FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

ESP-001-11A

DRG. NO. PY-DL-1-M104-8801-01

SH. 01 OF 01

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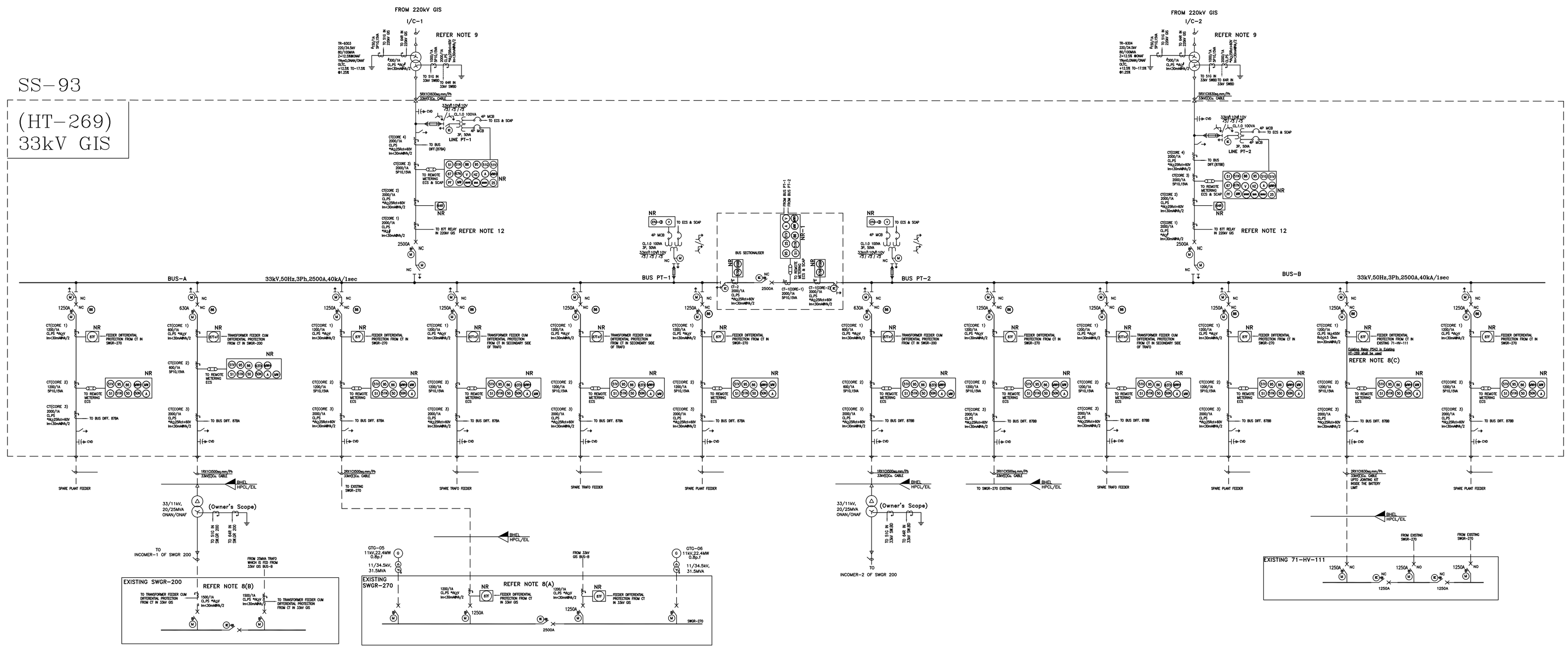
GENERAL DIMENSIONAL LIMITS,FITS & TOLERANCES AS PER HY0230261

COMPUTER FILE NAME

REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO



LEGEND:

- CURRENT TRANSFORMER
- CABLE CONNECTION
- POTENTIAL TRANSFORMER
- BUS DUCT
- HT BREAKER (FIXED TYPE) VCB/SF6
- ISOLATOR
- MCB
- HRC FUSE
- (A) AMMETER
- (V) VOLTMETER
- (MW) MEGA WATT METER
- (MWH) MEGA WATT HOUR METER
- (MVA) MEGAVOLT AMPERE METER
- (MVAR) MEGAVAR METER
- (PF) POWER FACTOR METER
- NR NUMERICAL RELAY
- (2) TIMER
- (27) UNDER VOLTAGE RELAY
- (50) INSTANTANEOUS OVER CURRENT RELAY
- (50N) INSTANTANEOUS EARTH FAULT RELAY
- (51) IDMT O/C RELAY
- (51N) IDMT E/F RELAY
- (64B) RESTRICTED E/F RELAY
- (51G) STANDBY E/F RELAY
- (67) DIRECTIONAL IDMT O/C RELAY
- (86) LOCKOUT RELAY
- (87B) BUS DIFFERENTIAL RELAY
- (87F) FEEDER DIFFERENTIAL RELAY
- (87T) TRAFO DIFFERENTIAL RELAY
- (95) TRIP CKT SUPERVISION RELAY
- (S) BREAKERS WITH SYNCHRONISING FACILITY
- (95S) CT SUPERVISION RELAY
- RTU REMOTE TERMINAL UNIT
- (67N) DIRECTIONAL IDMT E/F RELAY
- (63T) AUX. RELAY (TRANSFORMER)
- CAPACITIVE VOLTAGE DETECTOR
- EARTH SWITCH
- SURGE ARRESTOR

NOTES:

1. CABLE ENTRY FROM BOTTOM.
2. PROTECTION RELAYS ARE NUMERICAL TYPE.
3. MULTI FUNCTION NUMERICAL PROTECTION RELAYS WITH COMPREHENSIVE METERING OF SUITABLE PROTOCOL (COMMUNICABLE TO ECS) SHALL BE SUPPLIED.
4. CONTROL SUPPLY SHALL BE 110V DC.
5. SPRING CHARGING MOTORS SHALL BE SUITABLE FOR 110V DC.
6. REAR AND FRONT SIDE OF THE PANEL SHALL HAVE FEEDER DESCRIPTION AND PANEL No ON METALLIC PLATE.
7. CABLE SIZES ARE AS PER APPROVED HT POWER SIZING CALCUALTIONS.
8. FOLLOWING SHALL BE PROVIDED BY BHEL:
   A. FEEDER DIFFERENTIAL RELAYS,CTS(ON BOTH SIDES AS APPLICABLE)ALONG WITH CONTROL,DIFFERENTIAL CABLES FOR FEEDERS IN SWGR-270 AND MODIFICATIONS IN EXISTING SWGR-270 AS REQUIRED.
   B. TRANSFORMER CUM FEEDER DIFFERENTIAL RELAYS(ONE SIDE),CTS (BOTH ENDS) ALONG WITH CONTROL,DIFFERENTIAL CABLES FOR FEEDERS TO SWGR-200 AND MODIFICATIONS IN EXISTING SWGR-200 AS REQUIRED.
   C. RELOCATION OF EXISTING DIFFERENTIAL RELAY(P543) IN EXISTING HT-269 TO REUSE IN 33KV GIS FOR FEEDER TO 71-HV-111 WHILE SUPPLY AND INSTALLATION OF CONTROL CABLES,DIFFERENTIAL CABLES FROM 33kV GIS TO EXISTING SWGR 71-HV-111 IS IN OWNER'S SCOPE.
9. *KNEE POINT VOLTAGE INDICATED IN THE SLD ARE TENTATIVE AND WILL BE AS PER OEM's RECOMENDATION BASED ON FINALISATION OF RELAY MODEL.
10. ALL PROVISIONS AS REQUIRED FOR INTERFACE WITH SCAP, HMI SYSTEM AND ECS SHALL BE PROVIDED.
11. ECS I/O LIST FOR 33kV SWITCH BOARD AS INDICATED IN TENDER DOCUMENT WILL BE COMPLIED.
12. SUPPLY AND INSTALLATION OF DIFFERENTIAL RELAYS TO BE INSTALLED IN 220KV GIS FOR 220KV/33KV TRANSFORMERS IS IN OWNER'S SCOPE.
13. INTERFACE WITH 220kV GIS CONTRACTOR : THE RATINGS INDICATED (#) SHALL BE SELECTED BASED ON THE RATINGS AT 220kV GIS.

PROJECT: CAPTIVE POWER PLANT (CPP) PACKAGE
VISAKH REFINERY MODERNIZATION PROJECT (VRMP)
JOB NO. B016

OWNER: HINDUSTAN PETROLEUM CORPORATION LIMITED

PMC: ENGINEERS INDIA LIMITED (EIL), NEW DELHI

BHARAT HEAVY ELECTRICALS LTD. HYDERABAD

	NAME	SIGN.	DATE
DRN.	GRM/AVS	-SD-	30.03.18
CHD.	P.SURESH	-SD-	30.03.18
APPD.	J.K.PATTANAIK	-SD-	30.03.18

NO.OF VAR.

ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED
CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD	01	09.05.18	G.MONICA CHD/APPD J.K.PATTANAIK REVISED IN LINE WITH CONSULTANT COMMENTS ON R00.
	ZONE			ZONE			ZONE			ZONE			ZONE			ZONE			ZONE			ZONE			ZONE			

DEPT. PE&SD
CODE. 450

UNTOL. DIMS. GR. ~~C/M/F~~

SCALE

WEIGHT (KG)

REF. TO ASSY. DRG. -N.A.-

TITLE
SINGLE LINE DIAGRAM OF 33kV GIS SWITCHGEAR

CARD CODE N.A.

BHEL DRG NO. PY-DL-1-M104-8801-01

CUST DRG NO.

SHT. No 01 NO. OF SHT.

REVIEW DEM NO. N.A.

DOCUMENT NO. ESP-001-11A

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Approved by: SRIVASTAVA RAJESH KUMAR
Approved Date: 19-MAY-2018

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