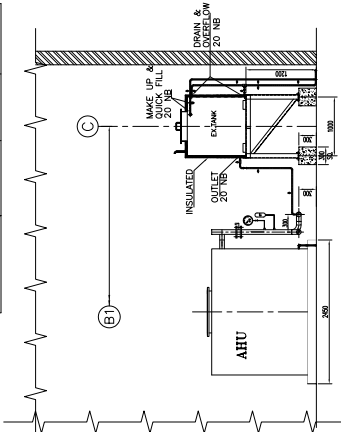


| TECHNICAL DATA OF EQUIPMENT |           |               |              |                  |                    |               |                |           |           |
|-----------------------------|-----------|---------------|--------------|------------------|--------------------|---------------|----------------|-----------|-----------|
| DESCRIPTION                 | AHU       | COOLING TOWER | CHILLER UNIT | COND. WATER PUMP | CHILLED WATER PUMP | FRESH AIR FAN | EXPANSION TANK | C. DOCTOR | C. DOCTOR |
| MAKE                        | ---       | ---           | ---          | ---              | ---                | ---           | ---            | ---       | ---       |
| MODEL                       | 17000 CMH | 280 USGPM     | 57 CMH       | 45 CMH           | 2250 CMH           | 1A-15         | 1A-15          | 1A-15     | 1A-15     |
| CAPACITY                    | 80 TR     | 57 CMH        | 45 CMH       | 2250 CMH         | 1A-15              | 1A-15         | 1A-15          | 1A-15     | 1A-15     |
| STATIC PRESS. HEAD          | 50 MMWC   | 30 M          | 30 M         | 30 M             | 28 MMWC            | 28 MMWC       | 28 MMWC        | 28 MMWC   | 28 MMWC   |
| MAXIMUM FLOW                | 100 UP    | 100 UP        | 100 UP       | 100 UP           | 100 UP             | 100 UP        | 100 UP         | 100 UP    | 100 UP    |
| QUANTITY                    | 3 (2H+1S) | 2 (1H+1S)     | 2 (1H+1S)    | 2 (1H+1S)        | 2 (1H+1S)          | 2 (1H+1S)     | 2 (1H+1S)      | 2 (1H+1S) | 2 (1H+1S) |
| STATIC WEIGHT(KGS)          | 700       | 424           | 287          | 287              | 80                 | 80            | 80             | 80        | 80        |
| OPERATING WEIGHT(KGS)       | 850       | 1256          | 2821         | 358              | 96                 | 96            | 96             | 96        | 96        |

| UTILITY LIST  |                       |                         |                         |
|---------------|-----------------------|-------------------------|-------------------------|
| DESCRIPTION   | EXPANSION TANK        | PAN HUMIDIFIER          | COOLING TOWER           |
| ELEVATION     | ELV.+10.5M            | ELV.+16.4M              | ELV.+16.4M              |
| MAKE UP WATER | 1 M <sup>3</sup> /Hr. | 0.4 M <sup>3</sup> /Hr. | 0.4 M <sup>3</sup> /Hr. |



VIEW : Z-Z  
(ENLARGED SCALE -1:2)

- NOTES :
- 1) ALL DIMENSIONS ARE IN MM. AND ELEVATIONS ARE IN MTRS.
  - 2) ALL WALL OPENING & GROUING ARE IN CDC'S SCOPE.
  - 3) ALL CIVIL WORK, AIR TIGHT DOOR & FALSE CEILING ARE IN BHEL'S SCOPE.
  - 4) FOR REF. DRAWING

- 1) DUCTING LAYOUT AT EL. 10.5 M. DRG. NO.: CDC/NAMRUP-8631
- 2) GA OF AIR HANDLING UNIT, DRG. NO.: CDC/NAMRUP-8637
- 3) GA OF COOLING TOWER, DRG. NO.: CDC/NAMRUP-8644
- 4) GA OF CHILLER UNIT, DRG. NO.: CDC/NAMRUP-8645
- 5) GA OF FRESH AIR FAN, DRG. NO.: CDC/NAMRUP-8645
- 6) GA OF CONDENSER WATER PUMP, DRG. NO.: CDC/NAMRUP-8636
- 7) GA OF CHILLED WATER PUMP, DRG. NO.: CDC/NAMRUP-8636
- 8) PIPING LAYOUT FOR AC SYSTEM, DRG. NO.: CDC/NAMRUP-8632
- 9) FOUNDATION LAYOUT FOR AC SYSTEM, DRG. NO.: CDC/NAMRUP-8630
- 10) ARCHITECTURAL PLAN AT EL.+10.500M, JPL BHEL DRG. NO.: 0-38142-01885
- 11) ARCHITECTURAL PLAN AT EL.+10.500M, JPL BHEL DRG. NO.: 0-38142-01887
- 12) ARCHITECTURAL PLAN AT EL.+10.500M, JPL BHEL DRG. NO.: 0-38142-01888
- 13) ROTATION OF ALL PUMPS (CHILLED WATER PUMP & CONDENSATE WATER PUMP) ARE CCW LOOKING FROM DRIVE END.
- 14) ALL PIPES & FITTINGS BELOW 65 NB SHALL BE GI & OTHER PIPES & FITTINGS FOR CHILLED WATER & CONDENSATE WATER PUMP SHALL BE MS. SEAMLESS PIPE.
- 15) ALL PLANGE SHALL BE AS PER ANSI 16.5 PLATE PLANGE, RP TYPE.
- 16) EXPANSION TANK AND EXPANSION TANK SHALL BE INSULATED WITH 50 mm EXPANDED POLYSTYRENE.
- 17) ALL DRAIN TO BE TERMINATED AT THE NEAREST DRAIN POINT UP TO 6M DISTANCE.
- 18) QTY. OF PIPES MAY VARY AS PER SITE CONDITION.

| REV. | NO. | DESCRIPTION                                 | DATE     |
|------|-----|---------------------------------------------|----------|
| 1    | 0   | REVISED AS PER BHEL COMMENTS DATED 22.07.15 | 03.10.15 |
| 2    | 0   | FIRST SUBMISSION                            | 14.07.15 |

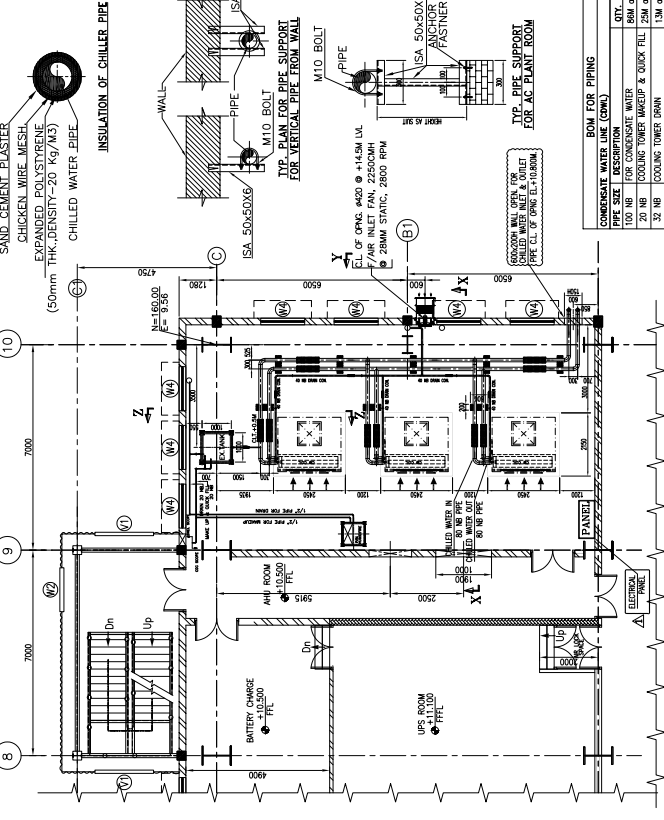
CUSTOMER: ASSAM POWER GENERATION CORPORATION LTD.  
GUWAHATI, ASSAM

CONSULTANT: DEVELOPMENT CONSULTANTS (P) LTD.  
CONSULTING ENGINEERS

PROJECT: 1X100MW NAMRUP COMBINED CYCLE REPLACEMENT  
POWER PROJECT (PHASE-I) AT NAMRUP, ASSAM

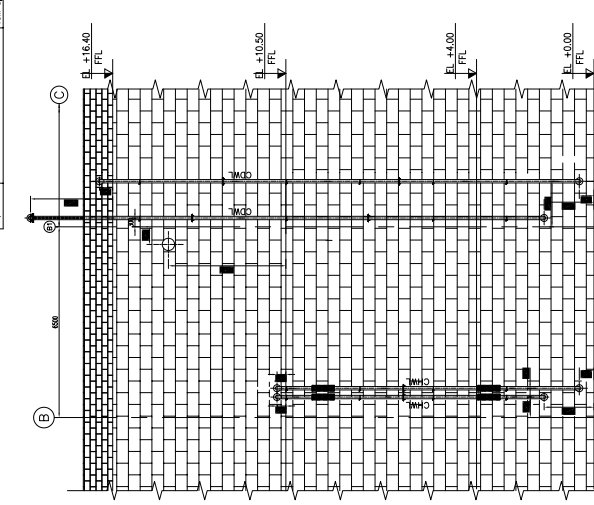
EPC CONTRACTOR: BHARAT HEAVY ELECTRICALS LTD.  
HYDERABAD

| TITLE: PIPING LAYOUT FOR AC SYSTEM |                 |                    |            |
|------------------------------------|-----------------|--------------------|------------|
| CV                                 | ME              | EL                 | CM         |
| DEPT.                              | SHEET SCALE     | CDC DOC. NO.       | SHEET SIZE |
| 1:90                               | CDC/NAMRUP-8632 | A1                 | REV. : 1   |
| SIGN.                              | DATE            | SHEET NO. : 1 OF 1 | REV. : 1   |

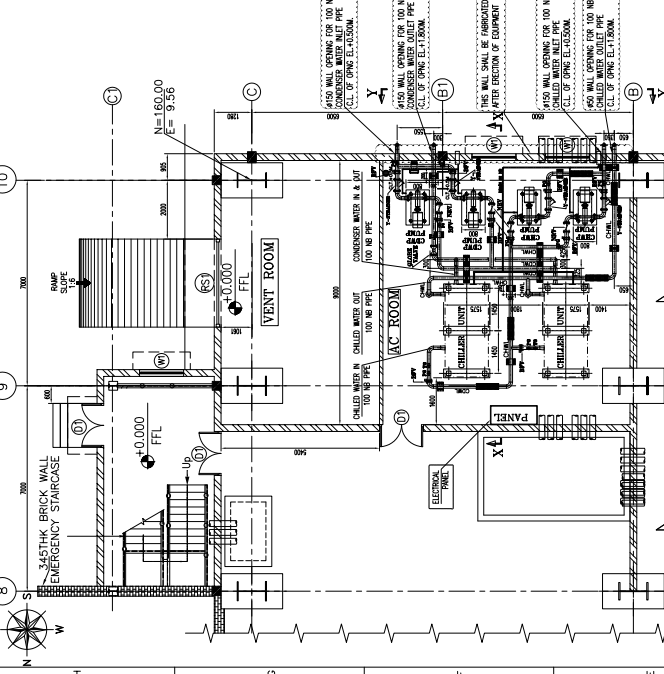


PLAN AT EL.+10.50M LVL

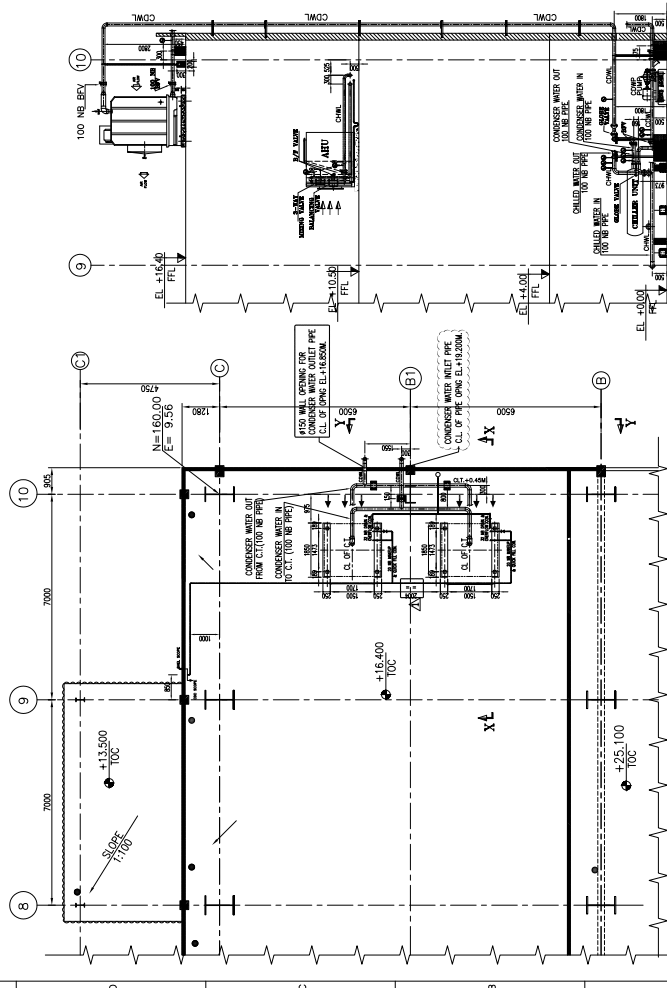
| CONDENSATE WATER LINE (CHW) |                      | QTY | MARKED  |
|-----------------------------|----------------------|-----|---------|
| 100 NB CONDENSATE WATER     | FOR CONDENSATE WATER | 25M | APPROX. |
| 20 NB CONDENSATE WATER      | FOR CONDENSATE WATER | 15M | APPROX. |
| 32 NB CONDENSATE WATER      | FOR CONDENSATE WATER | 15M | APPROX. |
| 40 NB CONDENSATE WATER      | FOR CONDENSATE WATER | 15M | APPROX. |
| 50 NB CONDENSATE WATER      | FOR CONDENSATE WATER | 15M | APPROX. |
| 60 NB CONDENSATE WATER      | FOR CONDENSATE WATER | 15M | APPROX. |
| 70 NB CONDENSATE WATER      | FOR CONDENSATE WATER | 15M | APPROX. |
| 80 NB CONDENSATE WATER      | FOR CONDENSATE WATER | 15M | APPROX. |
| 90 NB CONDENSATE WATER      | FOR CONDENSATE WATER | 15M | APPROX. |
| 100 NB CONDENSATE WATER     | FOR CONDENSATE WATER | 15M | APPROX. |



VIEW : Y-Y



PLAN AT EL.+0.00M LVL



VIEW : X-X

PLAN AT EL.+16.400M LVL