DWG. NA-12-D-892-

4160V. 3Φ 60~ SUPPLY FROM PWR. CTR. TRANSF. 3750KVA DWG 8605945 & 1118P857H01

(2) FUSED P/T'S 4200/120V.

(2) 'UR 5' C/T'S 1200/5A

BAL FUSE 5KV 20E

75 KVA 4160/208-120V 3Φ DISC. TRANSF.

*3/0 WIRE PDS-7419-1

'AB' (KL) BKR 300A

(2) 'CFS' C/T'S 200/5A

BAL-LR FUSES

1250 H.P. MOTOR #1

BAL FUSES

25 KVAR CAP. F.P. (3 PER. Φ)

PUSH TO TEST 'HB' P.B.

MAIN PUMP MOTOR STARTER No. 1

MOTOR STARTER #2 SAME AS #1 FOR 1250 H.P. MOTOR #2

MOTOR STARTER #3 SAME AS #1 FOR 1250 H.P. MOTOR #3

MOTOR STARTER #4 SAME AS #1 FOR 1250 H.P. MOTOR #4

NOTE '2' (BY CUSTOMER)
FOR THE PRESENT, MAIN PUMP WILL BE STARTED MANUALLY NO HIGH LEVEL OR LOW LEVEL SWITCHES WILL BE INSTALLED & USED

NOTE '21' (TO CUSTOMER)
DO NOT ATTEMPT TO START MOTOR WITH OLD SEL. SW. IN 'HAND' POSITION

100A DISC. SW. 100A

30A DISC SW. 30A

'AB' (F) BKR. 100A

50A 60V ARKTITE RECT.

TO (MAX) 25 H.P. Δ HOIST

TO CUST'S LOAD Δ (WHEN USED)

2 PST TOGGLE SW.

TSW

TO CONT. TRANSF. CUBICLE LIGHTING

TOGGLE SW. 2 PST

TSW

250W HEATER

ALL AB (E) BKR'S. 20A

OIL LIFT PUMP MOTOR #1, 3H.P.

OIL LIFT PUMP MOTOR #2, 3H.P.

OIL LIFT PUMP MOTOR #3, 3H.P.

OIL LIFT PUMP MOTOR #4, 3H.P.

OIL CIRC. PUMP MOTOR #1, 3H.P.

OIL CIRC. PUMP MOTOR #2, 3H.P.

OIL CIRC. PUMP MOTOR #3, 3H.P.

OIL CIRC. PUMP MOTOR #4, 3H.P.

NOTE 'X' EQUIPPED FOR FUTURE AUTOMATIC SEQUENCE OPERATION

CONTROL TRANSF CUBICLE

TO CUST'S REMOTE LIGHTING CIRCUIT Δ

11202-H32 → MOTOR STARTER #1

NOTE 'Y' (FOR AUTO. OPER.) JUMPER 'A' TO BE ADD'D/REMOVED ONLY AFTER REMOTE 'FLOAT SW.' 'HWFS' & 'LWFS' ARE IN SERVICE

(NOT USED) JUMPER OUT

REMOTE Δ START-RESET

Δ REMOTE STOP LOCK-OUT

REMOVE JUMPER (WHEN USED)

TO STARTER CUBICLE FRONT & REAR LIGHTS

TO CUST'S ALARM CKT. Δ

TO DEVICES AT MOTOR #1 Δ

SPACE HEATERS 1KW AT MOTOR

IN STARTER CUBICLE

MOTOR STARTER #2 SUFFIX-2

MOTOR STARTER #3 SUFFIX-3

MOTOR STARTER #4 SUFFIX-4

LEGEND

CUST. DEV.	DEV. NO.	TYPE	DESCRIPTION
8	8	TAL	HIGH TEMP ALARM CONTACT AT POWER CENTER TRANSFORMER
27	UVT	AB	CONTROL POWER BKR.
1X	HT	AM	"OFF DELAY" TIMING RELAY (FOR TD UV)
	DFSX	NH-22	HIGH WATER FLOAT SWITCH-OFF DELAY TIMER
98	OLP	H-260JK	OIL FLOW SWITCH AUX. RELAY
88	OCP	H-260JK	OIL LIFT PUMP STARTER
2	T1	AM	OIL CIRCULATION PUMP STARTER
			'ON DELAY' DELAYS STARTING OF OIL CIRCULATING PUMPS MAIN PUMP UNTIL THE OIL LIFT PRESS. SW. CLOSES AFTER FIRST OPENING, WHEN STARTING THE OIL LIFT PUMP.
48	TZ	AH	ON DELAY, INCOMPLETE SEQ. RELAY (5 MIN)
83	83	NH-48	SEQUENCE TRANSFER & ALARM RELAY
52X	MA	N-136	MAIN CONTACTOR CONTROL RELAY
52	M	H-250A	MAIN CONTACTOR
	MX	NH-13	MAIN CONTACTOR AUX. RELAY
96	TM	RH-37	ELAPSED TIME METER RECORDS HOURS OF MOTOR OPER.
	R	GT	MOTOR RUNNING VISUAL SIGNAL LAMP
38	BT		BEARING TEMP. RELAY CONTACT NC OPENS ON HIGH TEMP.
95	WFS		CUST. WATER FLOW SW. IN WATER DISCHARGE LINE - NO CONTACT CLOSES ON FLOW OF WATER - NC CONTACT OPENS ON FLOW OF WATER
63	OLPS		OIL LIFT PRESSURE RELAY (SW-NO-OPENS ON TO START OIL PRESSURE IN OIL LIFT LINE TO START THE MOTOR
97	OFS OFF	RATO ALARM	OIL FLOW SWITCH (REMOTE MTR.) NC OPENS ON LOSS OF OIL FLOW FROM MAIN METER - MOUNTED IN RATO ALARM EXTENSION WELL.
43M	SEL M	W	OIL LIFT PUMP HAND-AUTO STARTING SEL. SW.
43C	SEL OCP	W	OIL CIRCULATING PUMP HAND-AUTO STARTING SEL. SW.
43P	SEL MP	W	MAIN PUMP HAND-AUTO STARTING SEL. SW.
4	4	NH-40	MASTER RELAY
73	TD		OFF PEAK LOAD TIME SW. (INTERMATIC)
	HTR		SPACE HEATER
46	PF	AC-460 H-83-A	PHASE REVERSAL & PHASE FAILURE RELAY
	DS	HD	DOOR SW. CLOSED WHEN DOOR IS CLOSED OVER DISCONNECT TYPE BAL POWER FUSES, PREVENTS PULLING PWR. FUSES WHILE MOTOR IS RUNNING
1	HWFS		CUST'S HIGH WATER FLOAT SWITCH (FUTURE) - NO-CLOSES AT HIGH LEVEL
5	LWFS		CUST'S LOW WATER FLOAT SWITCH (FUTURE) - NC-OPENS ON LOW LEVEL
	OLS		OIL LEVEL REL. SW. N/C WITH IN NORMAL OIL LEVEL RANGE.
	WFR	SG	A.C. RELAY FOR WATER FLOW SW.
	C/T		CURRENT TRANSFORMER
10	10	W	SEQUENCE SWITCH
	ACM	H-260ML	AIR COMPRESSOR MOTOR STARTER
	H-OL	H16	TEMP. COMPENSATED THERMAL O.L. REL.
	STP	NH-31	AUX. RELAY FOR STOPPING
	TSW		TOGGLE SW. 20A -2PST
63H	DPG		OIL OVER PRESS. GOV. CONTACT - NO-CLOSES ON HIGH OIL PRESSURE - NC-OPENS ON HIGH OIL PRESSURE - THIS IS MECH. RELIEF VALVE, WITHOUT ELEC. CONTACTS

Δ - CUST'S REMOTE EQUIPMENT
(E) - LOCATED IN ADJACENT STARTER CUBICLE
(R) - EQUIPMENT LOCATED IN CONTROL TRANSFORMER CUBICLE
(S) - AT POWER CENTER, YARD.
◇ - CUST'S FUTURE REMOTE EQUIPT.

LEGEND

BREAKER AUXILIARY SWITCHES SHOWN FOR OPEN BREAKER. CONTACTS OF CONTACTORS AND RELAYS ARE SHOWN WITH COILS DE-ENERGIZED.

- TERMINAL OR STUD
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- SHUNT OPERATING COIL
- SERIES OPERATING COIL
- INDICATING LAMP
- B FOR BLUE, R FOR RED, C FOR CLEAR, W FOR WHITE, G FOR GREEN, Y FOR YELLOW
- NORMALLY OPEN PUSH BUTTON
- NORMALLY CLOSED PUSH BUTTON
- THERMAL ELEMENT
- RESISTOR
- KNIFE SWITCH
- FUSE
- DISCONNECT DEVICE
- FINGER OR PLUG TYPE
- CONTROL CIRCUIT

NOTE TO CUSTOMER

MATERIAL SUPPLIED BY WESTINGHOUSE ELECTRIC CORPORATION AS ACCORDING TO CONTRACT AND NOT MODIFIED BY ANYTHING SHOWN ON THIS DIAGRAM. LOCATION OF APPARATUS, WIRES OR CABLES MUST NOT BE DETERMINED FROM DIAGRAM.

PANEL CONNECTIONS SHOWN AS VIEWED FROM REAR EXCEPT AS NOTED. AUXILIARY SWITCHES AND CONTACTS SHOWN FOR OPEN, OFF OR DE-ENERGIZED POSITION OF MAIN DEVICES.

CURRENT AND POTENTIAL TRANSFORMER SYMBOLS SHOW TERMINALS OF THE SAME INSTANTANEOUS POLARITY AS INDICATED AT THE RIGHT.

CONNECTIONS ARE FOR PHASE ROTATION 1-2-3.

Ⓓ - 250 VOLT INSTRUMENT FUSE ..... 6 AMP.
Ⓔ - 600 VOLT INSTRUMENT FUSE ..... AMP.

ALL CONNECTIONS MADE WITH #12 SOLID OR #14 STRANDED WIRE, EXCEPT AS INDICATED.

NO.	CHANGE	DATE	BY
1	S.O. NACL-78094		
2	NACL-78094 SYMBOLS ▽ & ◇ WERE NOT SHOWN IN LEGEND. DEVICE NUMBERS SHOWN AS 52TD, 52TZ, 52TM, 52TP WERE INCORRECT. 52 IS CORRECT DEVICE NO. AS PER IEEE-37.2-1954. NOTE 2 & 21 ADDED & NOTES WERE CHANGED.	10-21-57	
3	WIRES C83 CA3 ON SEQ. RELAY DIAGRAM REVISED WIRE #12 TO CONTACTS 1 & 2 OF 52TZ. NOTE TO CUST ADDED.	10-10-58	

FORM 24497-A

WESTINGHOUSE ELECTRIC CORPORATION

GLEN ALDEN COAL CO. TRUESDALE COLLIERY

MARION #4 SHAFT

TITLE FAIRBANKS MORSE CO. COMMONWEALTH OF PENNA.

CLASS-11-200 HSL-1250 HP. MOTOR STARTERS-NEMA III

DIMENSIONS IN INCHES—SCALE — SCHEMATIC DIAG.

DFTM. E.T.R. 3-19-59

CHKD.

APPD. [illegible]

DIV. & PLANT LOCATION M & R DIVISION

KEY DWG. ENG. DWG. NA-93D073

NA-12-D-892-13