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# COX

Research and Technology, Inc.

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DUPLEX PUMP  
CONTROL PANEL  
CENTRAL CONTROL BUILDING  
VALERO REFINING COMPANY  
KROTZ SPRINGS

Cox Research and Technology, Inc.  
14697 S. Harrells Ferry Road  
Baton Rouge, LA. 70816  
(225) 756-3271 Fax (225) 755-1030

CP-2199

VOLTAGE	120V	(480V, 277/480V, 240V, 120/240V, 208V, 120/208V)
PHASE/HZ	1/60	
NO. MOTORS	2	
HP	3	
FLA	32	
TYPE OF PUMP	Self-Priming	(Self-Priming, Submersible)
MANUFACTURER	GR	
CATALOG NUMBER	T3C1P18	

CONTROL VOLTAGE	120V	(120V, Other)
ENCLOSURE	NEMA 4X	(NEMA 1, NEMA 3R, NEMA 4, NEMA 4X)
ENCLOSURE MATERIAL	Stainless Steel	(Painted Steel, Stainless Steel, Fiberglass)
CONTROL SENSOR	Floats	(Floats, Bubbler, Other)
CAPACITORS	No	(Yes, No)
CAPACITOR WIRING FIGURE	N/A	
THERM. & SEAL FAIL WIRING FIGURE		

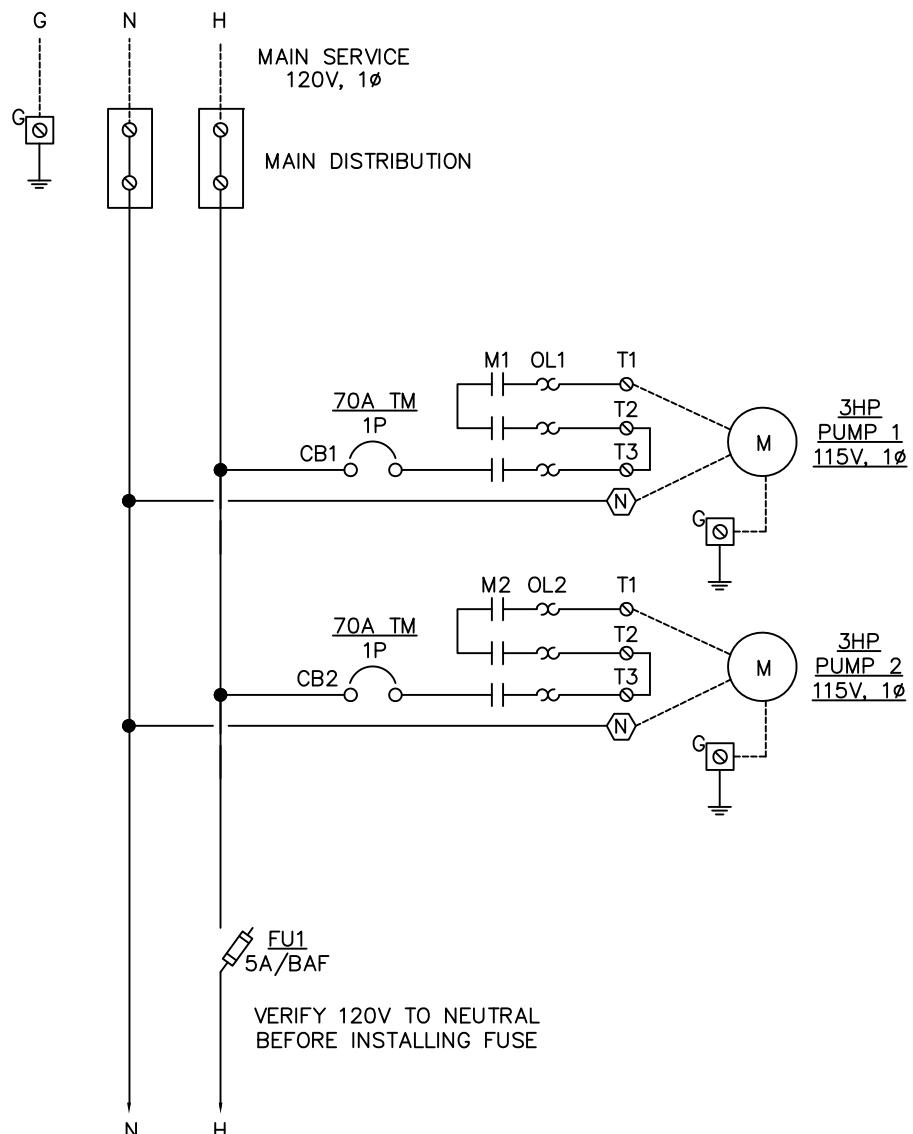
OPTIONS:

SEAL FAIL LIGHTS		(Submersible Only)
SEAL FAIL RELAYS		(Submersible Only)
SEAL FAIL PUMP SHUTDOWN		(Submersible Only)
HT PUMP SHUTDOWN	X	(Self-Primer, Submersible)
ALARM HORN		
ALARM LIGHT	X	
LIGHT PANEL MTD	X	
LIGHT REMOTE MTD		
LIGHT FLASHER		
LIGHTNING ARRESTER		
ELAPSED TIME METER		
PHASE MONITOR		
NEMA RATED STARTERS		
GROUND FAULT RECPT.		
GREEN RUN LIGHTS VS. RED		
POLE, BOX, SEAL		
INTRINSICALLY SAFE RELAYS		
HIGH TEMP. LOCKOUT, MANUAL RESET	X	
ECONOMY VERSION		

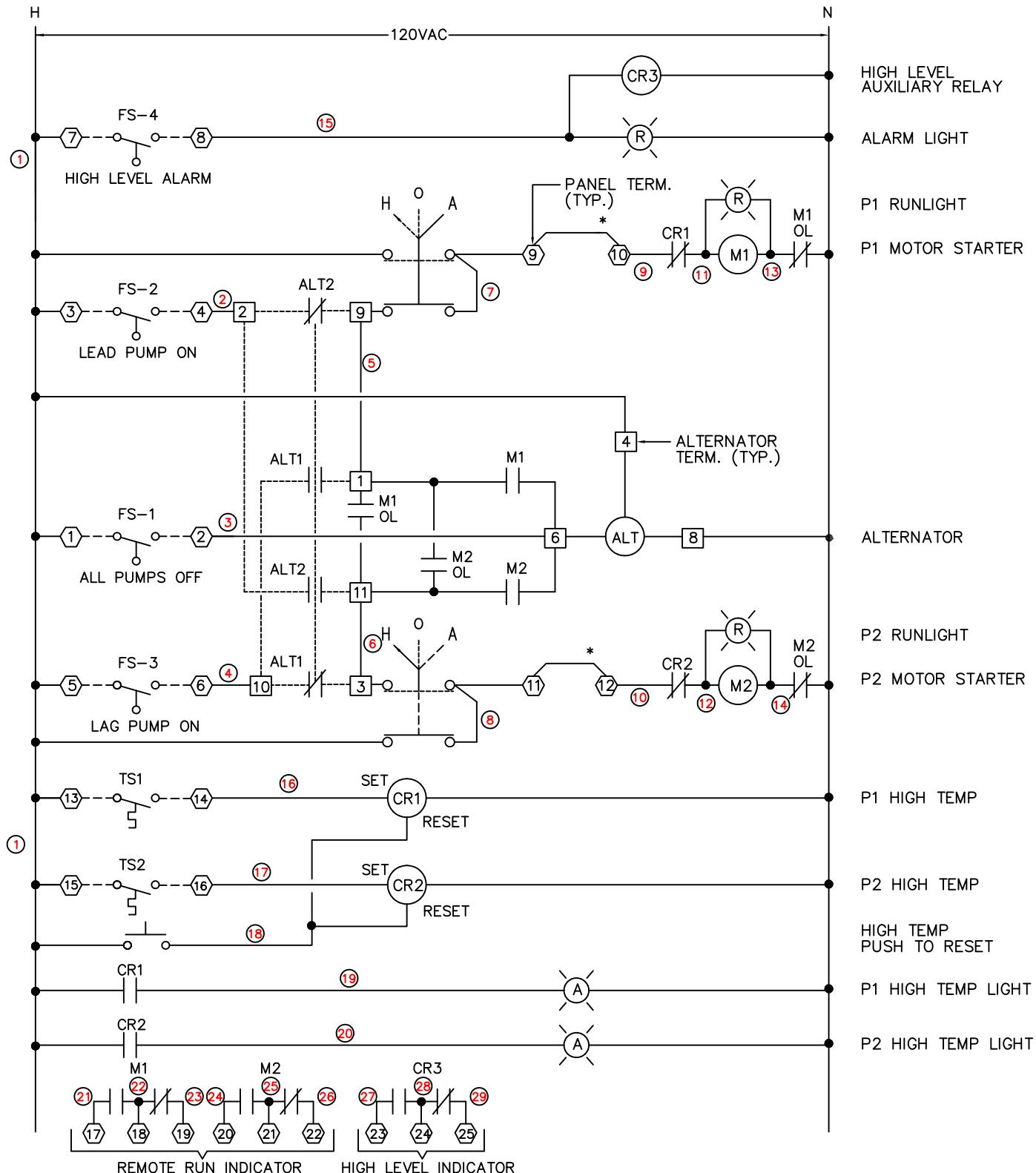
SOLD TO: Delta Process - Denham Springs, LA  
TAG : Central Control Building - Valero Refining Co.  
Krotz Springs, LA

SHIP TO: Delta Process - Denham Springs, LA

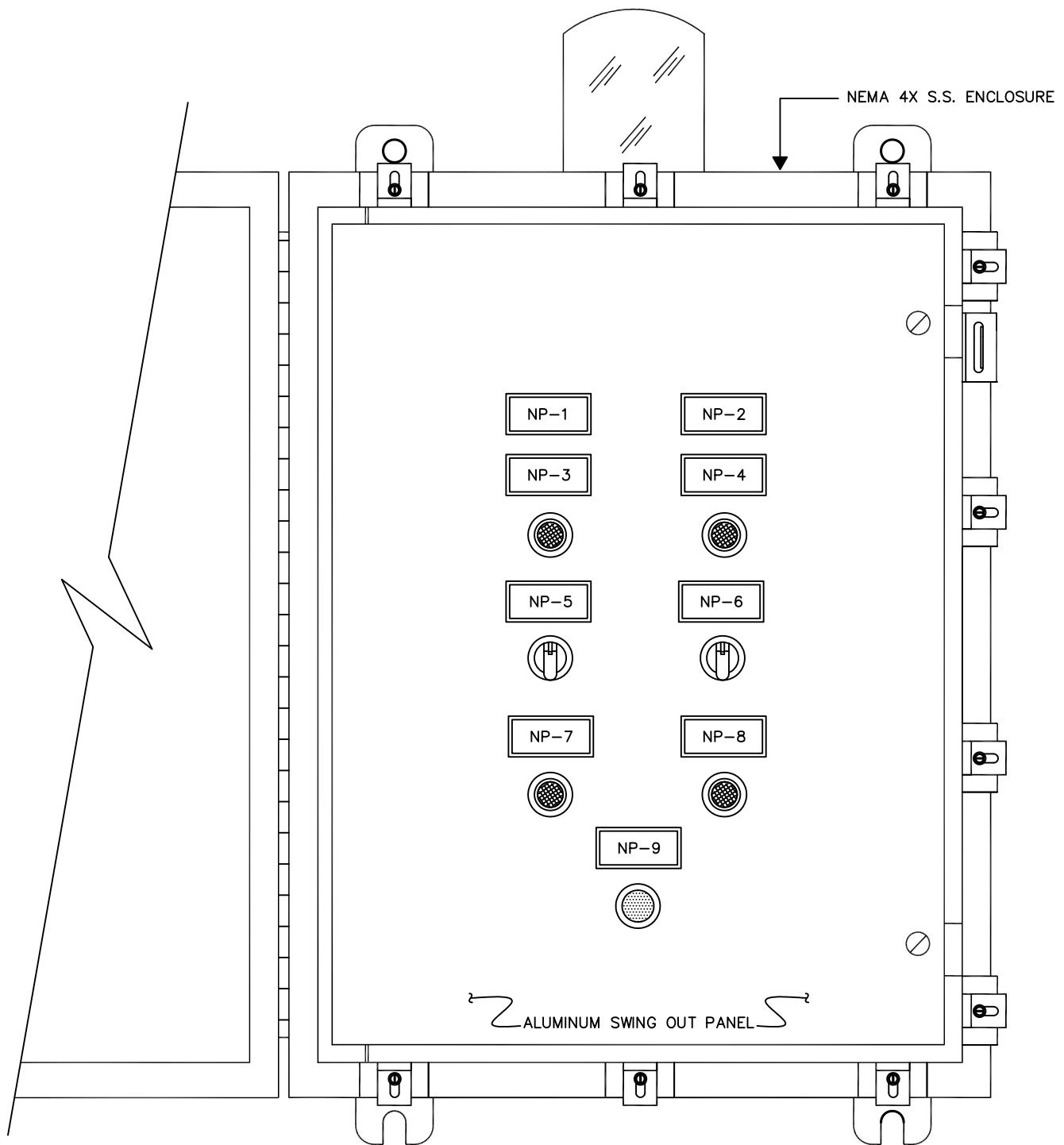
Drawing Title	PANEL DESCRIPTION						ECN	DATE	BY
	REFERENCE DRAWING		NO.	REVISION-LOCATION					
DATE 11/04/05	S/N	Sales Engineer	Application Engineer	DRAWN	APPROVED	BY	BY	DATE	
	C.C.		R.C.	BY C. RACHAL		BY	BY		
Project Title	<u>COX</u> Research and Technology, Inc.						PURCHASE ORDER NUMBER		
DUPLEX PUMP CONTROL PANEL							DRAWING NUMBER		
							CP-2199		
							SHEET NUMBER		
							1		



	Drawing Title  <b>POWER DIAGRAM</b>			
DATE 11/04/05	REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL
				DATE APPROVED BY DATE
	Project Title  <b>DUPLEX PUMP CONTROL PANEL</b>	<hr/> <hr/> <b>COX</b> <hr/> <hr/> Research and Technology, Inc. <hr/> <hr/>	P.O. Box 77808 Baton Rouge, LA 70809  Ph. (225)756-3271 Fax (225)755-1030	PURCHASE ORDER NUMBER  DRAWING NUMBER CP-2199  SHEET NUMBER 2



	Drawing Title  CONTROL DIAGRAM			
DATE 11/04/05		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION DRAWN Application Engineer R.C.
				ECN APPROVED BY C. RACHAL
Project Title  DUPLEX PUMP CONTROL PANEL	COX Research and Technology, Inc.	P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030	PURCHASE ORDER NUMBER  DRAWING NUMBER CP-2199 SHEET NUMBER 3	



#### NAMEPLATE SCHEDULE

NP-1	PUMP 1
NP-2	PUMP 2
NP-3	RUN
NP-4	RUN
NP-5	HOA
NP-6	HOA
NP-7	HIGH TEMP
NP-8	HIGH TEMP
NP-9	HIGH TEMP RESET

**NOTE:**  
SEWER GASES WILL DESTROY COMPONENTS IN PANEL.  
PROPER SEALS MUST BE INSTALLED EXTERNAL TO THE  
PANEL TO PREVENT ENTRY OF GASES.

DATE 11/04/05	Drawing Title  ENCLOSURE	REFERENCE DRAWING		NO.	REVISION-LOCATION		ECN	DATE	BY
		S/N	Sales Engineer C.C.	Application Engineer R.C.	DRAWN BY C. RACHAL	APPROVED BY			
	Project Title  DUPLEX PUMP CONTROL PANEL				P.O. Box 77808 Baton Rouge, LA 70809				
					Ph. (225)756-3271 Fax (225)755-1030				

# BILL OF MATERIALS

ITEM	QTY	MANUFACTURER	PART NO.	DESCRIPTION
1	1	C & I	I-242010ST4X	ENCLOSURE
1a	1	C & I	CI-2420P	BACKPLATE
1b	1	C & I	CI-2420ASP	DEAD FRONT
2	2	ABB	A40-30-10-84	MOTOR STARTER
3	2	ABB	TA42DU42	O.L. RELAY (29-42A)
4	2	SQUARE D	QOU170	CB1, CB2
5	1	TIMEMARK	261DT120	ALTERNATING RELAY
6	2	ACI	JR22FY	AMBER PILOT LIGHT
7	2	ACI	JR22FR	RED PILOT LIGHT
8	2	ACI	JR22P3M20B	HOA SWITCH
9	1	ACI	JR22AN11B	PUSH BUTTON
10	2	MAGNECRAFT	W388AMLCPX-9	LATCHING RELAYS
11	1	AC/DC	BL5-R-120	ALARM LIGHT
12	2	ABB	CAL5-11	AUXILIARY CONTACTS
13	1	IDEC	RU2S-A110	CR3
14	2	MARATHON	1321580	DISTRIBUTION BLOCKS
15				
16				
17				
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24				
25				

	Drawing Title  BILL OF MATERIALS						
DATE 11/04/05	REFERENCE DRAWING		NO.	REVISION-LOCATION	ECN	DATE	BY
	S/N	Sales Engineer	Application Engineer	DRAWN	APPROVED		
	C.C.	R.C.	BY C. RACHAL	BY	DATE		
Project Title  DUPLEX PUMP CONTROL PANEL	COX Research and Technology, Inc.				P.O. Box 77808 Baton Rouge, LA 70809  Ph. (225)756-3271 Fax (225)755-1030	PURCHASE ORDER NUMBER	
						DRAWING NUMBER	
						CP-2199	
						SHEET NUMBER	
						5	