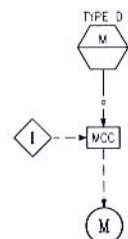
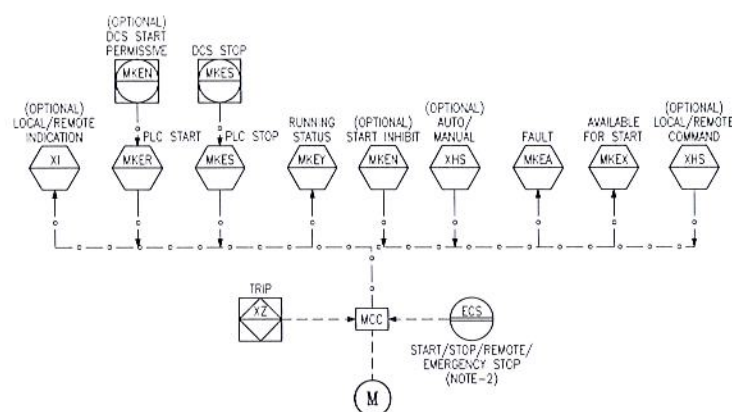


SHOWN ON P&ID

ENGINEERING DETAIL

ONE FAN MOTOR PLC CONTROLLED (TYPE-D)



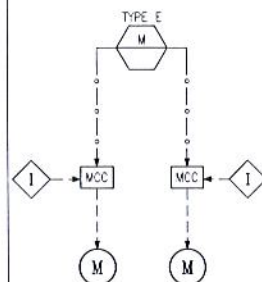
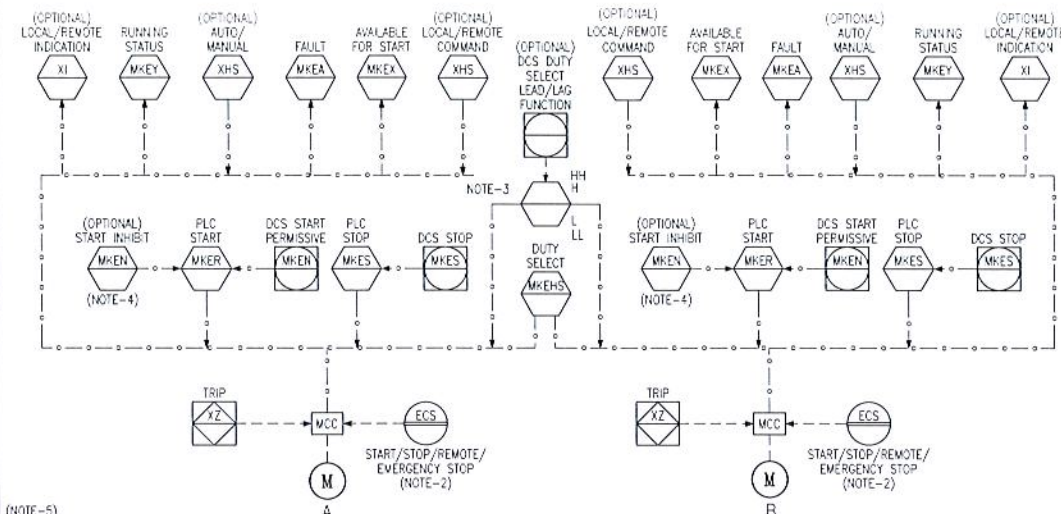
(NOTE-5)

Type D	SUFFIX FOR SIGNALS	Type D.1	Type D.2	Type D.3	Type D.4
1 FAN MOTOR (AUTO/MAN) PLC CONTROLLED					
LOCAL/REMOTE CMD FROM UCP	XHS	A	X	X	X
RUNNING STATUS	MKEY	A	X	X	X
FAULT	MKEA	A	X	X	X
AVAILABLE	MKEX	A	X	X	X
LOCAL REMOTE INDICATION ON UCP	XI	A	X	X	X
AUTO/MANUAL FROM DCS	XHS	B	X	X	X
DCS START PERMISSIVE	MKEN	A	X	X	X
DCS STOP	MKES	A	X	X	X
PLC START	MKER	A	X	X	X
PLC STOP	MKES	A	X	X	X
LOCAL START/STOP/REMOTE [PART OF ELECTRICAL CONTROL STATION (ECS)] (OPTIONAL)			X	X	X
EMERGENCY STOP [PART OF ELECTRICAL CONTROL STATION (ECS)] (MUST)			X	X	X
ESD TRIP	XZ	A	X	X	X
FAN MOTOR POWER (OPTIONAL)	MKEJ	A	X	X	X
FAN MOTOR START INHIBIT (OPTIONAL)	MKEN	B	X	X	X

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ENGINEERING DETAIL

TWO FAN MOTOR PLC CONTROLLED (TYPE-E)



(NOTE-5)

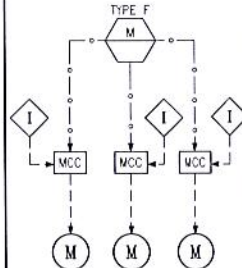
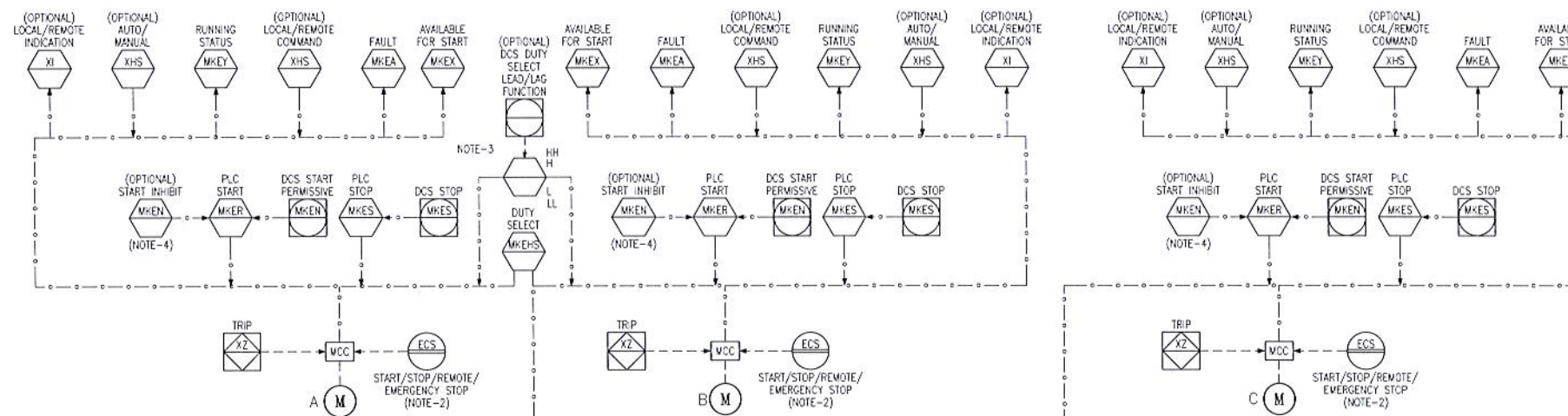
Type E	SUFFIX FOR SIGNALS	Type E.1	Type E.2	Type E.3	Type E.4
2 FAN MOTORS (AUTO/MAN) PLC CONTROLLED					
LOCAL/REMOTE CMD FROM UCP	XHS	A	B	X	X
RUNNING STATUS	MKEY	A	B	X	X
FAULT	MKEA	A	B	X	X
AVAILABLE	MKEX	A	B	X	X
LOCAL REMOTE INDICATION ON UCP	XI	A	B	X	X
AUTO/MANUAL FROM DCS	XHS	A	B	X	X
DCS START PERMISSIVE	MKEN	A	B	X	X
DCS STOP	MKES	A	B	X	X
PLC START	MKER	A	B	X	X
PLC STOP	MKES	A	B	X	X
LOCAL START/STOP/REMOTE [PART OF ELECTRICAL CONTROL STATION (ECS)] (OPTIONAL)			X	X	X
EMERGENCY STOP [PART OF ELECTRICAL CONTROL STATION (ECS)] (MUST)			X	X	X
ESD TRIP	XZ	A	B	X	X
DUTY/STANDBY SELECT FROM UCP	XHS			X	X
FAN MOTOR POWER (OPTIONAL)	MKEJ	A	B	X	X
FAN MOTOR START INHIBIT (OPTIONAL)	MKEN	A	B	X	X

- NOTES:
1. ALL THE OPERATIONAL SIGNALS AND FEEDBACKS TO THE PLC SHALL BE REPEATED TO THE DCS VIA SERIAL COMMUNICATION.
 2. ECS SHALL HAVE ONLY EMERGENCY STOP AS DEFAULT. SELECTIVE MOTORS/HEATERS SHALL HAVE OPTIONS OF LOCAL START/STOP/REMOTE SELECTION BASED ON OPERATIONS.
 3. LEAD/LAG & DUTY SELECT TO BE IMPLEMENTED IN DCS/PLC.
 4. START INHIBIT SHALL BE IMPLEMENTED IN DCS/PLC.
 5. THE SUB-TYPE PROVIDED FOR MOTOR CONTROL ARE INDICATIVE ONLY. THE SELECTION OF SIGNALS SHALL BE BASED ON PLANT OPERATIONS AS ELABORATED IN THE CONTROL NARRATIVE.
 6. THE OPTIONAL SIGNALS SHALL BE SELECTED BASED ON CONTROL PHILOSOPHY, AS ELABORATED IN THE CONTROL NARRATIVE.

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ENGINEERING DETAIL

THREE FAN MOTOR PLC CONTROLLED (TYPE-F)



(NOTE-5)

Type F	SUFFIX FOR SIGNALS	Type F.1	Type F.2	Type F.3	Type F.4
3 FAN MOTORS (AUTO/MAN) PLC CONTROLLED					
LOCAL/REMOTE CMD FROM UCP	XHS	A	B	C	X
RUNNING STATUS	MKEY	A	B	C	X
FAULT	MKEA	A	B	C	X
AVAILABLE	MKEX	A	B	C	X
LOCAL REMOTE INDICATION ON UCP (FOR MOTORS ONLY)	XI	A	B	C	X
AUTO/MANUAL FROM DCS	XHS	A	B	C	X
DCS START PERMISSIVE	MKEN	A	B	C	X
DCS STOP	MKES	A	B	C	X
PLC START	MKER	A	B	C	X
PLC STOP	MKES	A	B	C	X
LOCAL START/STOP/REMOTE [PART OF ELECTRICAL CONTROL STATION (ECS)] (OPTIONAL)			X	X	X
EMERGENCY STOP [PART OF ELECTRICAL CONTROL STATION (ECS)] (MUST)			X	X	X
ESD TRIP	XZ	A	B	C	X
DUTY/STANDBY SELECT FROM UCP	XHS				X
FAN MOTOR POWER (OPTIONAL)	MKEJ	A	B	C	X
FAN MOTOR START INHIBIT (OPTIONAL)	MKEN	A	B	C	X

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REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
C01	25.05.16	ISSUED FOR CONSTRUCTION	DX	VU	AB
D01	18.02.16	ISSUED FOR USE (DD)	DX	SI/WU	AB
H01	28.12.15	ISSUED FOR HAZOP (DD)	DX	SI/WU	AB
G01	26.10.15	ISSUED FOR REVIEW (DD)	DX	SI/WU	TT
A02	13.07.15	RE-ISSUED FOR COMPANY REVIEW	DX	SI/RS	TT
A01	28.05.15	ISSUED FOR COMPANY REVIEW	DX	SI/RS	TT

EARLY POWER PLANT
RUMAILA OIL FIELD
CONTRACT NO. 100478

中国石化工程建设公司
CHINA PETROLEUM ENGINEERING & CONSTRUCTION CORP.

CH2M HILL

DRAWING TITLE:
PIPING AND INSTRUMENTATION DIAGRAM
LEGEND SHEET
MOTOR CONTROL CENTRES

PROJECT NO.	100478CP	SCALE:	NONE	DWG SIZE:	A1
DRAWING NUMBER:		SHT. NO.:		REV.:	
100478CP-N-PG-PP01-PR-PID-0001-016		16/17			C01

