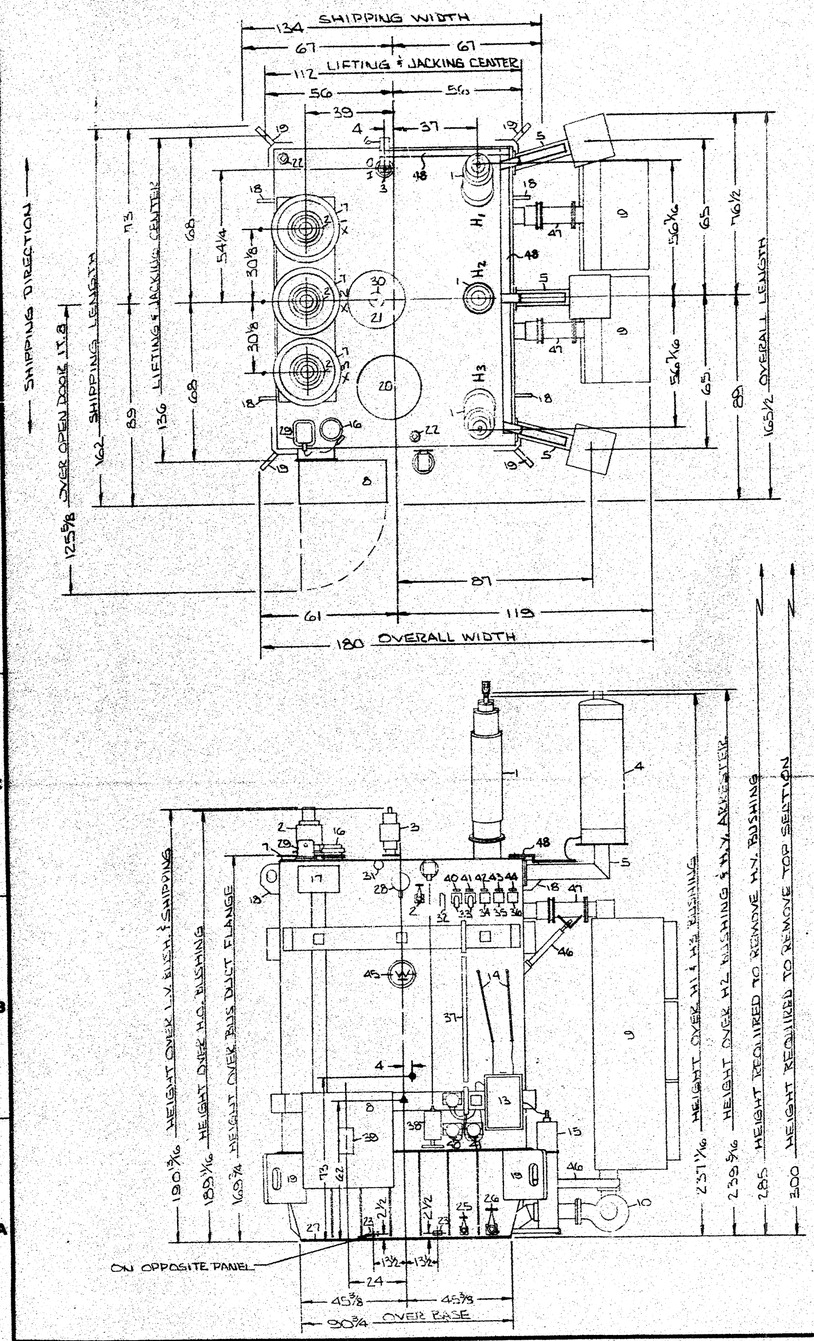
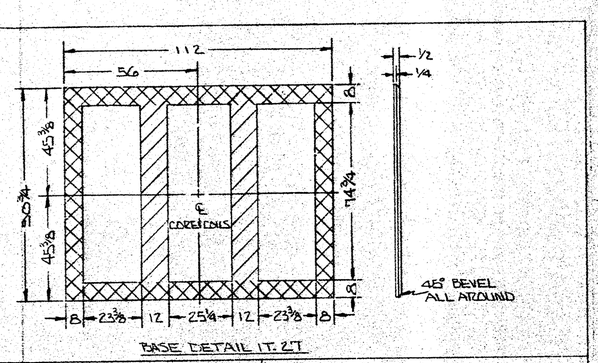
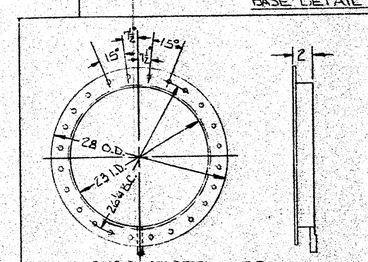


40 IDENTIFICATION PLATE FOR H.V. HOT SPOT, 2 TOTAL.
41 IDENTIFICATION PLATE FOR L.V. HOT SPOT, 2 TOTAL.
42 IDENTIFICATION PLATE FOR X1 SWITCHBOARD HOT SPOT.
43 IDENTIFICATION PLATE FOR X2 SWITCHBOARD HOT SPOT.
44 IDENTIFICATION PLATE FOR X3 SWITCHBOARD HOT SPOT.
45 DRESS NAMEPLATE.
46 REMOVABLE COOLER SUPPORT.
47 REMOVABLE COOLER DUTCHMAN.
48 GROUNDING STRAP FOR H.V. LIGHTNING ARRESTERS.

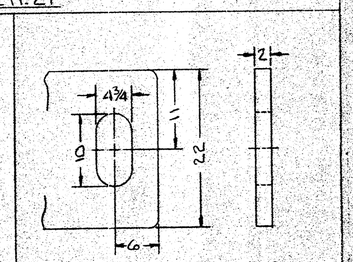
* SEND PRINTS TO CUSTOMER.



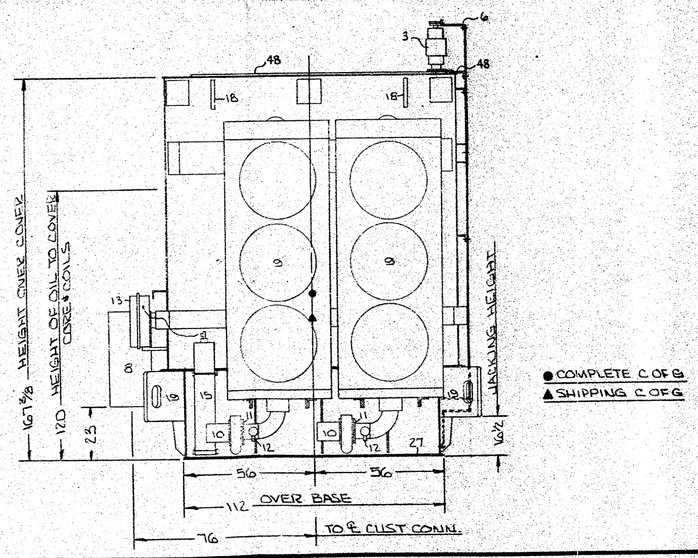
BASE DETAIL IT. 27



BUS DUCT DETAIL IT. 7



LIFTHOOK DETAIL IT. 19



● COMPLETE C OF G
▲ SHIPPING C OF G

DwgMCM741-01 Sub#3

COMP. CODE	
ROUTING	DEV. NO.

NOTES

SEE INSTRUCTION BOOK MCM741-12 FOR INSTALLATION AND MAINTENANCE OF THIS TRANSFORMER.

THIS OUTLINE CAN BE USED FOR ERECTION OR MOUNTING PURPOSES. IT IS NOT TO BE REGARDED AS INDICATING THE EXACT DETAILS OF CONSTRUCTION.

ALL VALVES HAVE THREADED ENDS UNLESS OTHERWISE SPECIFIED.

ALL THREADED VALVES AND FITTINGS ARE EQUIPPED WITH M.I. PLUGS.

SLING SPREADERS MUST BE USED WHEN LIFTING CORE AND COILS IN ORDER TO CLEAR THE SUPERSTRUCTURE.

BEFORE BREAKING THE SEAL ON ANY OPENING, BE SURE THE LIQUID IS LOWERED BELOW THE OPENING.

THE CASE IS BRACED FOR FILLING UNDER A FULL VACUUM.

THIS TRANSFORMER HAS A FORM-FIT CASE. THE UPPER SECTION OF THE CASE IS WELDED TO THE LOWER SECTION AS SHOWN. THE CORE AND COILS ARE BRACED IN THE TANK TO WITHSTAND HANDLING, SHIPPING AND OPERATING FORCES. THIS BRACING IS A PERMANENT PART OF THE TRANSFORMER STRUCTURE.

*IF IT EVER BECOMES NECESSARY TO REMOVE THE TOP SECTION OF THE CASE, REMOVE THE LIQUID AND CUT THE WELD AT THE FLANGE D.S. 48-069-16, FIGURE 5, AND LIFT THE TOP SECTION OF THE CASE FROM THE TRANSFORMER. THIS EXPOSES THE CORE AND COILS FOR INSPECTION OR REPAIR.

SHIPMENT WILL BE MADE IN NITROGEN IN ITS OWN CASE. BE SURE TO REMOVE DEHYDRATING CONTAINER BEFORE FILLING WITH LIQUID. BEFORE FILLING CASE WITH LIQUID, SEE INSTRUCTION BOOK.

CHECK OPERATION OF ALL TAP CHANGER MECHANISMS BEFORE SEALING TRANSFORMER.

THE TRANSFORMER IS EQUIPPED WITH INERTAIRE.

RAILS OR PEDESTALS USED TO SUPPORT THE TRANSFORMER, OR ROLLERS USED TO MOVE THE TRANSFORMER, MUST BE LOCATED IN OR ACROSS THE DOUBLE CROSS HATCHED AREA. THE TRANSFORMER WEIGHT IS DISTRIBUTED AND SUPPORTED BY THE TANK WALL LOCATED WITHIN THIS AREA. THE TANK IS BRACED INTERNALLY IN THE SINGLE CROSS HATCHED AREA. THIS AREA IS NOT INTENDED FOR ROLLING OR SUPPORTING THE TRANSFORMER UNLESS ROLLERS OR SUPPORTS ALSO CROSS THE DOUBLE CROSS HATCHED AREA. THE PORTION OF THE TRANSFORMER BOTTOM NOT CROSS HATCHED WILL NOT SUPPORT THE TRANSFORMER.

THE FOLLOWING ITEMS ARE TO BE REMOVED FOR SHIPMENT: 1, 4, 5, 6, 9, 10, 13, 15, 29, 46, AND 47. RED INSTRUCTION TAGS WILL BE ATTACHED TO ANY INTERNAL PARTS REQUIRING FIELD TAPING.

3640 GALLONS OF LIQUID ARE REQUIRED TO COVER CORE AND COILS WITH COOLERS MOUNTED AND 3580 GALLONS WITHOUT COOLERS.

	APPROXIMATE NET WEIGHT (LBS.)	SHIPPING WEIGHT (LBS.)
CORE AND COILS		
MAIN UNIT	144000	144000
CASE AND FITTINGS		
MAIN UNIT	28100	17600
OIL		
MAIN UNIT	37300	—
COOLERS	750	—
TOTAL	210150	161600

FITTINGS AND DESCRIPTIONS

ITEM

* 1 H.V. BUSHING, 3 TOTAL, OUTLINE DWG. 446C890, LINE 10, STUD SIZE 1-1/2 - 12 X 2-1/2 LG., WITH TERMINAL 4 SPADE WIDTH, WITH 4 HOLES 9/16 DIA. 1-3/4 SPACING. INTERNAL TOP CONNECTED - BRASS THROUGH LEAD. GRAY PORCELAIN.

* 2 L.V. BUSHING, 3 TOTAL, OUTLINE DWG. 259A476, LINE 2, STUD SIZE 5-3/8 SMOOTH X 6 IN. LG., INTERNAL BOTTOM CONNECTED - BOLTED TERMINAL.

* 3 H.O. BUSHING, 1 TOTAL, OUTLINE DWG. 232C294, LINE 1, STUD SIZE 1-1/2 - 12 X 2-1/2 IN. LG., INTERNAL BOTTOM CONNECTED - BOLTED TERMINAL.

4 H.V. LIGHTNING ARRESTER SF898A120A01, OUTLINE DWG. 898A076, 3 TOTAL WITH CONNECTION FOR #2 TO 425 MCM CABLE.

5 MOUNTING PROVISION FOR H.V. LIGHTNING ARRESTER, 3 TOTAL.

6 GROUNDING STRAP FOR H.O. BUSHING.

7 FLANGE FOR BUS DUCT CONNECTION. SEE DETAIL.

8 CONTROL CABINET FOR FANS AND PUMPS. UNDRILLED PLATE OVER A 10-1/2 X 35-1/4 OPENING FOR CUSTOMER'S CONNECTIONS.

9 FOA COOLER, 2 TOTAL. THE FAN MOTORS ARE 3 PHASE, 60 HERTZ, 230 VOLTS. TOTAL KVA REQUIRED 13.2.

10 FORCED-OIL PUMP WITH DRAIN AND VENT PLUGS, 2 TOTAL, 3 PHASE, 60 HERTZ, 230 VOLTS. TOTAL KVA REQUIRED 17.

11 SHUT-OFF VALVE.

12 OIL FLOW INDICATOR WITH ALARM CONTACTS SUITABLE FOR 600 VOLT-AMPERES AT 125, 250 AND 440 VOLTS AC OR 60 WATTS AT 125 TO 250 VOLTS DC LAMP LOAD OR 6 WATTS AT 125 TO 250 VOLTS DC RELAY LOAD.

13 INERTAIRE CABINET.

14 INERTAIRE CONNECTIONS.

15 NITROGEN CYLINDER.

16 MECHANICAL RELIEF DEVICE WITH SEMAPHORE FOR INDICATING RELIEF DEVICE TRIP AND ALARM CONTACTS FOR INDICATING RELIEF DEVICE TRIP SUITABLE FOR 1200 VOLT-AMPERES AT 125 TO 250 VOLTS AC, OR 60 WATTS NON-INDUCTIVE LOAD AT 125 TO 250 VOLTS DC, OR 6 WATTS INDUCTIVE LOAD AT 125 TO 250 VOLTS DC.

17 74 POINT JUNCTION BOX FOR CURRENT TRANSFORMER AND HOT SPOT LEADS.

18 EYES FOR LIFTING TOP SECTION OF TANK ONLY.

19 COMBINATION JACK LUG AND LIFTING HOOK FOR LIFTING COMPLETE UNIT, 4 TOTAL. SEE DETAIL.

20 MANHOLE 24 INCH DIAMETER OPENING.

21 MANHOLE 20 INCH DIAMETER OPENING.

22 3 INCH FILLING OR VACUUM PLUG. 2 TOTAL.

*23 GROUND PAD ON CASE WALL 2 TOTAL. SEE D.S. 48-061-21, FIGURE 2.

24 VALVE 1 INCH FOR UPPER FILTER PRESS CONNECTIONS.

25 VALVE 1 INCH FOR LOWER FILTER PRESS CONNECTIONS.

26 VALVE 2 INCH FOR COMBINATION LOWER FILTER PRESS CONNECTION AND COMPLETE DRAIN WITH 3/8 INCH SAMPLING DEVICE.

27 BASE WELDED TO CASE. SEE DETAIL.

28 MAGNETIC LIQUID LEVEL GAUGE, 5-1/2 DIAMETER DIAL WITH LOW LIQUID LEVEL ALARM CONTACTS SUITABLE FOR: 600 VOLT-AMPERES AT 125 TO 250 VOLTS AC, OR 60 WATTS AT 125 TO 250 VOLTS DC LAMP LOAD, OR 6 WATTS AT 125 TO 250 VOLTS DC RELAY LOAD.

*29 SUDDEN PRESSURE RELAY. SEE I.L. 48-065-1 FOR CONTACT RATINGS, ETC.

30 DEHYDRATING CONTAINER - TO BE REMOVED BY CUSTOMER BEFORE FILLING CASE WITH LIQUID.

31 PRESSURE - VACUUM GAUGE WITH AIR TEST CONNECTION.

32 LIQUID TEMPERATURE INDICATOR - LIQUID PRESSURE DIAL TYPE - WITH MAXIMUM INDICATING HAND AND ALARM CLOSING CONTACTS SUITABLE FOR 600 VOLT-AMPERES AT 125 TO 250 VOLTS AC OR 60 WATTS AT 120 TO 250 VOLTS DC LAMP LOAD.

33 HOT SPOT TEMPERATURE INDICATOR - LIQUID PRESSURE DIAL TYPE - WITH MAXIMUM INDICATING HAND AND ALARM CLOSING CONTACTS SUITABLE FOR 600 VOLT-AMPERES AT 125 TO 250 VOLTS AC OR 60 WATTS AT 120 TO 250 VOLTS DC LAMP LOAD. 2 TOTAL.

34 HOT SPOT RESISTANCE COIL - 10 OHMS AT 25°C - IN X1 WINDING FOR SWITCHBOARD TEMPERATURE INDICATOR.

35 HOT SPOT RESISTANCE COIL - 10 OHMS AT 25°C - IN X2 WINDING FOR SWITCHBOARD TEMPERATURE INDICATOR.

36 HOT SPOT RESISTANCE COIL - 10 OHMS AT 25°C - IN X3 WINDING FOR SWITCHBOARD TEMPERATURE INDICATOR.

37 THERMOMETER TUBING GUARD.

38 H.V. NO LOAD TAP CHANGER OPERATING MECHANISM, WITH PROVISION FOR PADLOCK.

39 DIAGRAM INSTRUCTION PLATE #MCM741-10.

SHOP ORDER MEM741, GENERAL ORDER TL-41926, CUSTOMER - PUBLIC SERVICE COMPANY OF OKLAHOMA.

PRINTS TO			
1		10	
2		11	
3		12	
4		13	
5		14	
6		15	
7		16	
8		17	
9		18	

TOOL REF. DWG. A10-20-30
ENGRG REF. DWG
REF BK SEC
BOOK # | APPROVED

WESTINGHOUSE ELECTRIC CORPORATION

APPARATUS POWER TRANSFORMER, CLASS FOA, SHELL FORM, OUTDOOR, 3 PHASE, KVA 90000, H.V. 138000, L.V. 13.8 kv, 60 HERTZ.

DIMENSIONS IN INCHES—SCALE NTS — SUB #3

DFTM R.E. COOK 11/4/71 — APPD 11/4/71
APPD 11/4/71
CHKD P. ASHE 11-5-71 — APPD

MCM741-01

TRANSFORMER DIVISION—MUNCIE PLANT — MUNCIE, IND., U.S.A.

IT.	CHANGE	Z	
7	MCM741 DETAIL DWG. CHANGED R.E. COOK 11-15-71		
48	MLM937 MLM937-09 WAS ADDED TO DWG. THE 4 SPADE WIDTH TERMINAL WAS ADDED. JF CARPENTER 4-9-73	3	
1			

S 0 MCM741
D MCM741-01