	R.Sasikala	02.11.16
					CHD	XAVIER ROSARIO	Xavier Rosario	02.11.16
					APPO	M.CHIDANBARAH	MECHDANBARAH	02.11.16

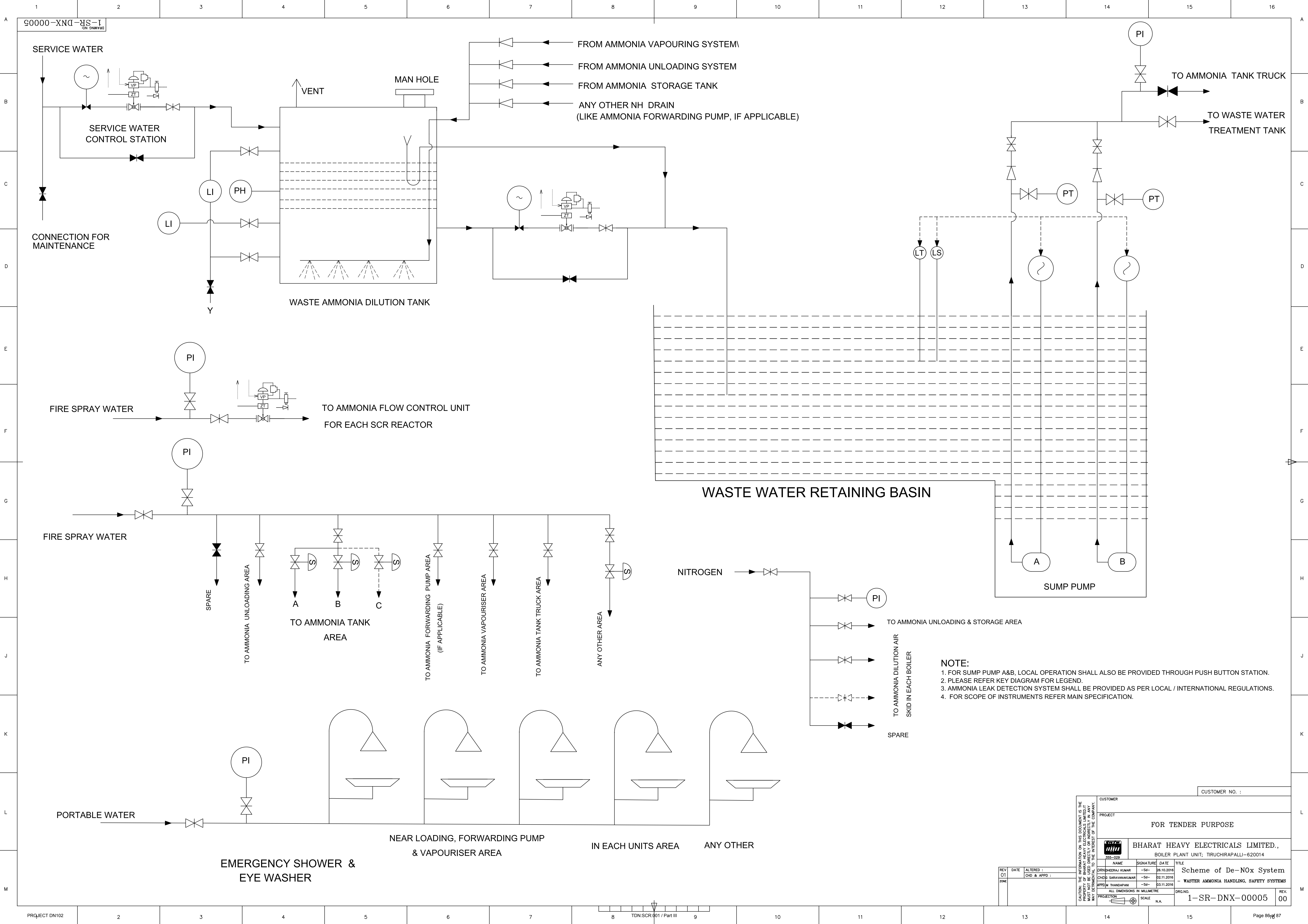
TITLE

SCR ARRANGEMENT

SCALE : NTS	DRG No.
	0-SK-SCR-00001
SHEET	1 OF 1
REV	00

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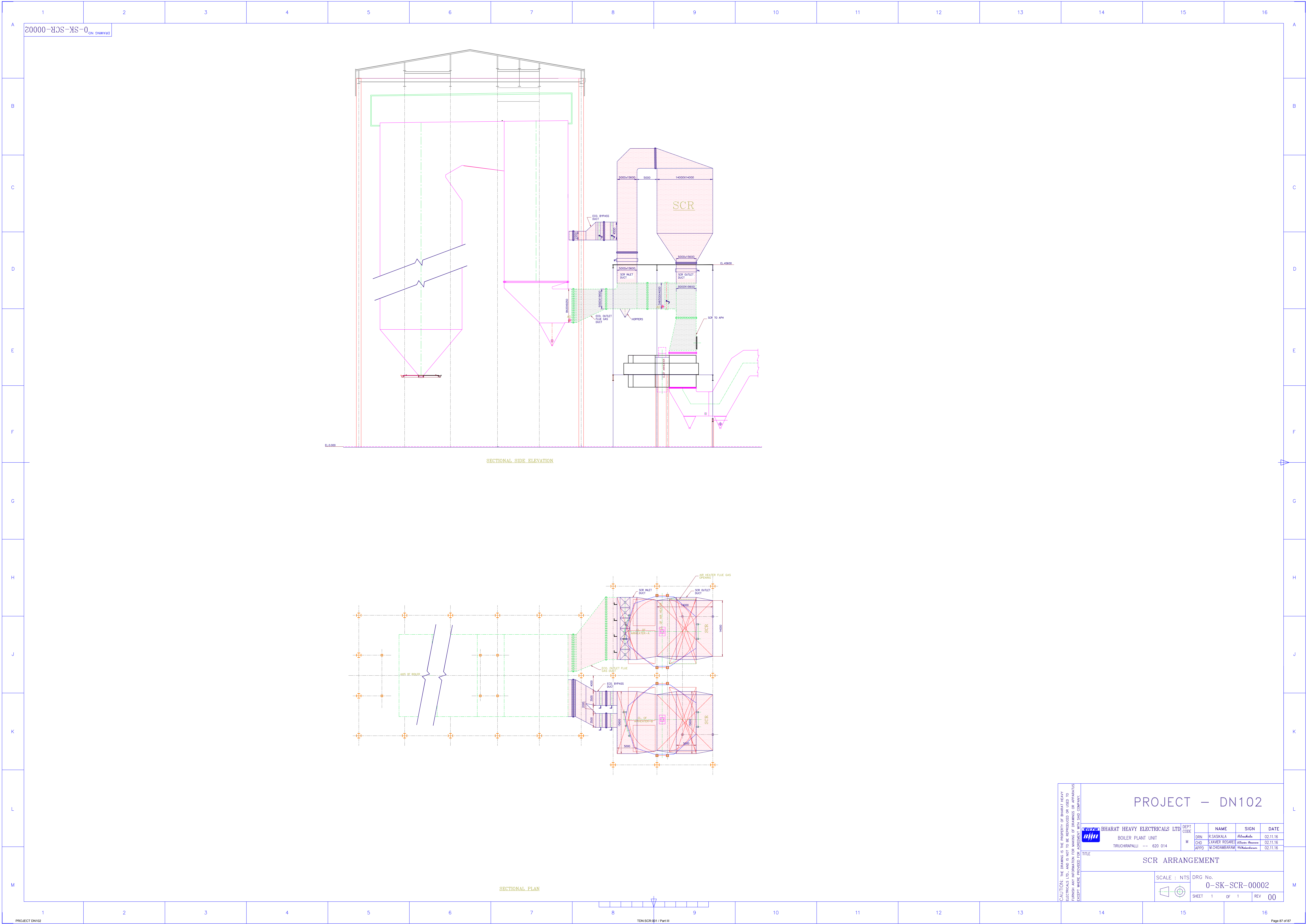




NOTE:
1. FOR SUMP PUMP A&B, LOCAL OPERATION SHALL ALSO BE PROVIDED THROUGH PUSH BUTTON STATION.
2. PLEASE REFER KEY DIAGRAM FOR LEGEND.
3. AMMONIA LEAK DETECTION SYSTEM SHALL BE PROVIDED AS PER LOCAL / INTERNATIONAL REGULATIONS.
4. FOR SCOPE OF INSTRUMENTS REFER MAIN SPECIFICATION.

REV	DATE	ALTERED :
01		CHD & APPD :
ZONE		

CUSTOMER NO. :			
PROJECT			
FOR TENDER PURPOSE			
BHARAT HEAVY ELECTRICALS LIMITED., BOILER PLANT UNIT, TIRUCHIRAPALLI-620014			
NAME	SIGNATURE	DATE	TITLE
DRINDEHARAJ KUMAR	-Sd-	26.10.2016	
CHIDJ SARAVANAKUMAR	-Sd-	02.11.2016	
APPD/M THANDAPANI	-Sd-	03.11.2016	
ALL DIMENSIONS IN MILLIMETRE			
PROJECTION	SCALE	N.A.	
DRG.NO.	1-SR-DNX-00005		REV. 00



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BHARAT HEAVY ELECTRICALS LTD.

BOILER PLANT UNIT

TIRUCHIRAPPALLI -- 620 014

DEPT CODE

M

NAME

R.SASIKALA

SIGN

R.Sasikala

DATE

02.11.16

DRN

XAVIER ROSARIO

CHD

XAVIER ROSARIO

APPD

MUTHUSUBRAMANIAM

DATE

02.11.16

DATE

02.11.16

PROJECT – DN102

SCR ARRANGEMENT

SCALE : NTS

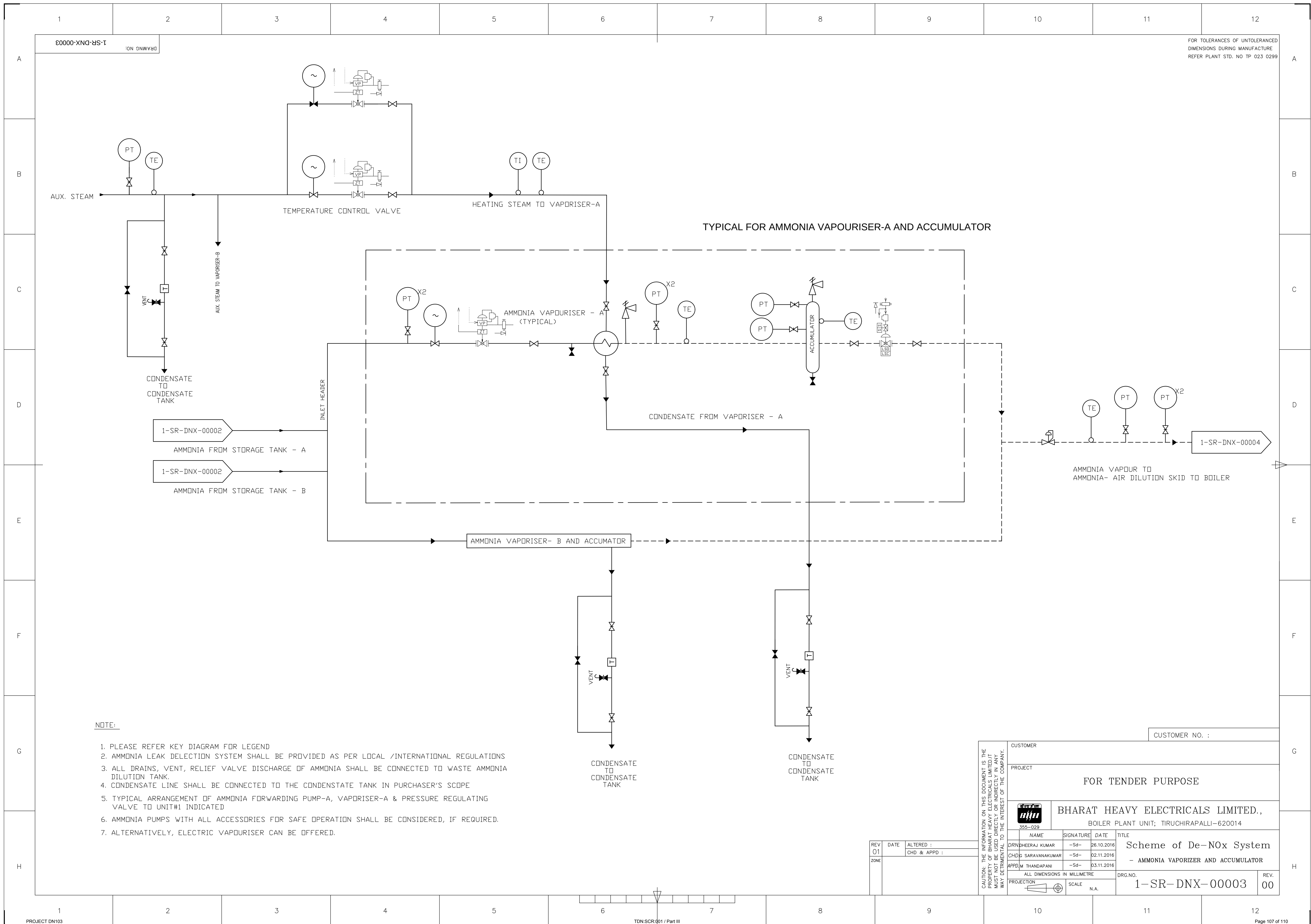
DRG No. 0-SK-SCR-00002

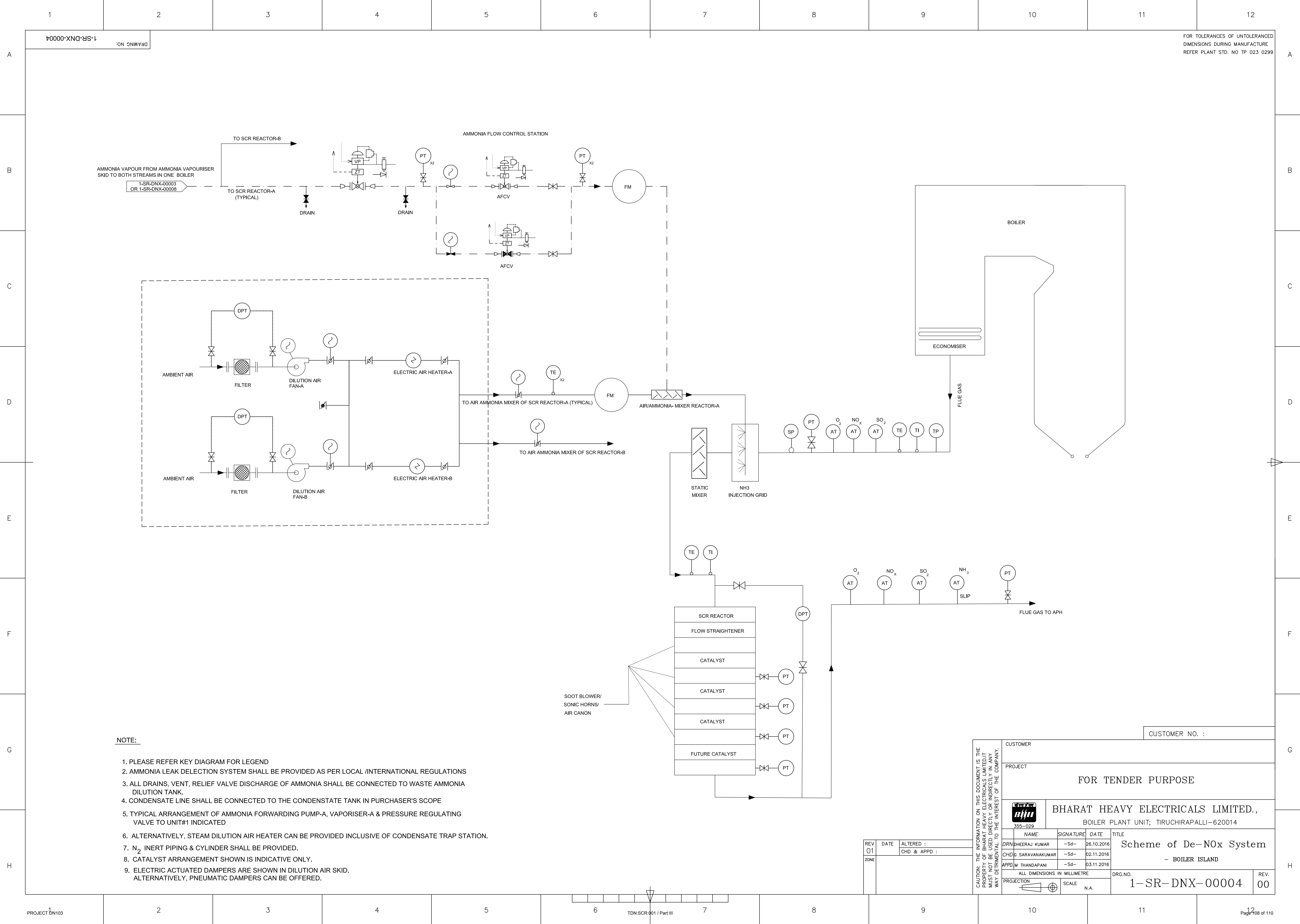
SHEET 1 OF 1 REV 00

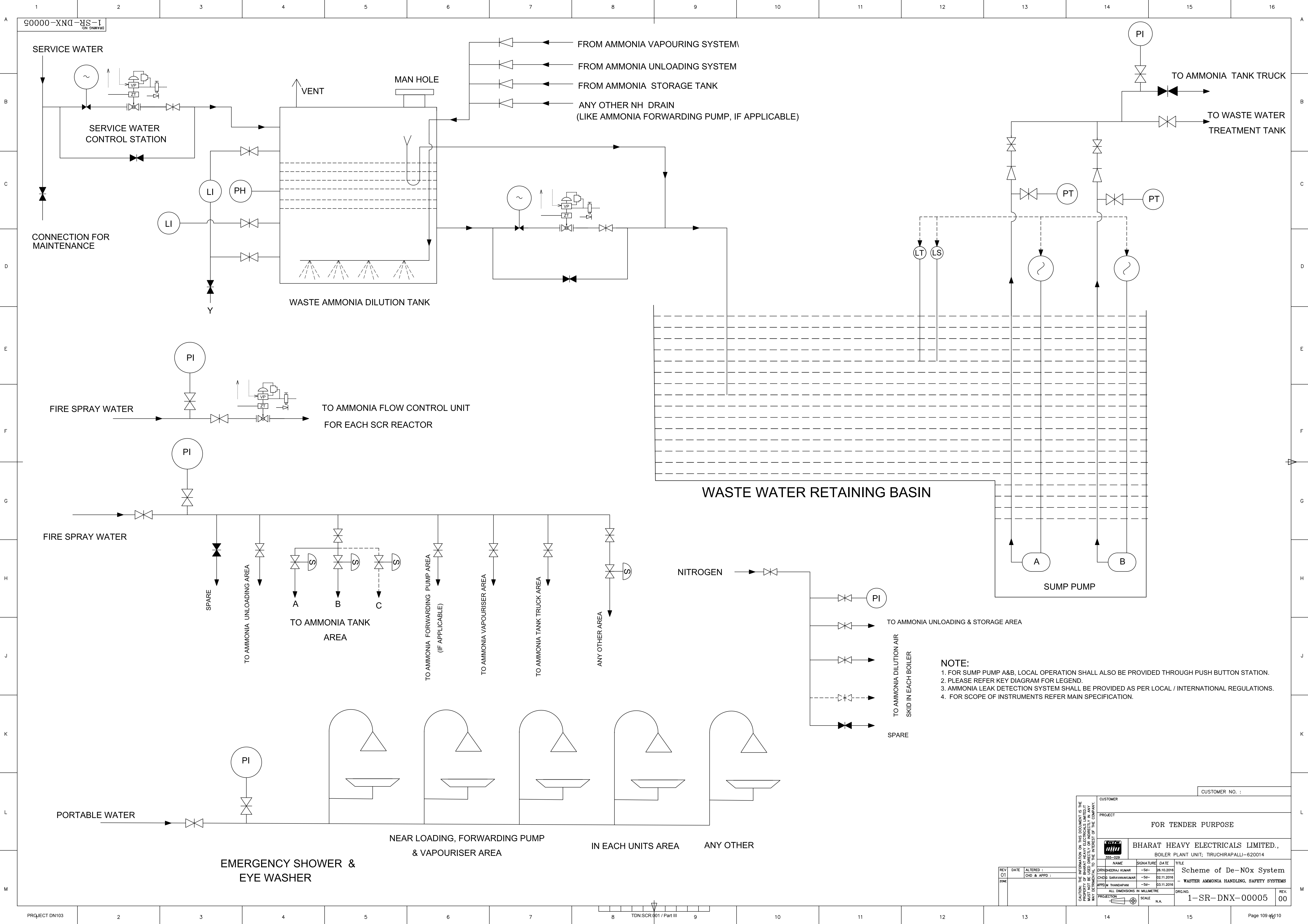
PROJECT DN102

TDN/SCR/01 / Part III

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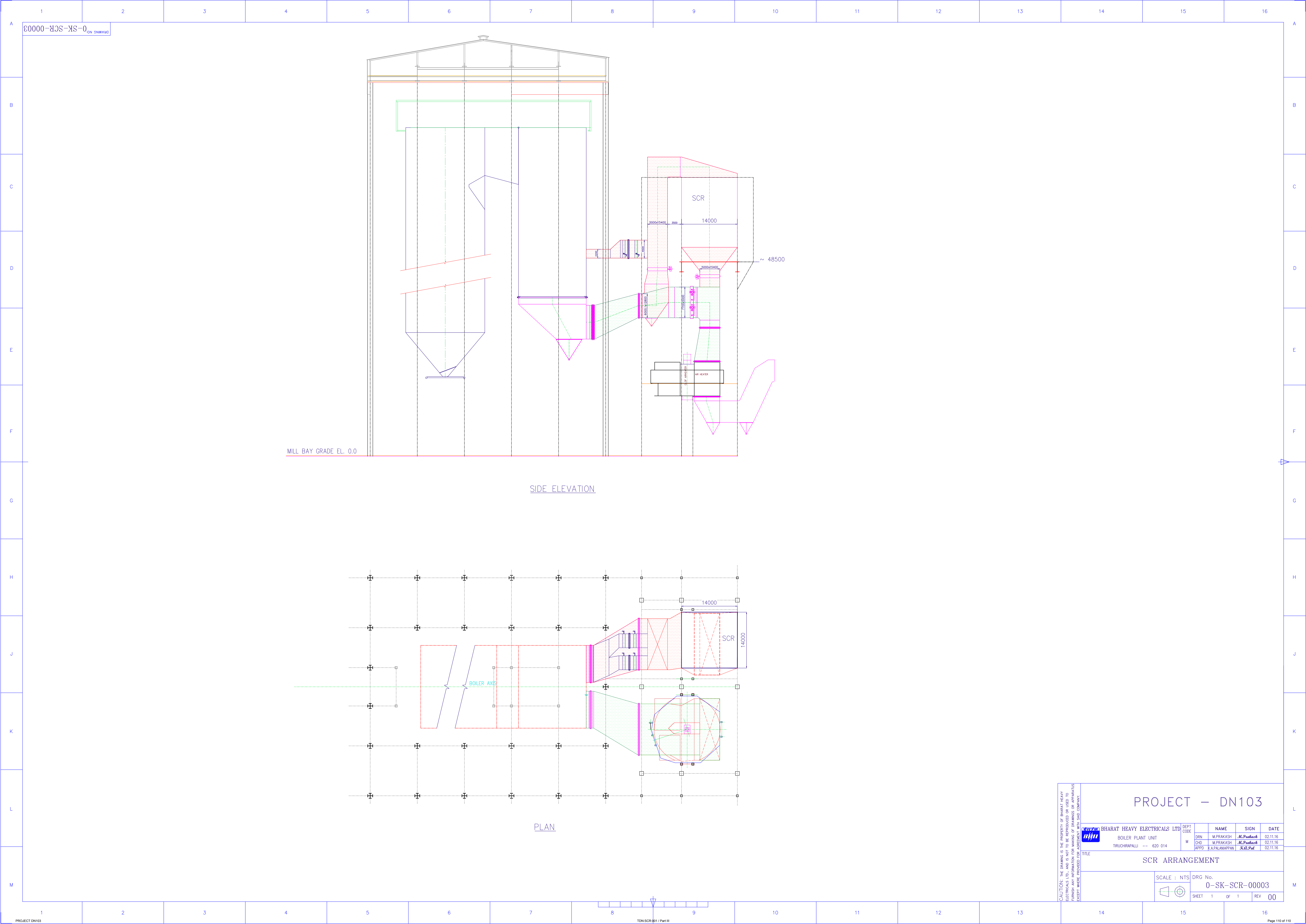




NOTE:
1. FOR SUMP PUMP A&B, LOCAL OPERATION SHALL ALSO BE PROVIDED THROUGH PUSH BUTTON STATION.
2. PLEASE REFER KEY DIAGRAM FOR LEGEND.
3. AMMONIA LEAK DETECTION SYSTEM SHALL BE PROVIDED AS PER LOCAL / INTERNATIONAL REGULATIONS.
4. FOR SCOPE OF INSTRUMENTS REFER MAIN SPECIFICATION.

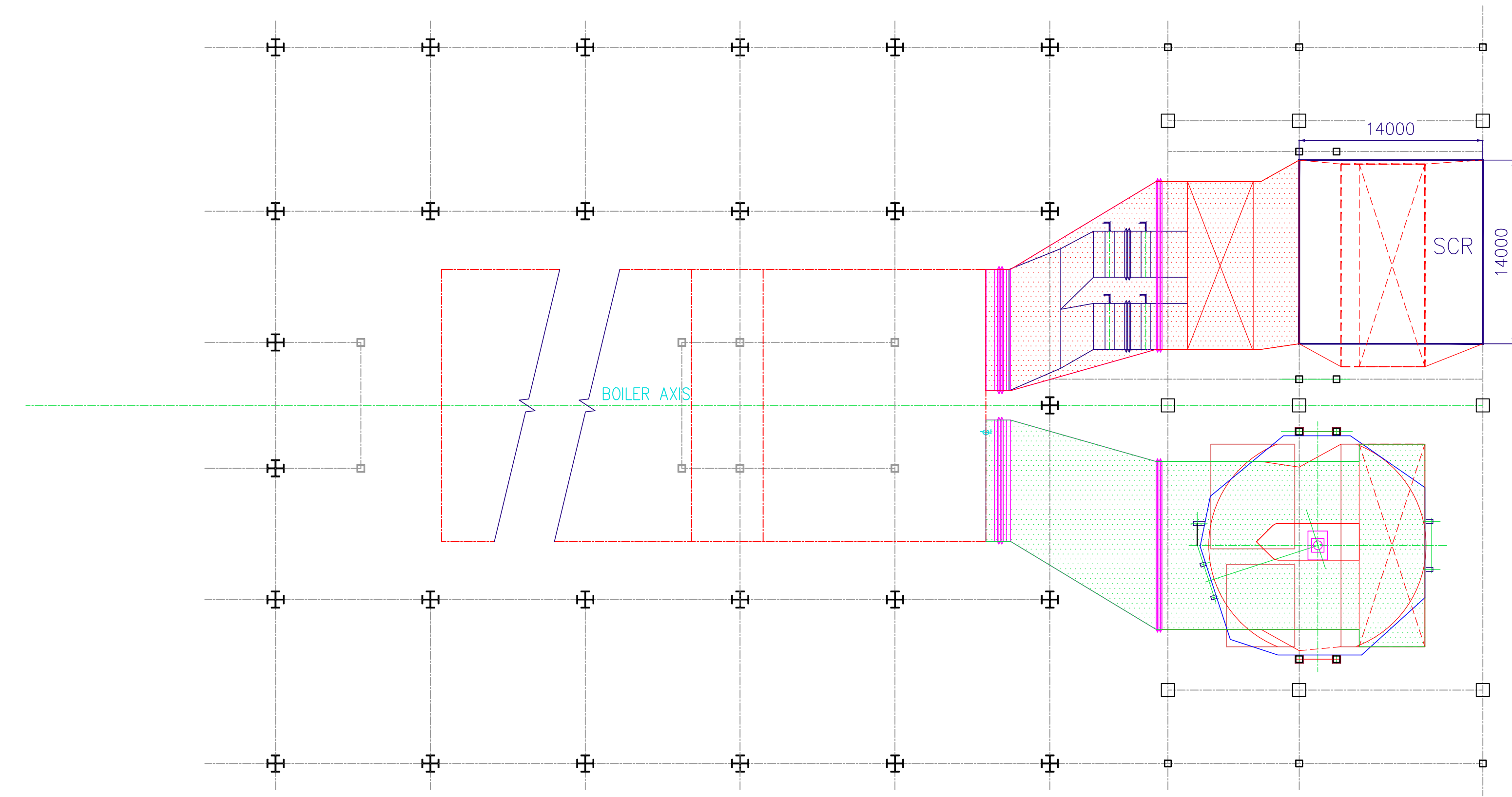
REV	DATE	ALTERED	CHD & APPD
01			
02			

CUSTOMER				CUSTOMER NO. :			
PROJECT				FOR TENDER PURPOSE			
Bharat Heavy Electricals Limited., Boiler Plant Unit, Tiruchirapalli-620014							
NAME	SIGNATURE	DATE	TITLE				
DRINDEHARAJ KUMAR	-Sd-	26.10.2016					
CHIDJ SARAVANAKUMAR	-Sd-	02.11.2016					
APPJIM THANDAPANI	-Sd-	03.11.2016					
ALL DIMENSIONS IN MILLIMETRE							
PROJECTION				SCALE N.A.			
DRG.NO.				REV. NO.			
1-SR-DNX-00005				00			



MILL BAY GRADE EL. 0.0

SIDE ELEVATION



PLAN

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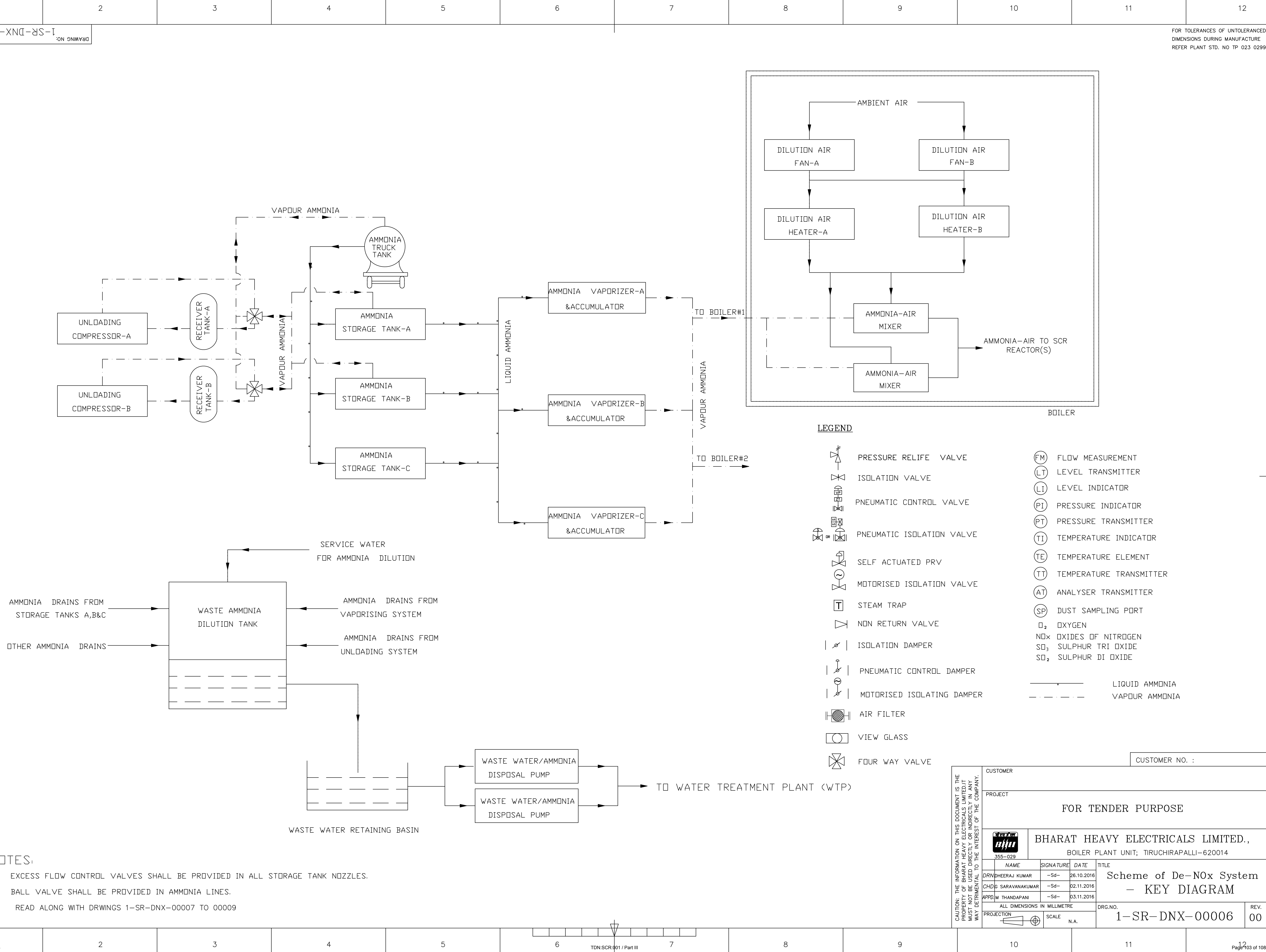
PROJECT – DN103

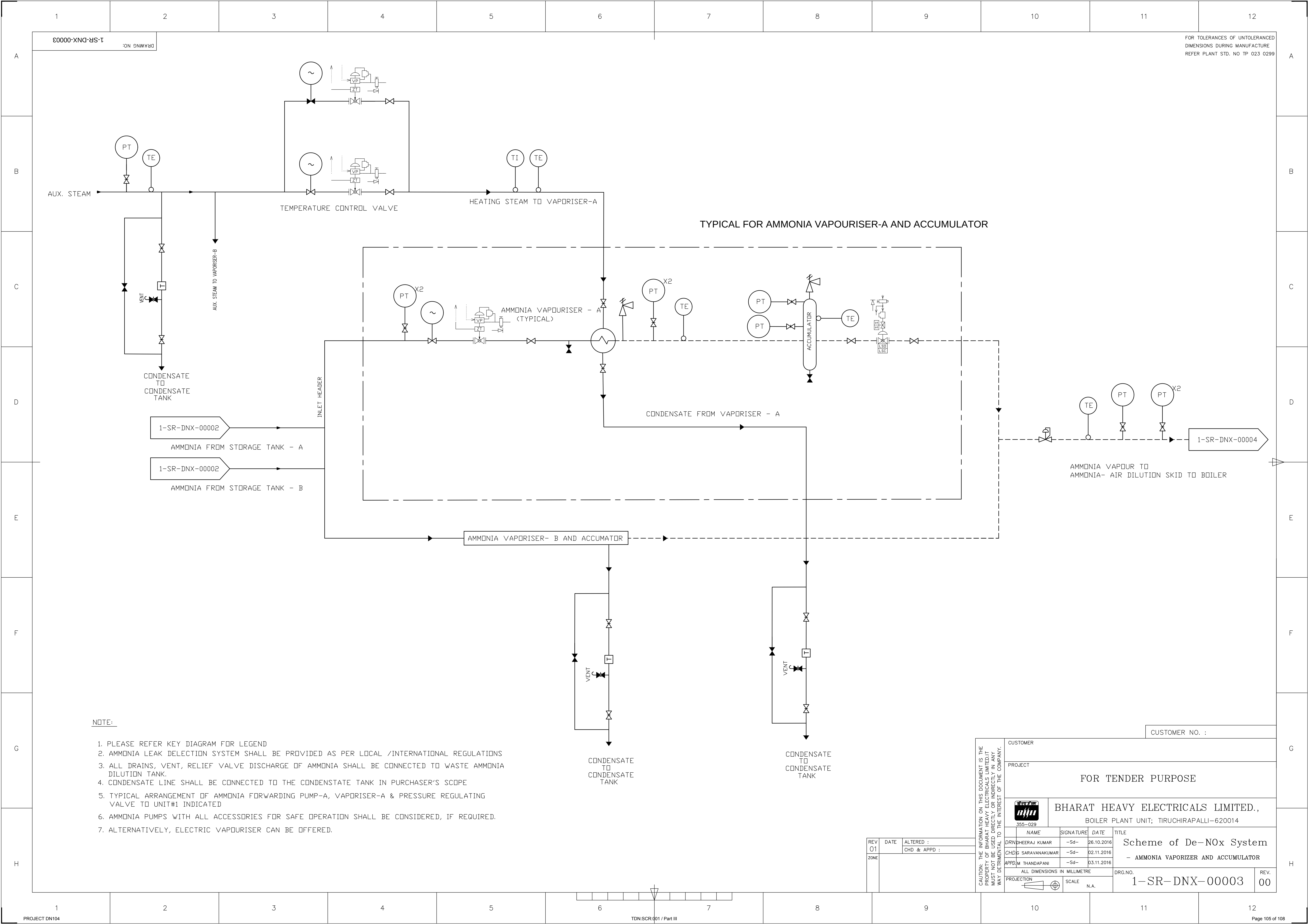
DEPT CODE	NAME	SIGN	DATE
DRN	M.PRAKASH	M.Praakash	02.11.16
CHD	M.PRAKASH	M.Praakash	02.11.16
APPD	K.A.PALANISAPPAN	K.A.Pal	02.11.16

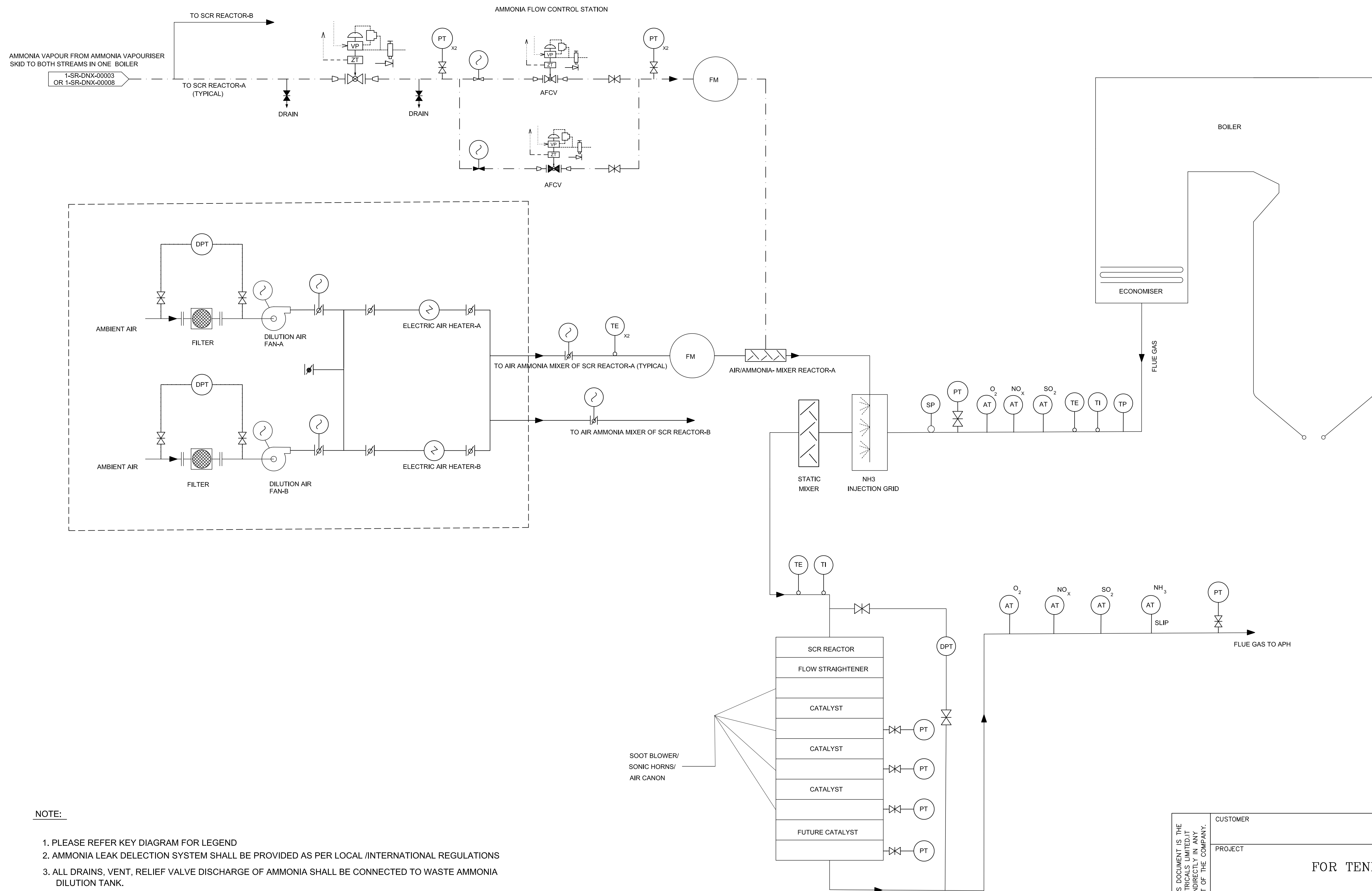
SCALE : NTS

DRG No. 0-SK-SCR-00003

SHEET 1 OF 1 REV 00



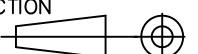


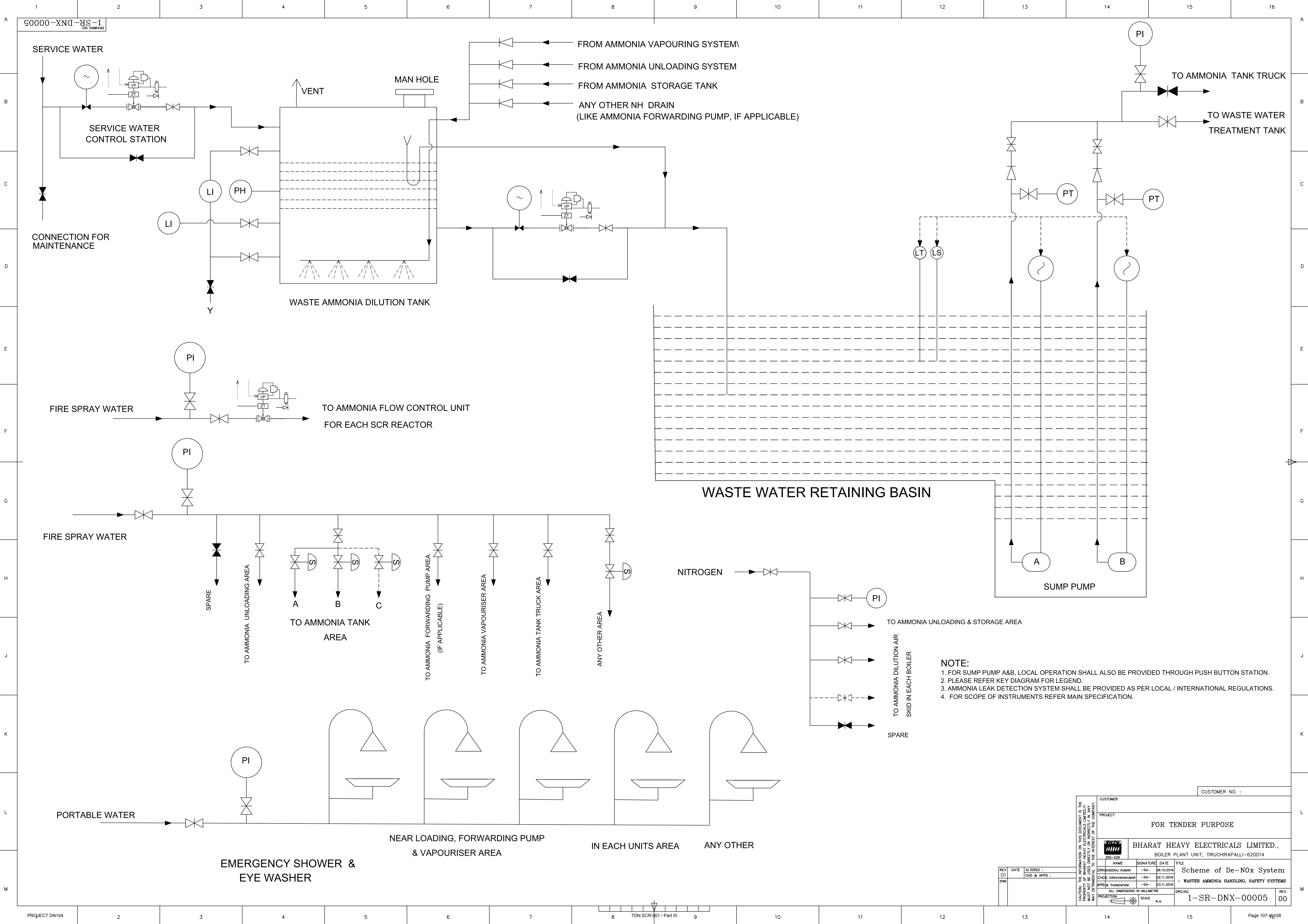


NOTE:

1. PLEASE REFER KEY DIAGRAM FOR LEGEND
2. AMMONIA LEAK DETECTION SYSTEM SHALL BE PROVIDED AS PER LOCAL /INTERNATIONAL REGULATIONS
3. ALL DRAINS, VENT, RELIEF VALVE DISCHARGE OF AMMONIA SHALL BE CONNECTED TO WASTE AMMONIA DILUTION TANK.
4. CONDENSATE LINE SHALL BE CONNECTED TO THE CONDENSATE TANK IN PURCHASER'S SCOPE
5. TYPICAL ARRANGEMENT OF AMMONIA FORWARDING PUMP-A, VAPORISER-A & PRESSURE REGULATING VALVE TO UNIT#1 INDICATED
6. ALTERNATIVELY, STEAM DILUTION AIR HEATER CAN BE PROVIDED INCLUSIVE OF CONDENSATE TRAP STATION.
7. N₂ INERT PIPING & CYLINDER SHALL BE PROVIDED.
8. CATALYST ARRANGEMENT SHOWN IS INDICATIVE ONLY.
9. ELECTRIC ACTUATED DAMPERS ARE SHOWN IN DILUTION AIR SKID.
ALTERNATIVELY, PNEUMATIC DAMPERS CAN BE OFFERED.

REV	DATE	ALTERED :
01		CHD & APPD :
ZONE		

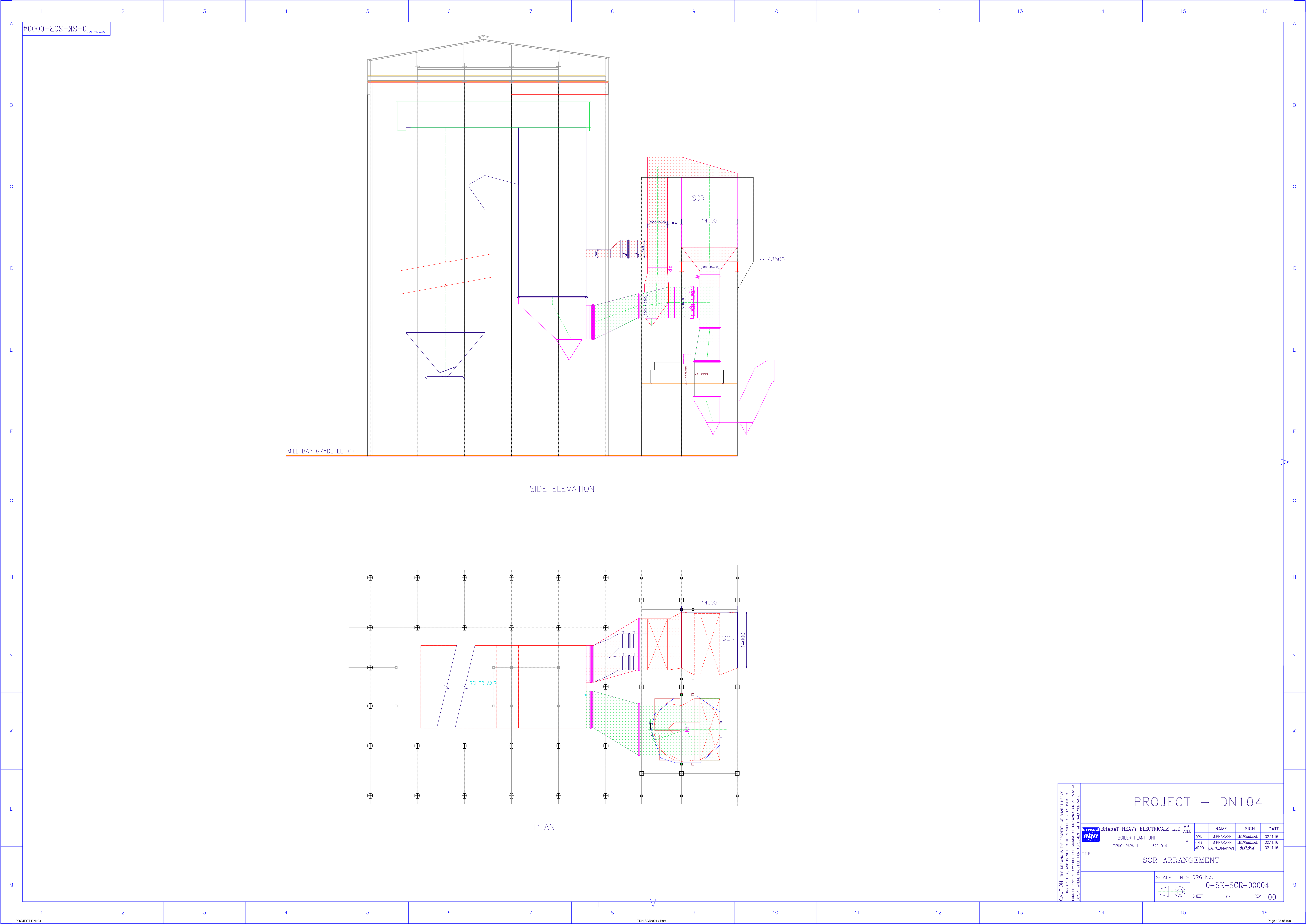
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	PROJECT			
	FOR TENDER PURPOSE			
	 BHARAT HEAVY ELECTRICALS LIMITED., BOILER PLANT UNIT; TIRUCHIRAPALLI-620014			
	355-029			
	NAME	SIGNATURE	DATE	TITLE
	DR/NDHEERAJ KUMAR	- Sd -	26.10.2016	Scheme of De-N₂O_x System - BOILER ISLAND
	CHD/S SARAVANAKUMAR	- Sd -	02.11.2016	
	APPD/M THANDAPANI	- Sd -	03.11.2016	
ALL DIMENSIONS IN MILLIMETRE				
PROJECTION			SCALE	DRG.NO.
	N.A.			1-SR-DNX-00004
				REV. 00



NOTE:
1. FOR SUMP PUMP A&B, LOCAL OPERATION SHALL ALSO BE PROVIDED THROUGH PUSH BUTTON STATION.
2. PLEASE REFER KEY DIAGRAM FOR LEGEND.
3. AMMONIA LEAK DETECTION SYSTEM SHALL BE PROVIDED AS PER LOCAL / INTERNATIONAL REGULATIONS.
4. FOR SCOPE OF INSTRUMENTS REFER MAIN SPECIFICATION.

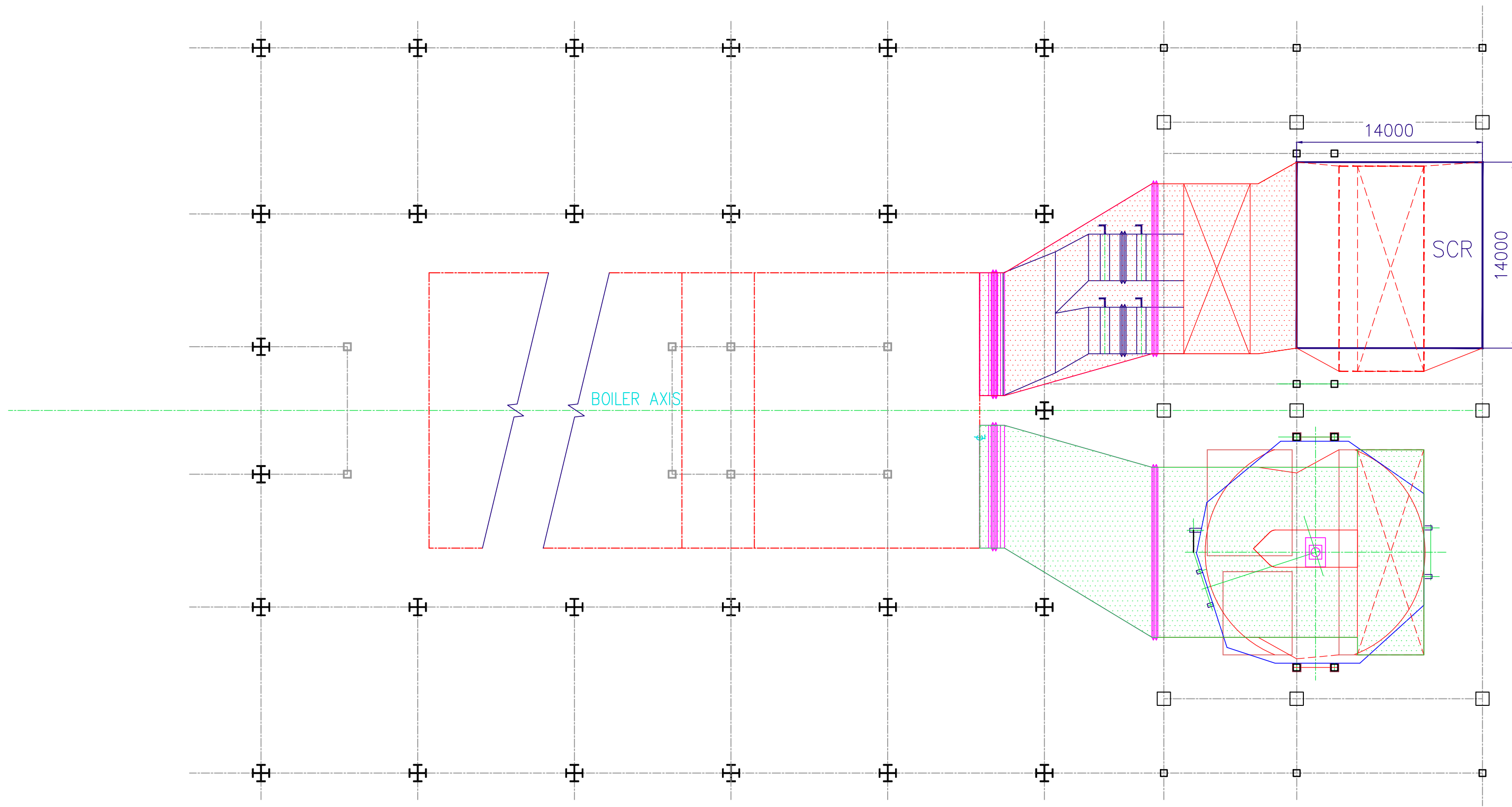
CUSTOMER NO. :			
PROJECT			
FOR TENDER PURPOSE			
BHARAT HEAVY ELECTRICALS LIMITED., BOILER PLANT UNIT, TIRUCHIRAPALLI-620014			
NAME	SIGNATURE	DATE	TITLE
DRINDEHARAJ KUMAR	-Sd-	26.10.2016	
CHIDJ SARAVANAKUMAR	-Sd-	02.11.2016	
APPJIM THANDAPANI	-Sd-	03.11.2016	
ALL DIMENSIONS IN MILLIMETRE			
PROJECTION	SCALE	N.A.	
DRG.NO.			REV.
1-SR-DNX-00005			00

REV	DATE	ALTERED :
01		CHD & APPD :
ZONE		



MILL BAY GRADE EL. 0.0

SIDE ELEVATION



PLAN

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PROJECT – DN104

DEPT CODE	NAME	SIGN	DATE
DRN	M.PRAKASH	M.Praakash	02.11.16
CHD	M.PRAKASH	M.Praakash	02.11.16
APPD	K.A.PALANISAPPAN	K.A.Pal	02.11.16

SCALE : NTS

DRG No. 0-SK-SCR-00004

SHEET 1 OF 1 REV 00