THIS DRAWING IS THE PROPERTY OF THE DOW CHEMICAL COMPANY ("DOW") OR AN AFFILIATED COMPANY OF DOW, IS CONFIDENTIAL, AND MUST NOT BE MADE PUBLIC OR COPIED, AND IS SUBJECT TO RETURN ON DEMAND. ALL RIGHTS OF INVENTION OR DESIGN ARE RESERVED.

12"

11¼"

13"

12¼"

McGRAW-EDISON

Power Systems Division
McGraw-Edison Company
Canonsburg, PA 15317 USA

THREE PHASE 60 HERTZ LOAD TAP CHANGING TRANSFORMER
CLASS OA/FA/FA

SPEC. 15238

SERIAL C-06498-5-1

VOLTAGE RATING 140000Δ-14000Y/8080
45000 KVA OA RATING
60000 KVA OA/FA RATING
75000 KVA OA/FA/FA RATING
FULL LOAD CONTINUOUSLY 65°C. RISE

IMPEDENCE 13.9 %
140000Δ-14000Y/8080 VOLTS AT 45000 KVA

HIGH VOLTAGE		CAUTION: TAP CHANGER FOR DE-ENERGIZED OPERATION	
VOLTS	AMPERES AT 75000 KVA	POSITION	CONNECTS ON EACH PHASE
147000	295	A	11 TO 12
143500	302	B	12 TO 13
140000	309	C	13 TO 14
136500	317	D	14 TO 15
133000	326	E	15 TO 16

LIQUID LEVEL BELOW TOP SURFACE OF HIGHEST POINT OF MANHOLE FLANGE AT 25°C. 12.75 IN. ± 0.3"

LIQUID LEVEL CHANGE PER 10°C. LIQUID TEMP. CHANGE 1.08 IN.

MAXIMUM OPERATING PRESSURE OF OIL PRESERVATION SYSTEM, 0.5 PSI POSITIVE TO 8 PSI POSITIVE. MAIN TANK DESIGNED FOR 15 PSI VACUUM FILLING AND 10 PSI GAUGE PRESSURE, PLUS 6.3 PSI OIL HEAD. SEE INSTRUCTIONS FOR RATINGS OF OTHER PARTS. TRANSFORMER IS FILLED WITH MINERAL OIL.

APPROXIMATE WEIGHTS IN POUNDS

CORE AND COILS			127300
TANK AND FITTINGS			68250
TYPE 3478 LTC MECHANISM			1400
OIL	11100	GALS. IN MAIN TANK	83250
OIL	340	GALS. IN INTERRUPTER COMPARTMENT	2550
OIL	290	GALS. IN SELECTOR COMPARTMENT	2150
TOTAL WEIGHT			284900
UNTANKING WEIGHT (HEAVIEST PIECE)			121300

LOW VOLTAGE		LOAD TAP CHANGER			
VOLTS	AMPERES AT OA/FA/FA RATING	POSITION	CONNECTS ON EACH PHASE Y TO	Z TO	N TO
16100	2698	16	9	9	1
15969	2712	15	8	9	1
15838	2726	14	8	8	1
15706	2757	13	7	8	1
15575	2788	12	7	7	1
15444	2884	11	6	7	1
15313	2828	10	6	6	1
15181	2852	9	5	6	1
15050	2877	8	5	5	1
14919	2982	7	4	5	1
14788	2928	6	4	4	1
14656	2954	5	3	4	1
14525	2981	4	3	3	1
14394	3008	3	2	3	1
14263	3036	2	2	2	1
14131	3064	1	N	2	1
14000		N	N	N	18
13869		1	9	N	18
13738		2	9	9	18
13606		3	8	9	18
13475		4	8	8	18
13344		5	7	8	18
13213		6	7	7	18
13081		7	6	7	18
12950		8	6	6	18
12819		9	5	6	18
12688		10	5	5	18
12556		11	4	5	18
12425		12	4	4	18
12294		13	3	4	18
12163		14	3	3	18
12031		15	2	3	18
11900		16	2	2	18

RAISE / LOWER

ACCESSORY SCHEMATIC DRAWINGS
421911
421912

PLAN VIEW FACING LOW VOLTAGE

HEADROOM REQUIRED FOR UNTANKING (BAIL TO CRANE HOOK)
30 FT. 8 IN.

WINDING MATERIAL:
H.V.— — COPPER
L.V.— — COPPER
A.V.— — COPPER

DATE OF MANUFACTURE
1983

MULTI-RATIO BUSHING TYPE CURRENT TRANSFORMERS 600-5 AMPERES (CTDT)

RATIO	TURNS	TAPS
50-5	10	X2 - X3
100-5	20	X1 - X2
150-5	30	X1 - X3
200-5	40	X4 - X5
250-5	50	X3 - X4
300-5	60	X2 - X4
400-5	80	X1 - X4
450-5	90	X2 - X5
500-5	100	X2 - X5
600-5	120	X1 - X5

MULTI-RATIO BUSHING TYPE CURRENT TRANSFORMERS 2000-5 AMPERES (CPWT)

RATIO	TURNS	TAPS
300-5	60	X3 - X4
400-5	80	X1 - X2
500-5	100	X4 - X5
600-5	120	X2 - X3
1100-5	220	X2 - X4
1200-5	240	X1 - X3
1500-5	300	X1 - X4
1600-5	320	X2 - X5
2000-5	400	X1 - X5

PHASOR DIAGRAM

FULL WAVE IMPULSE LEVEL:
HIGH VOLTAGE — — — 650KV
LOW VOLTAGE — — — 110KV

TRANSFORMER T-116A

NPC 421910 REV. B

BEFORE INSTALLING OR OPERATING READ INSTRUCTION BOOK

THIS DRAWING APPLIES TO SERIAL C-06498-5-1 ONLY.
SEE DWG. NPC440103 FOR SERIAL C-06498-5-2.

ALL LETTERS AND FIGURES ARE TO BE SUNKEN AND FILLED WITH BLACK ENAMEL
BACKGROUND TO BE NATURAL COLOR OF STAINLESS STEEL. DULL FINISH

FINISHED SIZE TO BE: PLATE SIZE - 13" X 12" X 20 GAGE STAINLESS STELL.
HOLE CENTERS - 12¼" X 11¼"
MOUNTING HOLES - ⅜" DIAMETER
AREA - 156 SQUARE INCHES

NO. UNITS ORDERED	1	McGRAW-EDISON Power System Division McGraw-Edison Company Canonsburg, PA 15317 USA		NEC 15238
DRAWN HWE TRACED JPW	DATE 3-8-82			ORDER C-06498-5
CHECKED LCS	3-22-82	DESCRIPTION		TYPE OA/FA/FA
APPROVED PR	3-22-82	CONNECTION DIAGRAM NAMEPLATE		
DWGS REFERENCE				
CONFIDENTIAL MUST NOT BE USED IN ANY WAY DETERIMENTAL TO McGRAW-EDISON CO.		CUSTOMER DOW CHEMICAL, USA		
		CUSTOMERS ORDER 780368-M0711-48	NPC421910	REV. B
		SPECIFICATION NO. 27-011-780368		

REV. MARK	REVISION	BY	CHK	APP	DATE
A	CONVERTED TO MICROSTATION FORMAT	SS	NN	KS	8/88
B	CHANGED DRAWING NUMBER FROM B7-877-1102	JN	NN	KS	8/88
C	SWAPPED POSITION OF HIGH-SIDE CT'S	JN	NN	KS	8/88

DRAWING ISSUE RECORD

ISSUE NO.	REV	MATERIAL OR JOB SPEC	BID	FAB	CONST	REF
			DATE ISSUED FOR			

DESIGNED	MCGRAW-EDISON	3/82
DRAWN	S. SARAVANAN	8/88
CHECKED	N. NGUYEN	8/88
APPROVED	K. SHARMA	8/88
PROJ. ENGR.	C. SEIDEL	8/88
MFG. REP.	J. BLOM	8/88

STATUS PROJECT
PLANT NO.
P.E. SEAL

THE DOW CHEMICAL COMPANY
CONTINENTAL PITTSBURG, CALIFORNIA
ELECTRICAL DISTRIBUTION BLOCK 020

SWGR-020 SUBSTATION (BUILDING 021)
TRANSFORMER T-116A
NAMEPLATE

CHARGE NUMBER	SCALE		REV.
198642-16187	NONE	07-94BA-020	C

PRINTED VER.

7 INT

@INSTRUCTIONS @PERSON @TIME @DATE @FILENAME