INSTRUMENT FUNCTION OUTLINE DEPARTMENT

TITLE #6 CHLORINATOR TO COOLER TEMP CONTROL & ALARM LOOP NUMBER 012

SHEET 2 OF CLASSIFICATION TICA-12

2.0 COMPONENT AND CALIBRATION DATA

	OPERATING DATA	MECHANICAL DATA
TE-12	THERMOCOUPLE & THERMOWELL	TEM TEX T/C & T/W ASSEMBLY #P3-U8-WTE14J22-11TP12
	LOCATION: 28' LEVEL SOUTH OF TANK 408	IRON-CONST. ,#14 GA. LENGTH: 22" (OR AS REQ'D) T/C END: 1/2" NPT CONDUIT END: 3/4" NPT WELL: 304 SS, THREADED BARSTOCK, 3/4" NPT MALE, 1/2" NPT FEMALE, 12" BELOW THREAD NIPPLE-UNION-NIPPLE: 8"-U8 * T/C TIPS GRND. TO WELL
TT-12	TEMPERATURE TRANSMITTER	MOORE TEMP. TRANS. # 7711Y
	LOCATION: PANEL INPUT: 2.3-13.5 MV DC AIR SUPPLY: 20 # IAS OUTPUT: 3-15 PSIG CALIB: 50-250°C	RANGE: 2-50 MV DC POWER SUPPLY: 115 V, 60 Hz
C-12	TEMPERATURE INDICATING CONTR.	FISCHER & PORTER TEMP. IND. CONTR. #51-1351AAFC
	LOCATION: PANEL AIR SUPPLY: 20 # IAS INPUT: 3-15 PSIG OUTPUT: 3-15 PSIG ACTION: INC. INPUT INC. OUTPUT	RANGE: 50-250°C PROP BAND: 2-500 % RESET RATE: .2 TO 30 MIN. ACCURACY: 1/2 %
TV-12	DIAPHRAGM ACTUATOR	ANNIN LONG STROKE DIA. ACT. # 664
	LOCATION: 28' LEVEL, OVER TANK 408 INPUT: 3-15 PSIG	CYL. BORE: 6" MAX. STEM TRAVEL: 4" SUPPLY PRESS./MAX. LB. THRUST: 30 PSIG/420, 60 PSIG/845, 100 PSIG/1410
TSA-12	PRESSURE SWITCH	BARKSDALE PRES. SWITCH # D2T-H18
	LOCATION: PANEL FIELD SET FCT: LO TEMP ALARM RATING: 115 V; 10 A. SPDT CONTACT	RANGE: 0-18 PSIG BRONZE DIAPHRAGM ELEMENT PRESS. CONN: 1/4" IPS CONDUIT CONN: 1/2" NPS

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INSTR. Nº (2)
CALIB: 3-15 PSIG
SCALE: 50-250°C
OUTPUT: 3-15 PSIG
ACTION: INC. INPUT
INC. OUTPUT

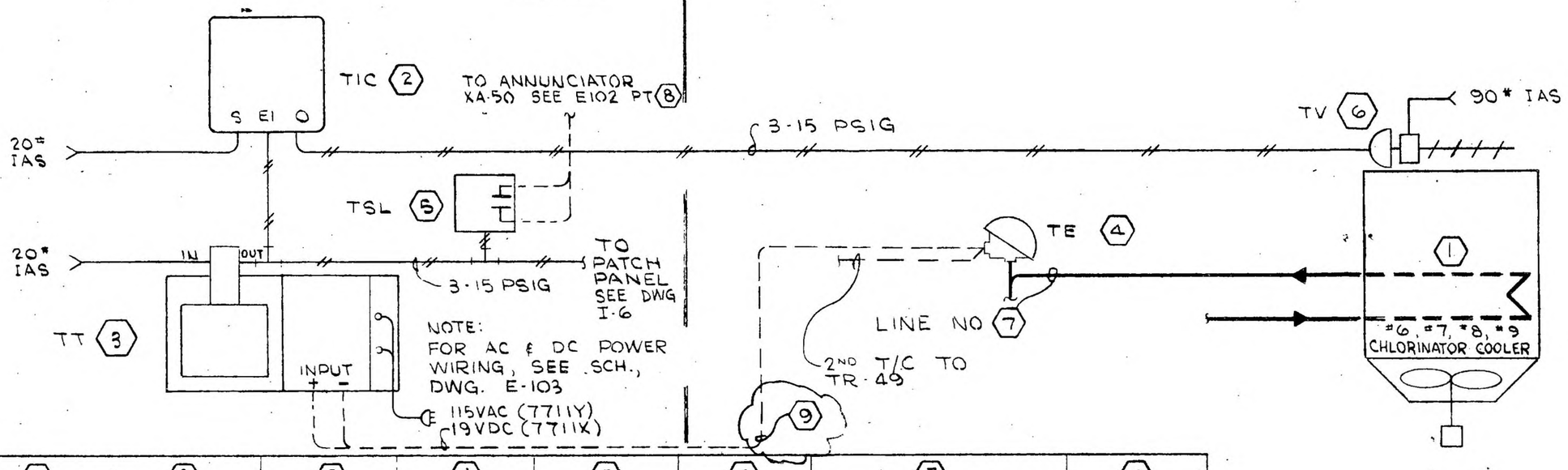
INSTR. Nº (3)
OUTPUT: 3-15 PSIG
CALIB: 50 - 250° C

FIELD

INSTR. Nº (5)
SET POINT: FIELD SET
FUNCTION: LO TEMP ALARM

INSTR. Nº (6)

PANEL



(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2-408	TIC-12	TT-12	TE-12/49.2	TSL-12	TV-12	2-408-1-F11-2P-3"	1-2
2-412	TIC-13	TT-13	TE-13/49.4	TSL-13	TV-13	2-412-1-F11-P-3"	1-3
2-416	TIC-14	TT-14	TE-14/49.6	TSL-14	TV-14	2-416-1-F11-P-3"	1-4
2-420	TIC-15	TT-15	TE-15/49.8	TSL-15	TV-15	2-420-1-F11-P-3"	1-5

BILL OF MATERIAL

MARK NO	QUAN	SPEC 1800	P.O. NO 1800-9	DESCRIPTION
(2)	4	12.1	0079	FISCHER & PORTER MODEL 51-1351ABFC INDICATING CONTR.
(3)	4	19.1	0080	MOORE 7711Y OR 7711X M/V/P TRANSDUCER
(4)	4	04.1	0153	TEM-TEX # P3-U8-WTE14J22-11TP12 DUAL TC & TW ASSEMBLY
(5)	4	13.2	0112	BARKSDALE D2T-H18 PRESSURE SWITCH

MARK NO	QUAN	SPEC 1800	P.O. NO 1800-9	DESCRIPTION
(6)	4	408	0021	ANNIN Nº 664 POSITIONER & ACTUATOR FURNISH WITH ITEM 408, 412, 416 & 420
(9)		—	0194	DEKORON 1PR IRON/CONSTAN. T/C WIRE CAT# 1800-626

MONSANTO COMPANY
CENTRAL ENGINEERING DEPARTMENT, ST. LOUIS, MISSOURI

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INSTRUMENT SCHEMATIC DIAGRAM

LOOP NO. TICA 12, 13, 14, 15
FUNCTION CHLORINATOR COOLER TEMP. CONTR. & ALARM

C.E.A. NO.	REFERENCE NO
1800	I 9 B

PCB-ARCH-EXT0373853

INSTRUMENT FUNCTION OUTLINE DEPARTMENT 246

TITLE #6 Chlorinator To Cooler Temp Control & Alarm. LOOP NUMBER 012

SHEET 4 OF 4 CLASSIFICATION TICA 12

3.0 Operation of The Loop

3.1 Normal Operation

Set The Temp. Controller at 150°C. Place Fan control Switch in Fast (Summer) or Slow (Winter) as per operating instructions.

3.1.1 Start up Instructions

Align Values at Cooler and pump To Circulate Through The Cooler, check That by pass around Cooler is closed. Check That Cooler Fans are OFF. Selector Switch should be in Slow or Fast positions. Check all Air pressures and Test The Annunciator

3.1.2 Shut down Instructions

Close values at cooler & pump. Set Temp Controller To 120°C. In event of a prolonged shutdown put Steam on Circulating Lines or Tracing around The chlorinator To maintain 120°C minimum Temperature

3.1.3 Manual Operating Instructions

A Manual-Automatic Selector Switch is installed on The panel board To Control The Fan and Select The Motor Speed.

3.2 Inter Locks

An Alarm will Sound on Hi Temp. 190°C and on Low Temp. 120°C. On Low Temp The Cooler Fan will stop and it be Restarted until chlorinator Temp. is 150°C.

3.3 Abnormal Operation

3.31 Air Failure

Air Failure To The loop will Cause Loss of Temp Control but Not Temp Indication.

3.32 Power Failure

Power Failure To The loop will Cause Loss of Temp Control & of Temp. Indication.

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