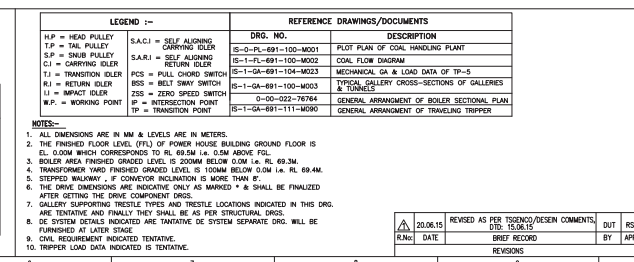
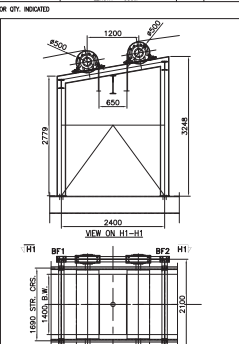
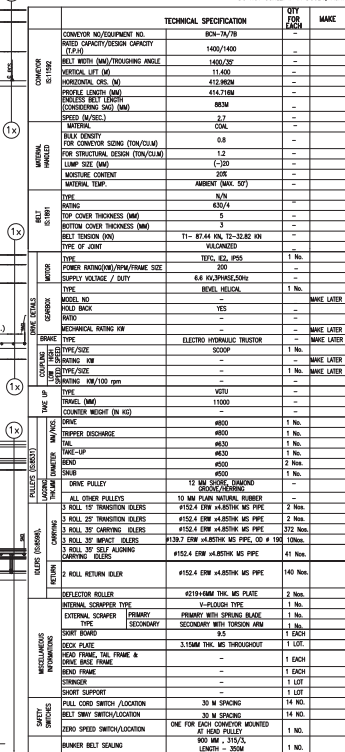


2

DO NOT SCALE. IF IN DOUBT, ASK.



|                |                                                                                        |  |  |  |                                 |      |      |          |              |  |
|----------------|----------------------------------------------------------------------------------------|--|--|--|---------------------------------|------|------|----------|--------------|--|
| OWNER:         | TELANGANA STATE POWER GENERATION CORPORATION LTD.                                      |  |  |  |                                 |      |      |          |              |  |
|                | HYDERABAD – TELANGANA, INDIA                                                           |  |  |  |                                 |      |      |          |              |  |
| CONSULTANT     | DESEIN PRIVATE LIMITED                                                                 |  |  |  |                                 |      |      |          |              |  |
|                |   |  |  |  |                                 |      |      |          |              |  |
| PROJECT :      | BHADRADRI THERMAL POWER STATION<br>4 X 270 MW, UNITS-1 TO 4, MANGURU, TELANGANA, INDIA |  |  |  |                                 |      |      |          |              |  |
| EPC CONTRACTOR | BHARAT HEAVY ELECTRICALS LIMITED                                                       |  |  |  |                                 |      |      |          |              |  |
|                | INDUSTRIAL SYSTEMS GROUP                                                               |  |  |  |                                 |      |      |          |              |  |
|                | ISG-BANGALORE                                                                          |  |  |  |                                 |      |      |          |              |  |
|                |                                                                                        |  |  |  | NAME                            | SIGN | DATE |          |              |  |
|                |                                                                                        |  |  |  | DRN. DUT                        |      |      | 30.04.15 |              |  |
|                |                                                                                        |  |  |  | CPQ. MNK                        |      |      | 30.04.15 |              |  |
|                |                                                                                        |  |  |  | APP. RSP/VSD                    |      |      | 30.04.15 |              |  |
|                | TITLE :                                                                                |  |  |  |                                 |      |      |          | TOTAL SHEETS |  |
|                | GA AND LOAD DATA OF BCN-7A/B                                                           |  |  |  |                                 |      |      |          | SHEET NO.    |  |
| SCALE          | BHEL JOB NO. IS-1-14-2007                                                              |  |  |  | BHEL-ISG IS-1-4-GA-691-101-M014 |      |      |          |              |  |

DO NOT SCALE. IF IN DOUBT, ASK



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No.

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|-----------|-------|--------------|
| RJN:      | DATE: | BRIEF RECORD |
| REVISIONS |       |              |

OWNER

CONSULTANT

|                                                                                       |           |
|---------------------------------------------------------------------------------------|-----------|
|  | संस्कृत   |
|                                                                                       | PROJECT : |

EPC

• **•••••**

TELANGANA STATE POWER GENERATION CORPORATION LTD.

HYDERABAD - TELANGANA, INDIA

|    |                       |
|----|-----------------------|
| IT | DECEM PRIVATE LIMITED |
|----|-----------------------|

DESEIN PRIVATE LIMITED

MANHOUTH THERMAL POWER STATION

MANUGURU THERMAL POWER STATION  
4 X 270 MW. UNITS-1 TO 4. MANUGURU, TELANGANA, INDIA

|                                  |  |      |      |      |     |
|----------------------------------|--|------|------|------|-----|
| DIADAM HEAVY ELECTRICALS LIMITED |  | NAME | SIGN | DATE | REV |
|----------------------------------|--|------|------|------|-----|

|                                  |  |  |          |          |   |
|----------------------------------|--|--|----------|----------|---|
| BHARAT HEAVY ELECTRICALS LIMITED |  |  | NAME     | DATE     | A |
| INDUSTRIAL SYSTEMS GROUP         |  |  | DRN. DUT | 30.04.15 |   |

|      |          |          |    |
|------|----------|----------|----|
| CHD. | MNK      | 30.04.15 | NO |
| APP  | RSR /USD | 30.04.15 | OF |

|         |       |    |
|---------|-------|----|
| TITLE : | TOTAL | 05 |
|---------|-------|----|

GA AND LOAD DATA OF BCN-7A/B

|     |  |
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| 440 |  |
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|  |          |     |     |
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|  |          | NO. |     |
|  | DUEL ISC |     | REV |

SCALE

|                           |                      |                      |    |
|---------------------------|----------------------|----------------------|----|
| BHEL JOB NO. IS-1-14-2007 | BHEL-ISO<br>DRG.NO.: | IS-1-GA-691-101-M014 | 01 |
|---------------------------|----------------------|----------------------|----|

1

Size-A

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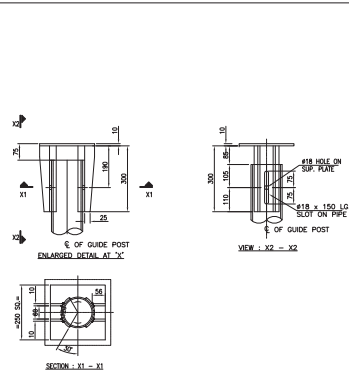
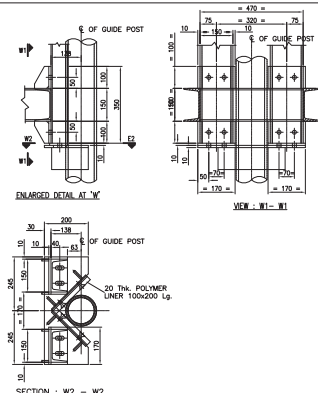
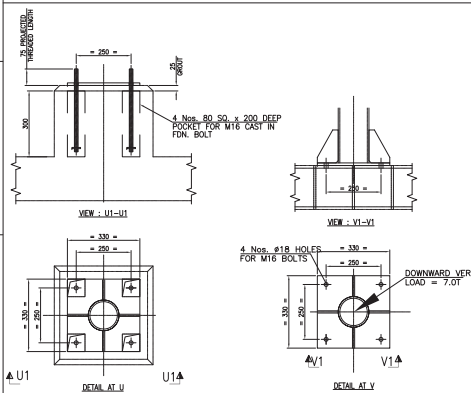
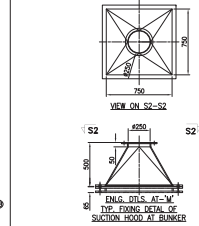
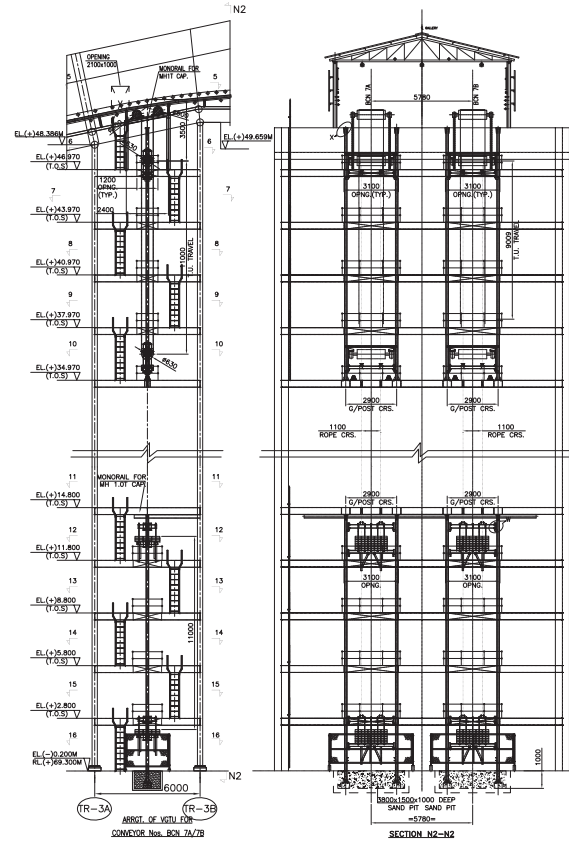
FIRST ANGLE PROJECTION

ALL DIMENSIONS ARE IN MM

#10W-101-T69-VG-T-SI

ON DRAWING

DO NOT SCALE, IF IN DOUBT, ASK.

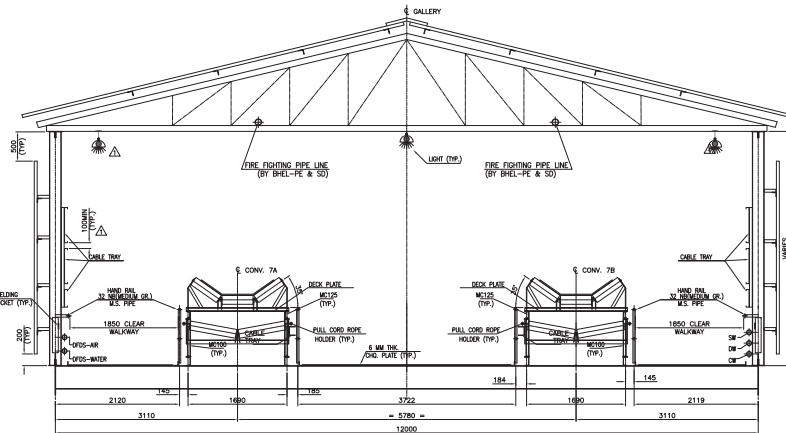


| REV. | DATE     | REVISIONS                            |
|------|----------|--------------------------------------|
| 1    | 20.06.15 | REVISED AS PER TENDR/DESIGN COMMENTS |
| 2    | 15.08.15 | BRIEF RECORD                         |

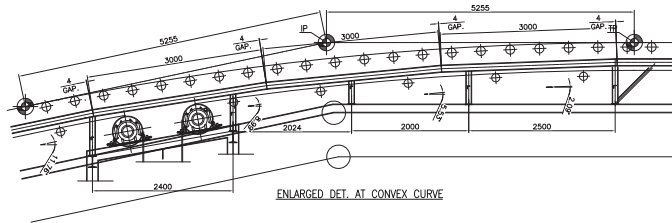
|                 |                                                                                        |                    |                      |         |
|-----------------|----------------------------------------------------------------------------------------|--------------------|----------------------|---------|
| OWNER:          | TELANGANA STATE POWER GENERATION CORPORATION LTD.<br>HYDERABAD - TELANGANA, INDIA      |                    |                      |         |
| CONSULTANT:     | DESEIN PRIVATE LIMITED                                                                 |                    |                      |         |
| PROJECT :       | MANUGURU THERMAL POWER STATION<br>4 X 270 MW, UNITS-1 TO 4, MANUGURU, TELANGANA, INDIA |                    |                      |         |
| EPC CONTRACTOR: | BHARAT HEAVY ELECTRICALS LIMITED<br>INDUSTRIAL SYSTEMS GROUP<br>ISG-BANGALORE          |                    |                      |         |
| TITLE :         | GA AND LOAD DATA OF BCN-7A/B                                                           |                    |                      |         |
| SCALE:          | BHEL JOB NO. IS-1-14-2007                                                              | BHEL-1SG DRG-J05.1 | IS-1-GA-691-101-M014 | REV. 01 |
|                 |                                                                                        |                    |                      | SIZE-A1 |

| REV. | DATE     | REVISIONS                            |
|------|----------|--------------------------------------|
| 1    | 30.04.15 | REVISED AS PER TENDR/DESIGN COMMENTS |
| 2    | 30.04.15 | BRIEF RECORD                         |

DO NOT SCALE. IF IN DOUBT, ASK.



GALLERY CROSS SECTION  
FOR BUNKER CONVEYOR HORIZONTAL  
NOT IN TRIPPER TRAVEL REGION



ENLARGED DET. AT CONVEX CURVE

|                                                                                       |              |                                                                                                                                                                                                                                                                          |      |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
|---------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|--|----------------------|--|---------|--|--|--|---------|--------------|------|------------------------------|-----------|-----|----------|----|-----|-----|----------|----|-----|---------|----------|-----|
| OWNER :                                                                               |              | TELANGANA STATE POWER GENERATION CORPORATION LTD.                                                                                                                                                                                                                        |      |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| CONSULTANT :                                                                          |              | HYDERABAD – TELANGANA, INDIA                                                                                                                                                                                                                                             |      |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
|  |              | DESEIN PRIVATE LIMITED                                                                                                                                                                                                                                                   |      |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| PROJECT :                                                                             |              | MANUGURU THERMAL POWER STATION<br>4 X 270 MW, UNITS-1 TO 4, MANUGURU, TELANGANA, INDIA                                                                                                                                                                                   |      |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| LOCAL CONTRACTOR :                                                                    |              | BHARAT HEAVY ELECTRICITIES LIMITED<br>INDUSTRIAL SYSTEMS GROUP<br>ISG-BANGALORE                                                                                                                                                                                          |      |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| ISP :                                                                                 |              | <table><tr><td>NAME</td><td>SIGN</td><td>DATE</td><td>REV.</td></tr><tr><td>DRN</td><td>DUT</td><td>30.04.16</td><td>05</td></tr><tr><td>CHD</td><td>WNC</td><td>30.04.16</td><td>05</td></tr><tr><td>APP</td><td>RSP/YSD</td><td>30.04.16</td><td>VAR</td></tr></table> |      |                   |  |                      |  |         |  |  |  | NAME    | SIGN         | DATE | REV.                         | DRN       | DUT | 30.04.16 | 05 | CHD | WNC | 30.04.16 | 05 | APP | RSP/YSD | 30.04.16 | VAR |
| NAME                                                                                  | SIGN         | DATE                                                                                                                                                                                                                                                                     | REV. |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| DRN                                                                                   | DUT          | 30.04.16                                                                                                                                                                                                                                                                 | 05   |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| CHD                                                                                   | WNC          | 30.04.16                                                                                                                                                                                                                                                                 | 05   |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| APP                                                                                   | RSP/YSD      | 30.04.16                                                                                                                                                                                                                                                                 | VAR  |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
|  |              | <table><tr><td>TITLE :</td><td>TOTAL SHEETS</td><td>05</td></tr><tr><td>GA AND LOAD DATA OF BCN-7A/B</td><td>SHEET NO.</td><td>05</td></tr></table>                                                                                                                      |      |                   |  |                      |  |         |  |  |  | TITLE : | TOTAL SHEETS | 05   | GA AND LOAD DATA OF BCN-7A/B | SHEET NO. | 05  |          |    |     |     |          |    |     |         |          |     |
| TITLE :                                                                               | TOTAL SHEETS | 05                                                                                                                                                                                                                                                                       |      |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| GA AND LOAD DATA OF BCN-7A/B                                                          | SHEET NO.    | 05                                                                                                                                                                                                                                                                       |      |                   |  |                      |  |         |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |
| SCALE :                                                                               |              | BHEL JOB NO. IS-1-14-2007                                                                                                                                                                                                                                                |      | BHEL-ISP DRG.NO.: |  | IS-1-GA-691-101-M014 |  | REV. 01 |  |  |  |         |              |      |                              |           |     |          |    |     |     |          |    |     |         |          |     |

| Compliance report                              |                                                                                                                                                                                                                                                              |                                                                                                                      |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 4 x 270 MW Bhadradi TPS - Coal Handling System |                                                                                                                                                                                                                                                              |                                                                                                                      |
| Drg/Doc no:IS-1-GA-691-101-M014 Rev00          |                                                                                                                                                                                                                                                              |                                                                                                                      |
| Drg/Doc title: GA & LOAD DATA OF BCN-7AB       |                                                                                                                                                                                                                                                              |                                                                                                                      |
| Sl no                                          | TSGENCO/DESEIN COMMENTS, Dtd: 15.06.2015                                                                                                                                                                                                                     | BHEL reply Dtd: 18-08-15                                                                                             |
| 1                                              | Please correct the title of drawing as "load data" instead of "load date".                                                                                                                                                                                   | Noted & revised.                                                                                                     |
| 2                                              | Please delete coal handling package and include Units 1 to 4 in Project details.                                                                                                                                                                             | Noted & revised.                                                                                                     |
| 3                                              | Please include reference number for GA of boiler sectional plan.                                                                                                                                                                                             | Noted & revised.                                                                                                     |
| 4                                              | Transition idler is given as 15 & 25 degree in drawing while the same is mentioned as 10 & 20 in details                                                                                                                                                     | Noted & revised.                                                                                                     |
| 5                                              | Please correct vertical lift in idlers profile                                                                                                                                                                                                               | Noted & revised.                                                                                                     |
| 6                                              | As per Design memorandum, All Return idlers shall be single roll, flat type except for Conveyor of length more than 400 M. For such conveyors return idler shall be of two roll V-type, with 10 deg troughing angle. Please correct the drawing accordingly. | Noted & revised.                                                                                                     |
| 7                                              | Please indicate distance between column center line TP-5/03 and support. Also clarify what does 1000x means.                                                                                                                                                 | Shall be indicated in the civil/structural gallery drg. Also, "100x" is typographical error & same is corrected now. |
| 8                                              | Refer elevation of tripper: Column 7 is repeated. Please check and correct.                                                                                                                                                                                  | Noted & revised.                                                                                                     |
| 9                                              | Column numbers are not matching in elevation and plan view. Please check and correct.                                                                                                                                                                        | Noted & revised.                                                                                                     |
| 10                                             | Elevation of bunker/ tripper floor in metres is 50.1 as per bunker sizing calculations while the TOC in tripper floor is indicated as 49.99m. Please check and correct.                                                                                      | Noted & revised.                                                                                                     |
| 11                                             | Refer technical specification for switches: Please add type of switches as addressable type PCS and BSS shall be located on either side of the conveyor at a distance of 24m as shown in the switches profile. Please correct.                               | Noted & revised in line with NIT specifications.                                                                     |
| 12                                             | Please indicate monorail missing in sheet 2 of 4.                                                                                                                                                                                                            | Noted & revised.                                                                                                     |
| 13                                             | Please provide the length of monorail extended beyond column 36 which shall be minimum 3 m.                                                                                                                                                                  | Noted & revised.                                                                                                     |
| 14                                             | Please include loads of travelling tripper, drive equipment, dust suppression equipment etc.                                                                                                                                                                 | Noted & revised.                                                                                                     |
| 15                                             | Please ensure there is no fouling of vertical gravity take up with the structures or ducts.                                                                                                                                                                  | Noted & revised.                                                                                                     |
| 16                                             | Pls. indicate the distance b/w the portal & bottom of the gallery.                                                                                                                                                                                           | Shall be indicated in the civil/structural gallery drg.                                                              |