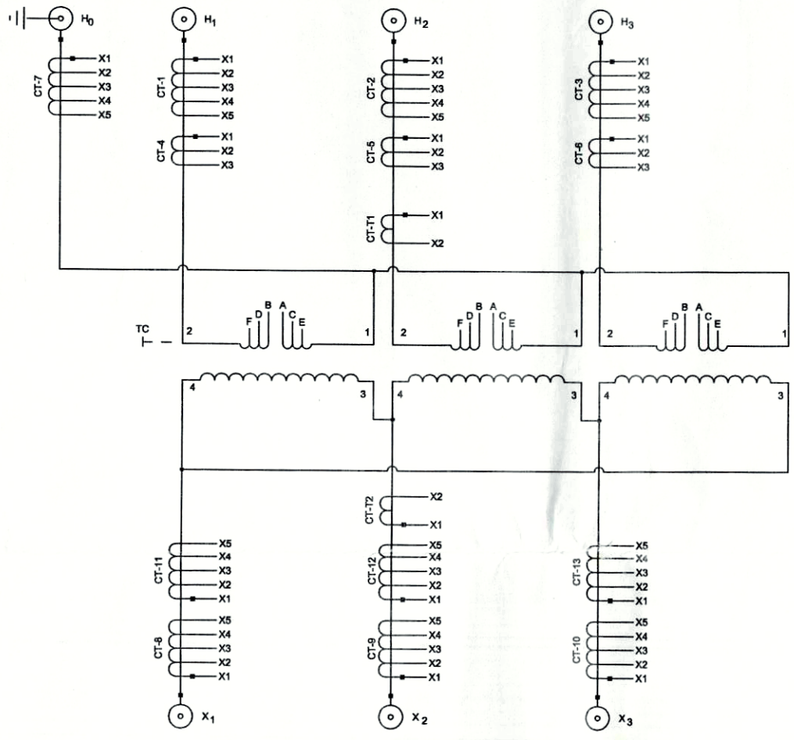
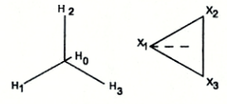
NO.	REVISIONS	BY	DATE	APRV.
1	APPROXIMATE WEIGHTS WERE ADDED CTS-4,5,6,8 - 13 WERE CHANGED	BM	10/08/12	
2	3000:5 TAP RATIO CHART VALUES CORRECTED	BM	11/12/12	
3	ADDED S/N, IMPEDANCE AND DATE OF MANUFACTURE	JD	12/5/12	

POWER TRANSFORMER

S/N E41031112	CLASS	ONAN/ONAF/ONAF THREE PHASE 60 HERTZ
HV	350 kV BIL	69000 GrdY/39840 VOLTS
HV NEUTRAL	110 kV BIL	
LV	110 kV BIL	12470 VOLTS
CONT. TEMP. RISE	55°C	20/26.7/33.3 MVA
CONT. TEMP. RISE	65°C	22.4/29.9/37.3 MVA
IMPEDANCE	8.1% AT	69000 - 12470 VOLTS AND 20 MVA





HIGH VOLTAGE			
VOLTS L-L	AMPS AT 37.3 MVA	HV DE-ENERGIZED T.C. POS.	CONNECTS
72450	297	1	A - B
70725	304	2	B - C
69000	312	3	C - D
67275	320	4	D - E
65550	329	5	E - F

LOW VOLTAGE	
VOLTS L-L	AMPS AT 37.3 MVA
12470	1725
FOR STEP UP OPERATION	

AS BUILT

BUSHING CURRENT TRANSFORMER TRF 2.0 MULTI-RATIO ACC. CLASS C800 CT-8,9,10,11,12,13 RATIO: 3000/5			
CURRENT RATIO	TAP	CURRENT RATIO	TAP
300/5	X3-X4	1500/5	X2-X4
500/5	X4-X5	2000/5	X2-X5
800/5	X3-X5	2200/5	X1-X3
1000/5	X1-X2	2500/5	X1-X4
1200/5	X2-X3	3000/5	X1-X5

BUSHING CURRENT TRANSFORMER TRF 2.0 MULTI-RATIO ACC. CLASS C800 CT-1,2,3 RATIO: 1200/5			
CURRENT RATIO	TAP	CURRENT RATIO	TAP
100/5	X2-X3	600/5	X2-X4
200/5	X1-X2	800/5	X1-X4
300/5	X1-X3	900/5	X3-X5
400/5	X4-X5	1000/5	X2-X5
500/5	X3-X4	1200/5	X1-X5

BUSHING CURRENT TRANSFORMER TRF 2.0 MULTI-RATIO ACC. CLASS C400 CT-7 RATIO: 1200/5			
CURRENT RATIO	TAP	CURRENT RATIO	TAP
100/5	X2-X3	600/5	X2-X4
200/5	X1-X2	800/5	X1-X4
300/5	X1-X3	900/5	X3-X5
400/5	X4-X5	1000/5	X2-X5
500/5	X3-X4	1200/5	X1-X5

BUSHING CURRENT TRANSFORMER TRF 3.0
DOUBLE-RATIO ACC. CLASS 0.3 B1.8
CT-4,5,6 RATIO: 600/300:5

BUSHING CURRENT TRANSFORMER TRF 2.0
FOR HV WINDING HOT-SPOT TEMPERATURE
CT-T1 RATIO: 400/5

BUSHING CURRENT TRANSFORMER TRF 2.0
FOR LV WINDING HOT-SPOT TEMPERATURE
CT-T2 RATIO: 1800/5

OIL LEVEL BELOW TOP OF MANHOLE FLANGE AT 25°C 13 INCHES (330 mm).
OIL LEVEL CHANGES 0.8 INCHES (20.32mm) PER 10°C CHANGE IN OIL TEMPERATURE.
TRANSFORMER TANK TO WITHSTAND FULL VACUUM AND 15 LBS (103.4 KPA) POSITIVE PRESSURE.
TRANSFORMER FILLED WITH INHIBITED MINERAL OIL (0.15% DBPC)

APPROXIMATE WEIGHTS [POUNDS (KG)]			
UNTANKING (CORE & COIL)			45,200 (20,500)
TANK & FITTINGS			32,900 (14,920)
OIL [GAL(LT)]	MAIN TANK	3,015 (11,410)	
	RADIATORS	550 (2080)	26,900 (12200)
	TOTAL	3565 (13495)	
TOTAL			105,000 (47620)

DATE OF MANUFACTURE
11 / 2012

DELTA STAR, INC.
LYNCHBURG OPERATION (434) 845-0921
3550 MAYFLOWER DR., LYNCHBURG, VA 24501

BEFORE INSTALLING OR OPERATING, READ INSTRUCTIONS. (DS-100 & DS-106)
THE UNIT DID NOT CONTAIN PCB AT TIME OF INITIAL FILLING.

E410310
REVISION 3

24"(609.6mm)
11.5"(292.1mm)
11.5"(292.1mm)
0.5"(25.4mm) TYP
17"(431.8mm)
18"(457.2mm)

RENSSELAER MUNICIPAL ELECTRIC UTILITY
P.O. # MT 5-1
S.O. # E4103
RENSSELAER GENERATION PLANT SUBSTATION

NOTE/ TRANSFORMER IS DESIGNED FOR A NOMINAL 8.0% IMPEDANCE ON A 20 MVA BASE, WITH A +/- 7.5% STANDARD TOLERANCE. EXACT IMPEDANCE VALUE TO BE ADDED AFTER FACTORY TESTING.

SERIAL NUMBER	MVA	VOLTAGE (KV)	IMPEDANCE (%)
E41031112	20	69-12.47	8.1

SCALE/ FULL	DELTA STAR, INC. LYNCHBURG OPERATION (434) 845-0921 3550 MAYFLOWER DR., LYNCHBURG, VA 24501	
DFT/ BY/DATE JPA / 08-02-2012	TITLE NAMEPLATE	
CHK/ BY/DATE JPA / 08-02-2012	D	E410310 1 OF 1 3
	SIZE	DRAWING NO. REV