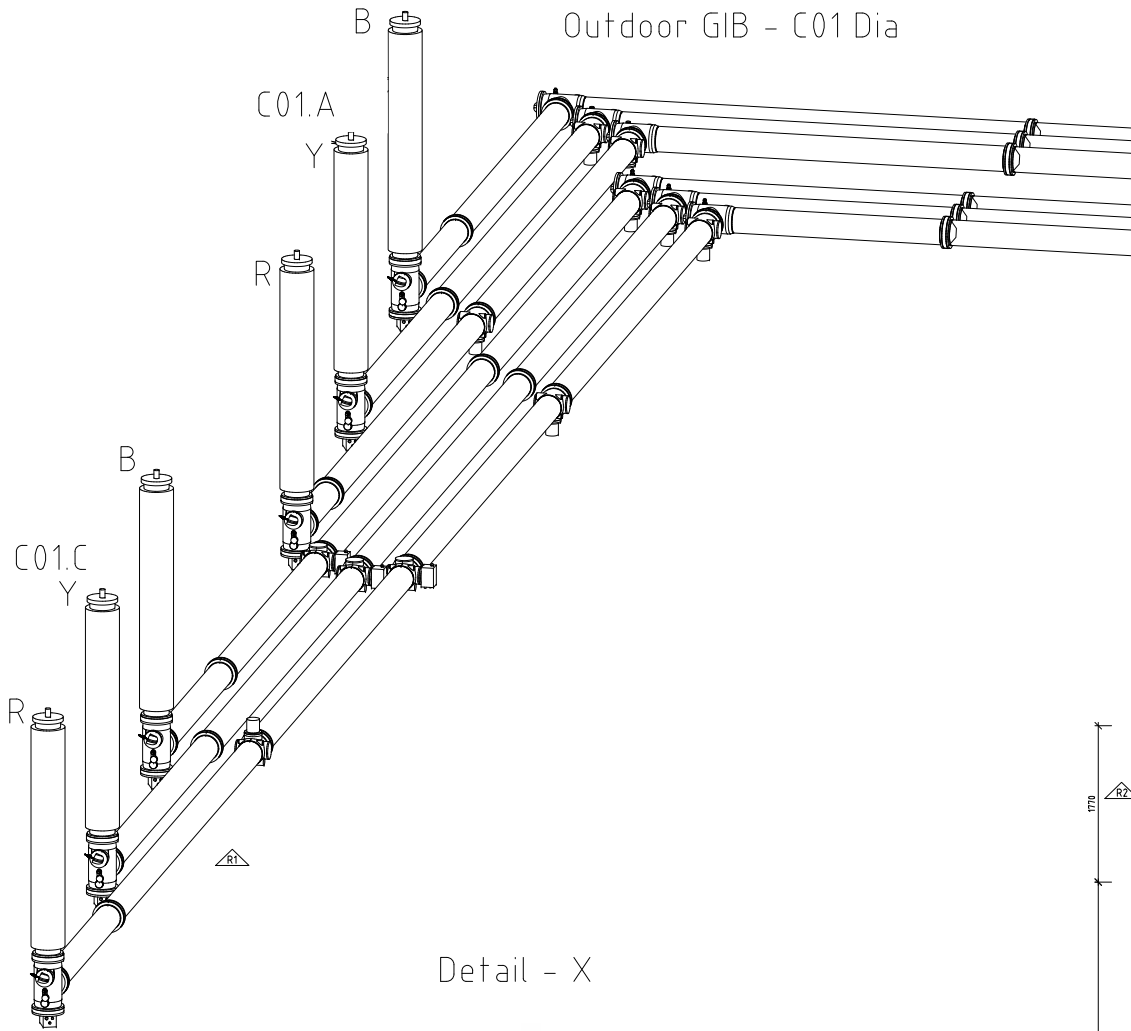
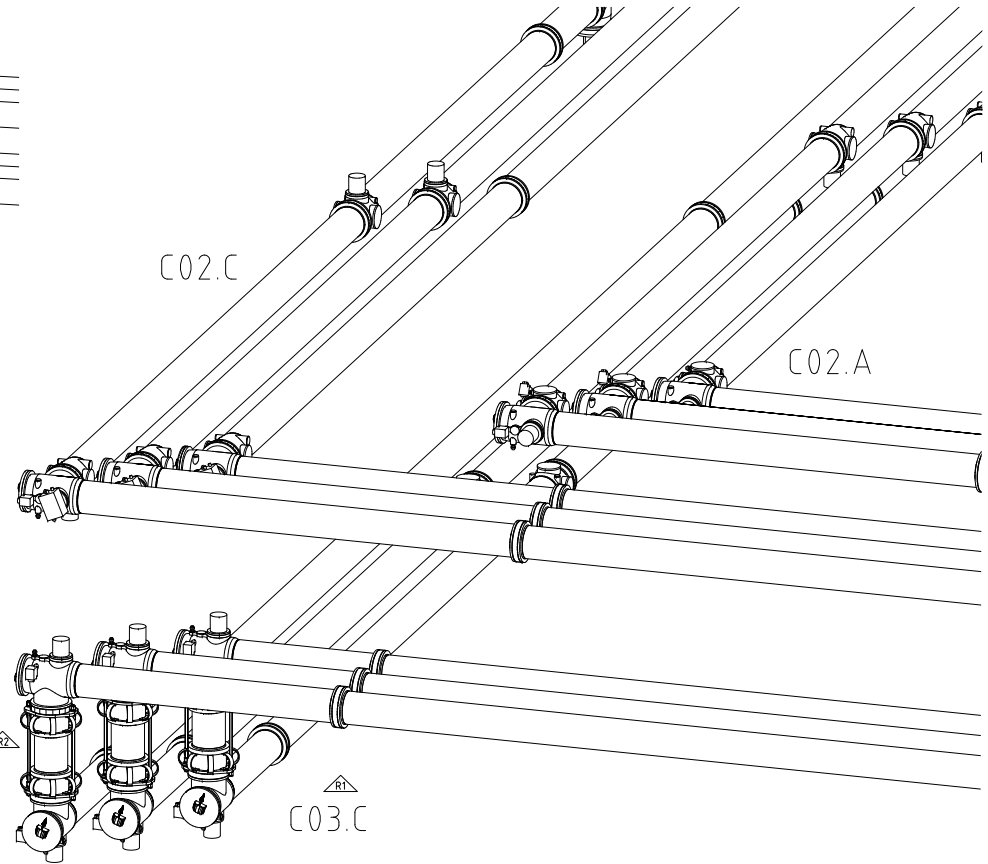




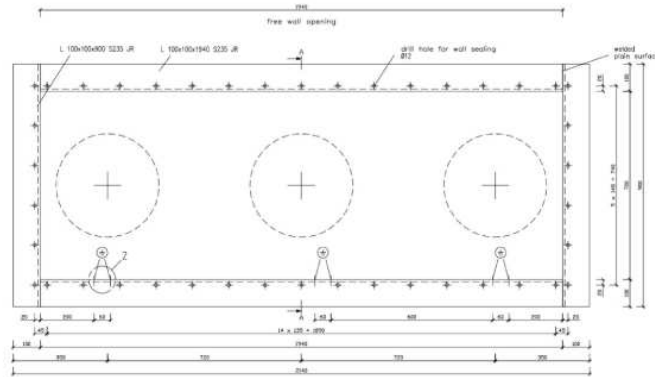
### Outdoor GIB - C01 Dia



### Busduct crossing typical



### Detail - X



### Bus duct length

Bay	Duct Length (mtr)
C01.A	163
C01.C	103
C02.A	124
C02.C	286
C03.B	220
C04.A	73
C04.C	94
C05.A	103
C05.C	73
C06.A	136
C07.A	121
C07.C	184

### Gas Qty

1. First filling of SF6 gas (A): 16690 kg
2. 10% of total gas(B): 1669kg
3. 20 % of total quantity of SF6 gas shall also be supplied in non returnable cylinders.20% of item ((1)+(2)): 3672 kg
4. Total gas quantity:  
(i) 16690 kg for GIS+1669 kg in cylinder  
(ii) 3672 kg in non returnable cylinder

Phase assignment	Client designation
L1 = A = I	
L2 = B = II	
L3 = C = III	

PROJECT :	400kV GIS of 2X660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Chennai-120	Scale	1:1	= TANGEDCO	+ENNORE	/
MOA No :	CE/P/SE/M/P/EE-10/E/P/F.2X660MW ENNORE SEZ STTP/D60/DT 27.027.2014	400kV GIS ENNORE				8DQ1 400 kV
CUSTOMER :	TAMILNADU GENERATION AND DISTRIBUTION CORPORATION (TANGEDCO)					400kV GIS - PLAN & SECTION VIEW INCLUDING GIB
CONSULTANT :	DESEIN PRIVATE LIMITED, NEW DELHI	02	Customer comment	13.2.2018	BS	
CONTRACTOR :	BHARAT HEAVY ELECTRICALS LIMITED	01	First Issue	21.2.2018	BS	Siemens
DWG NO :	TB-578-516-101-02 REV.02	Rev	Remarks	Date	Name	(1) G71770 - AC209 - V025 - 00

ANZ-AC-209 SHEET ENNORE

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Sheet 10-12



# Compliance Sheet



**PROJECT TITLE :** 400kV GIS at 2 x 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Chennai-120  
**CUSTOMER :** Tamilnadu Generation & Distribution Corporation (TANGEDCO)  
**CONSULTANT :** Descin Private Limited, New Delhi  
**MAIN CONTRACTOR :** Bharat Heavy Electricals Limited (BHEL)  
**REVIEW OF,**

**DOCUMENT TITLE:** 400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)

**DOCUMENT REF.NO.:** TB— 378- 316 101—02 I Rev 01

Sl. No.	Document No.	Description	Revision	Reviewer	MARK-UP?	TANGEDCO/DESEIN comments		BHEL/Siemens reply/ confirmations		TANGEDCO/DESEIN comments		BHEL/Siemens reply/ confirmations	
						REV00	Date: 19.12.2017	REV01	Date: 22.12.2017	REV01	Date: 17.01.2018	REV02	Date: 01.02.2018
1	TB— 378- 316 101—02	400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)	1	EL	No	BHEL/Siemens to provide mechanical Interlock in adding to the electrical interlock for operation of Bus Sectionalizer	Along with electrical interlock, manual Padlock provision with locking arrangement shall be provided to avoid inadvertent stop/start command from LCC/ Remote panel.	Noted and already incorporated in document Ref. 400KV GIS SWITCHGEAR GUARANTEED TECHNICAL PARTICULARS (TB-378-316-101—01).	TO BE INCLUDED AS A NOTE IN THE DOCUMENT. Additional comment-BHEL shall provide synchro check relay inline with discussion in this meeting held at Chennai.	Completed and Closed. For additional comment Synchro check relay shall be provided in CRP panel. Reply is in BHEL Scope.			
2	TB— 378- 316 101—02	400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)	1	EL	No	Rating of Bus Sectionalizer (Disconnector) to match with the Bus Rating	Noted and already incorporated in document Ref. 400KV GIS SWITCHGEAR GUARANTEED TECHNICAL PARTICULARS (TB-378-316-101—01).	To be also mentioned in the SLD	Completed and Closed.				
3	TB— 378- 316 101—02	400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)	1	EL	No	Section view of Gas Insulator Bus Duct to shown for a typical crossing	Noted and Completed. Isometric view for GIB crossing has been incorporated.	Noted.	Closed				
4	TB— 378- 316 101—02	400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)	1	EL	No	SF6 Gas Qty to be furnished. Spare Gas Quantity and ( no. of cylinder ) to be provided.	Tentative Qty 1.5T. Tentative no. of cylinders approx 30. Final SF6 Gas Qty can be confirmed after final approval only. However locating for placing spare gas quantities has been shown layout Drawing Ref. TB-378—510/005 Rev01.	To be included as a note in the document.	Completed and Closed				
5	TB— 378- 316 101—02	400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)	1	EL	No	Typical Drawing for Wall opening is to be furnished	Noted and Completed	Noted.	Closed				
6	TB— 378- 316 101—02	400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)	1	EL	No	LCC to be placed at the distance of 200mm from wall and provision of tying insulating mats shall be confirmed	Noted and completed. Insulating Mat shall be provided separately at site	Noted.	Closed				
7	TB— 378- 316 101—02	400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)	1	EL	No			Crossover walking platform at one side to other side of GIS to be, provided as discussed » in the meeting.	Completed. For crossing from one side of GIS to other side of GIS is possible at Multiple locations like Sectionalizer 1-3 and 2—4 and Bus PT Bay (CO1) and Bus PT Bay) (CO4). Walking platform will be provided and separate Drawing will be submitted for the same.				
8	TB— 378- 316 101—02	400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)	1	EL	No			In sheet 3 of 10, it is indicated Maximum length of each gas compartment is » busduct<=50 Mtrs. BHEL to Check and revert.	Maximum Length of each Gas Compartment in bus Duct is 50 meters and the gas in the compartment is maximum 206kg. The same is as per Standard Practice followed by all major utilities like Power Grid, NTPC etc and also in line with contract specifications which specifies maximum 400kg in any compartment.				

<b>PROJECT :</b> 400KV GIS at 2x660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Chennai-120		8001	400KV GIS ENNORE
<b>M/A No. :</b>	CE/P/SE/M/P/EE-10/E/P/ 2x660MW ENNORE SEZ STP/0607/DT 27.02/2014	13.02.2018	400KV GIS- PLAN & SECTION VIEW INCLUDING GIB
<b>CUSTOMER :</b>	TAMILNADU GENERATION AND DISTRIBUTION CORPORATION (TANGEDCO)	13.02.2018	
<b>CONSULTANT :</b>	DESCIN PRIVATE LIMITED, NEW DELHI	13.02.2018	
<b>CONTRACTOR :</b>	BHARAT HEAVY ELECTRICALS LIMITED	26.12.07 BS	
<b>DWG No. :</b>	TB-378-316-101-02 REV.02	13.02.2018	
<b>Sheet No. :</b>	(1) GT1770-ACC209 - V025 - 00	13.02.2018	

 - Corresponds to revision REV.01  
 - Corresponds to revision REV.02

BHEL Chennai, India  
 Descin Private Limited, New Delhi, India  
 Tamilnadu Generation and Distribution Corporation (TANGEDCO), Chennai, India  
 Project Name: 400KV GIS at 2x660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Chennai-120  
 Drawing Title: 400KV GIS SWITCHGEAR-LAYOUT (PLAN & SECTION VIEW INCLUDING GIB)  
 Drawing No: TB-378-316-101-02 REV.02  
 Sheet No: (1) GT1770-ACC209 - V025 - 00  
 Date: 13.02.2018  
 Scale: As per drawing  
 Author: [Name]  
 Checker: [Name]  
 Engineer: [Name]  
 Project Manager: [Name]