




Vendor: NEWJCM Job No.: 5656	EPC Contractor :  Project No. : 1208	HENGAM FERTILIZER PROJECT AMMONIA COMPRESSOR I/O LIST WITH SET POINTS Doc. No.: VD-1208-301A-LST-351	Owner:  Rev. : 05	MC: 
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VENDOR : **Jinzhou NEWJCM Machinery Manufacturing Co., Ltd.**

REQ. NO. : **1208-00-RE-REQ-301A**

ITEM NO. : **40-C-441 / 40-CT-441**

ITEM DESCRIPTION : **Ammonia Compressor**




PURCHASER DOC. NO. : **-**

VENDOR DOC. NO. : **VD-1208-301A-LST-351**

TOTAL PAGES : **24 (Excluding Attachments)**

<input type="checkbox"/> No Comment To Vendor <input type="checkbox"/> Comment as marked manufacturing may proceed To Vendor <input type="checkbox"/> Major Comment as marked manufacturing is on hold for the next rev To Vendor <input type="checkbox"/> Rejected , new document with the same rev. no. To Vendor <input type="checkbox"/> Used as for information To Vendor		
Name :	Req. No.:	Seq. No.:
Signature :		
Date:		
PIDE review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment		

DE		EXT				
Eng. Phase		Purpose of Distribution (POD)	Purpose of Issue (POI)		Purchaser's Action	
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Vendor: NEWJCM	EPC Contractor : 	HENGAM FERTILIZER PROJECT		Owner: 	MC: 
Job No.: 5656	Project No. : 1208	AMMONIA COMPRESSOR I/O LIST WITH SET POINTS			
		Doc. No.: VD-1208-301A-LST-351	Rev. : 05		

Index

Page

Contents

IN ATTACHMENT	• • • • • 4-6
1-1. Digital Input to PLC	• • • • • 7-11
1-2. Pulse Input to PLC	• • • • • 12
1-3. Digital Output from PLC	• • • • • 13-15
1-4. Analog Input to PLC	• • • • • 16-19
1-5. Analog Output from PLC (GOVERNOR)	• • • • • 20
2-1. Analog Input to BENTLY MONITOR	• • • • • 21-24

Abbreviation

L : Local	LCR: Local Control Room
LCS : Local Control Station	SW : Switch
LGB : Local Gauge Board	PB : Push Button switch
MCC : Motor Control Center	COS : Change-Over Switch
DCS : Distributed Control System	SOV : Solenoid Valve
GSM : Gas Seal Module	CV : Control Valve
CCR : Center Control Room	TRANS : Transmitter
BN : Bently Nevada monitor	PROX : Proximitior
MOP : Main Oil Pump	INST : Instrument
AOP : Auxiliary Oil Pump	RTD : Resistance Temperature Detector
EOP : Emergency Oil Pump	EOH : Electric Oil Heater
PLC : Program Logic Control System	OSTM: Overspeed Trip Module
TC : Thermocouple	AOC :Auxiliary Operating Console
EOST : OverSpeed Trip Test Enable	MIST :Oil Mist Fan Electric
MPU : Impulse	PI :Pulse Input
505 : Electronic Governor	IS :Intrinsically Safe
NIS : No-Intrinsically Safe	DE:DRIVE END
NDE : NON-DRIVE END	UCP-441:Ammonia Compressor Unit Control Panel
AMM-MCC: Ammonia MCC	NNF:Normal No Flow

NOTE1: All instruments have prefix No.40 for example 40-HS-44101.

NOTE2: All transmitters will be HART Protocol & Integrated display type.

NOTE3: All Valve proximity switches shall be "NAMUR" type.

IN ATTACHMENT NO. 1

Signal type	Signal source	Signal destination	Power by PLC (yes or no)		Redundant (yes or no)	IS/NIS	Subtotal	Spare	Total	Remark
AI	L	PLC	11	yes	no	IS	64	12	76	
				no						
AI	LGB	PLC	15	yes	no	IS				
				no						
AI	L	PLC	16	yes	yes	IS				
				no						
AI	DGS	PLC	6	yes	yes	IS				
				no						
AI	DGS	PLC	13	yes	no	IS				
				no						
AI	CCR	PLC		yes	no	NIS				
			1	no						
AI	505	PLC		yes	no	NIS				
			2	no						
A0	PLC	L		yes	yes	IS	13	3	16	
			11	no						
A0	PLC	505		yes	yes	NIS				
				no						
A0	PLC	FCS	1		no	NIS				
A0	505	L		yes	no	NIS				
			1	no						
PROXIMITY	L	BN3500	19	yes	no	IS	19	2	21	VIBRATION/AXIAL/KEYPHASE
				no						
PT100	L	BN3500		yes	no	IS	24	6	30	BEARING TEMP.
			24	no						
PI	L	505		yes	no	NIS(Exd)	2			
			2	no						
PI	L	OSTM		yes	no	NIS(Exd)	3			
			3	no						

IN ATTACHMENT NO. 2

Signal type	Signal source	Signal destination	Power by PLC (yes or no)		Redundant (yes or no)	IS/NIS	Subtotal	Spare	Total	Remark
DI	L	PLC	10	yes	no	IS	69	17	86	
				no						
DI	L	PLC	1	yes	yes	NIS(Exd)				
				no						
DI	L	PLC	2	yes	no	NIS(Exd)				
				no						
DI	LCS	PLC	11	yes	no	NIS(Exd)				
				no						
DI	LGB	PLC	11	yes	no	NIS(Exd)				
				no						
DI	LGB	PLC	1	yes	yes	NIS(Exd)				
				no						
DI	MCC	PLC	10	yes	no	NIS				
				no						
DI	CCR	PLC	1	yes	yes	NIS				
				no						
DI	505	PLC	1	yes	yes	NIS				
				no						
DI	505	PLC	1	yes	no	NIS				
				no						
DI	OSTM	PLC	1	yes	yes	NIS				
				no						
DI	OSTM	PLC	1	yes	no	NIS				
				no						
DI	BN	PLC	9	yes	yes	NIS				
				no						
DI	BN	PLC	1	yes	no	NIS				
				no						
DI	CCR	PLC	3	yes	no	NIS				
				no						
DI	PLC CABINET	PLC	4	yes	no	NIS				
				no						
DI	PLC CABINET	PLC	1	yes	yes	NIS				
				no						

IN ATTACHMENT NO. 3

Signal type	Signal source	Signal destination	Power by PLC (yes or no)		Redundant (yes or no)	IS/NIS	Subtotal	Spare	Total	Remark
D0	PLC	LCS	4	yes	no	NIS(Exd)	36	8	44	
				no						
D0	PLC	LGB	5	yes	no	NIS(Exd)				
				no						
D0	PLC	L	2	yes	yes	NIS(Exd)				
				no						
D0	PLC	L	3	yes	yes	IS				
				no						
D0	PLC	OSTM		yes	no	NIS				
			1	no						
D0	PLC	BN		yes	no	NIS				
			1	no						
D0	PLC	505		yes	no	NIS				
			8	no						
D0	PLC	505		yes	yes	NIS				
			1	no						
D0	PLC	MCC	10	yes	no	NIS				
				no						
D0	PLC	ESD		yes	yes	NIS				
			1	no						

1-1. Digital Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	NOR. OPE.	CONTACT ACTION (SETPOINT)		SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.			OPEN	CLOSE	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
VD-1208-301A-PID-301 PROCESS GAS PID																		
1	FZSH-44161	COMP. SECTION-1 ANTI SURGE CONTROL VALVE OPEN	SW	L	-	-	1		PRO (NAMUR)	-	PLC	UCP-441	*	-	-	*	1 @ START PERMISSIVE	
2	FZSL-44161	COMP. SECTION-1 ANTI SURGE CONTROL VALVE CLOSE	SW	L	-	-		1	PRO (NAMUR)	-	PLC	UCP-441	*	-	-	-		
3	FZSH-44164	COMP. SECTION-2 ANTI SURGE CONTROL VALVE OPEN	SW	L	-	-	1		PRO (NAMUR)	-	PLC	UCP-441	*	-	-	*	1 @ START PERMISSIVE	
4	FZSL-44164	COMP. SECTION-2 ANTI SURGE CONTROL VALVE CLOSE	SW	L	-	-		1	PRO (NAMUR)	-	PLC	UCP-441	*	-	-	-		
5	FZSH-44166	COMP. SECTION-3 ANTI SURGE CONTROL VALVE OPEN	SW	L	-	-	1		PRO (NAMUR)	-	PLC	UCP-441	*	-	-	*	1 @ START PERMISSIVE	
6	FZSL-44166	COMP. SECTION-3 ANTI SURGE CONTROL VALVE CLOSE	SW	L	-	-		1	PRO (NAMUR)	-	PLC	UCP-441	*	-	-	-		
VD-1208-301A-PID-303 LUBE OIL SYSTEM TANK PID																		
7																	DELETED	
8	HS-44101	STANDBY OIL PUMP MOTOR 40-PM-452B START PB	PB	LCS	-	-	-	START	DRY	-	PLC	UCP-441	*	-	-	-	Exd	
9	HS-44102	STANDBY OIL PUMP MOTOR 40-PM-452B STOP PB	PB	LCS	-	-	STOP	-	DRY	-	PLC	UCP-441	*	-	-	-		
10	HS-44103	STANDBY OIL PUMP MOTOR 40-PM-452B REMOTE/LOCAL SELECTOR	COS	LCS	-	-	MANUAL	REMOTE	DRY	-	PLC	UCP-441	*	-	-	-		
11	HS-44104	EMERGENCY OIL PUMP MOTOR 40-PM-452C START PB	PB	LCS	-	-	-	START	DRY	-	PLC	UCP-441	*	-	-	-		
12	HS-44105	EMERGENCY OIL PUMP MOTOR 40-PM-452C STOP PB	PB	LCS	-	-	STOP	-	DRY	-	PLC	UCP-441	*	-	-	-		
13	HS-44106	EMERGENCY OIL PUMP 40-PM-452C MOTOR REMOTE/LOCAL SELECTOR	COS	LCS	-	-	MANUAL	REMOTE	DRY	-	PLC	UCP-441	*	-	-	-		
14	HS-44107	ELECTRIC OIL HEATER 40-H-441 ON PB	PB	LCS	-	-	-	ON	DRY	-	PLC	UCP-441	*	-	-	-		
15	HS-44108	ELECTRIC OIL HEATER 40-H-441 OFF PB	PB	LCS	-	-	OFF	-	DRY	-	PLC	UCP-441	*	-	-	-		

1-1. Digital Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	NOR. OPE.	CONTACT ACTION (SETPOINT)		SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.			OPEN	CLOSE	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
16	HS-44109	ELECTRIC OIL HEATER 40-H-441 REMOTE/LOCAL SELECTOR	COS	LCS	-	-	MANUAL	REMOTE	DRY	-	PLC	UCP-441	*	-	-	-	-	Exd
17	HS-44110	OIL MIST FAN 40-X-441-FM START PB	PB	LCS	-	-	-	START	DRY	-	PLC	UCP-441	*	-	-	-	-	
18	HS-44111	OIL MIST FAN 40-X-441-FM STOP PB	PB	LCS	-	-	STOP	-	DRY	-	PLC	UCP-441	*	-	-	-	-	
19	XP-452B-M-R	STANDBY OIL PUMP MOTOR 40-PM-452B RUNNING	SW	AMM MCC	-	-	-	RUNNING	DRY	-	PLC	UCP-441	*	-	-	-	-	
20	XP-452C-M-R	EMERGENCY OIL PUMP MOTOR 40-PM-452C RUNNING	SW	AMM MCC	-	-	-	RUNNING	DRY	-	PLC	UCP-441	*	-	-	-	-	
21	XH-441-R	ELECTRIC OIL HEATER 40-H-441 RUNNING	SW	AMM MCC	-	-	-	ON	DRY	-	PLC	UCP-441	*	-	-	-	-	
22	XP-441-FM-R	OIL MIST FAN 40-X-441-FM RUNNING	SW	AMM MCC	-	-	-	RUNNING	DRY	-	PLC	UCP-441	*	-	-	-	-	
23	XP-441-FM-T	OIL MIST FAN 40-X-441-F ELECTRIC FAULT	SW	AMM MCC	-	-	FAULT	-	DRY	-	PLC	UCP-441	-	-	*	-	*	
24	XP-452B-M-T	STANDBY OIL PUMP MOTOR 40-PM-452B ELECTRIC FAULT	SW	AMM MCC	-	-	FAULT	-	DRY	-	PLC	UCP-441	-	-	*	-	*	
25	XP-452C-M-T	EMERGENCY OIL PUMP MOTOR 40-PM-452C ELECTRIC FAULT	SW	AMM MCC	-	-	FAULT	-	DRY	-	PLC	UCP-441	-	-	*	-	*	
26	XH-441-T	ELECTRIC OIL HEATER 40-H-441 ELECTRIC FAULT	SW	AMM MCC	-	-	FAULT	-	DRY	-	PLC	UCP-441	-	-	*	-	*	
VD-1208-301A-PID-305 MACHINE MONITORING DIAGRAM																		
27	XA-44150	BENTLY MONITOR COMMON ALARM	BN	UCP-441	-	-	ALARM	-	DRY	-	PLC	UCP-441	-	-	*	-	-	
28	VSHH-44151	TURBINE RADIAL VIBRATION COMMON HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
29	VSHH-44152	LP COMP. RADIAL VIBRATION COMMON HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
30	VSHH-44153	HP COMP. RADIAL VIBRATION COMMON HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
31	ZSHH-44151	TURBINE AXIAL POSITION COMMON HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
32	ZSHH-44152	LP COMP. AXIAL POSITION COMMON HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant

1-1. Digital Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	NOR. OPE.	CONTACT ACTION (SETPOINT)		SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.			OPEN	CLOSE	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
33	ZSHH-44153	HP COMP. AXIAL POSITION COMMON HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
34	TSHH-44151	TURBINE BEARING TEMPRETURE HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
35	TSHH-44152	LP COMP. BEARING TEMPRETURE HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
36	TSHH-44153	HP COMP. BEARING TEMPRETURE HIGH HIGH	BN	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
VD-1208-301A-PID-308 TURBINE GOVENING SYSTEM																		
37	XZSH-44121	TTV OPEN DETECTION	SW	L	-	-	-	1	PRO (NAMUR)	-	PLC	UCP-441	*	-	-	-	-	
38	XZSL-44121	TTV TRIP DETECTION	SW	L	-	-	-	1	PRO (NAMUR)	-	PLC	UCP-441	*	-	-	-	*	TTV CLOSE @ TURNING MOTOR / COMP. START PERMISSIVE
39	XZS-44142	TURNING GEAR ENGAGED	SW	L	-	-	-	1	PRO (NAMUR)	-	PLC	UCP-441	*	-	-	-	*	ENGAGED @ TURNING DEVICE (MOTOR) START PERMISSIVE
40	HS-44149	REMOTE/LOCAL SELECTOR	COS	LGB	-	-	LOCAL	REMOTE	DRY	-	PLC	UCP-441	-	*	-	-	-	Exd
41	HS-44130A	SHUTDOWN PB	PB	LGB	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	*	-	-	-	(Mushroom & Lockable Type) REDUNDANT Exd
42	HS-44131	TRIP RESET PB	PB	LGB	-	-	-	RESET	DRY	-	PLC	UCP-441	-	*	-	-	-	Exd
43	HS-44132	TURBINE START PB	PB	LGB	-	-	-	START	DRY	-	PLC	UCP-441	-	*	-	-	-	
44	HS-44133R	TURBINE SPEED RAISE	PB	LGB	-	-	-	RAISE	DRY	-	PLC	UCP-441	-	*	-	-	-	
45	HS-44133L	TURBINE SPEED LOWER	PB	LGB	-	-	-	LOWER	DRY	-	PLC	UCP-441	-	*	-	-	-	
46	HS-44141	OVERSPEED TRIP TEST ENABLE	COS	LGB	-	-	-	EOST	DRY	-	PLC	UCP-441	-	*	-	-	-	
47	HS-44142	TURNING MOTOR 40-M-413 START PB	PB	LGB	-	-	-	START	DRY	-	PLC	UCP-441	-	*	-	-	-	
48	HS-44143	TURNING MOTOR 40-M-413 STOP PB	PB	LGB	-	-	STOP	-	DRY	-	PLC	UCP-441	-	*	-	-	-	
49	HS-44144	LOCAL LAMP TEST PB	PB	LGB	-	-	-	TEST	DRY	-	PLC	UCP-441	-	*	-	-	-	

1-1. Digital Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	NOR. OPE.	CONTACT ACTION (SETPOINT)		SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.			OPEN	CLOSE	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
50	HS-44145	TURBINE TRIP SOV-A TEST PB	PB	LGB	-	-	-	TEST	DRY	-	PLC	UCP-441	-	*	-	-	-	Exd
51	HS-44146	TURBINE TRIP SOV-B TEST PB	PB	LGB	-	-	-	TEST	DRY	-	PLC	UCP-441	-	*	-	-	-	
52	XZS-44141A	MANUAL BLOCK VALVE FOR TURBINE TRIP SOV-A TEST	SW	L	-	-	-	1	PRO (NAMUR)	-	PLC	UCP-441	*	*	-	-	*	NOT 1 @ START PERMISSIVE
53	XZS-44141B	MANUAL BLOCK VALVE FOR TURBINE TRIP SOV-B TEST	SW	L	-	-	-	1	PRO (NAMUR)	-	PLC	UCP-441	*	*	-	-	*	NOT 1 @ START PERMISSIVE
54	XP-413-M-R	TURNING MOTOR 40-M-413 RUNNING	SW	AMM MCC	-	-	-	RUNNING	DRY	-	PLC	UCP-441	*	-	-	-	-	
55	XP-413-M-T	TURNING MOTOR 40-M-413 ELECTRIC FAULT	SW	AMM MCC	-	-	FAULT	-	DRY	-	PLC	UCP-441	-	-	*	-	*	
56																		DELETED
57	XS-4415	TIME SYNCHRONIZATION FROM FCS	FCS	CCR	-	-	-	AT 5:00AM	PLUSE	-	PLC	UCP-441	-	-	-	-	-	At pluse type for 5 second duration (contact is closed for 5 sec., time will be adjust in raising edge plus)
58	XA-44121	505 COMMON ALARM	505	UCP-441	-	-	ALARM	-	DRY	-	PLC	UCP-441	-	-	*	-	-	
59	XS-44125	505 TRIP	505	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
60	XA-44122	OVERSPEED TRIP MODULE COMMON ALARM	OSTM	UCP-441	-	-	ALARM	-	DRY	-	PLC	UCP-441	-	-	*	-	-	
61	XS-44122	TURBINE OVERSPEED TRIP	OSTM	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
62	XS-44152A	POWER EXCHANGE BOX POWER 1 FAULT	VC	L	-	-	FAULT	-	DRY	-	PLC	UCP-441	*	-	*	-	-	Exd
63	XS-44152B	POWER EXCHANGE BOX POWER 2 FAULT	VC	L	-	-	FAULT	-	DRY	-	PLC	UCP-441	*	-	*	-	-	Exd
64	XS-4411	ESD TRIP TO PLC	ESD	CCR	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant
PLC CABINET																		
65	HS-44130C	SHUTDOWN PB (ON DOOR OF COMP. CONTROL PANEL)	PLC	UCP-441	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	(Mushroom & Lockable Type) *Redundant
66	XA-44143	AUXILIARY POWER SUPPLY COMMON FAILURE ALARM	SW	UCP-441	-	-	ALARM	-	DRY	-	PLC	UCP-441	-	-	*	-	-	

1-1. Digital Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	NOR. OPE.	CONTACT ACTION (SETPOINT)		SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.			OPEN	CLOSE	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
																		DELETED
67	XA-44144A	PLC UCP-441A/B PANEL INTERNAL TEMP.	SW	UCP-441	-	-	ALARM	-	DRY	-	PLC	UCP-441	-	-	*	-	-	
68	XA-44144B	PLC UCP-441C/D PANEL INTERNAL TEMP.	SW	UCP-441	-	-	ALARM	-	DRY	-	PLC	UCP-441	-	-	*	-	-	
		HARDWARE CONSOLE																
69	HS-44130D	EMERGENCY SHUTDOWN PB(ON THE HARDWARE CONSOLE)	PB	CCR	-	-	TRIP	-	DRY	-	PLC	UCP-441	-	-	-	*	-	*Redundant

1-3. Digital Output from PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	NOR. OPE.	CONTACT ACTION		SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.			OPEN	CLOSE	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
VD-1208-301A-PID-301 PROCESS GAS PID																		
1	FY-44161A	COMP. SECTION-1 ANTI SURGE CONTROL VALVE SOV	PLC	UCP-441	-	-	-	-	WET	24VDC	SOV	L	-	-	-	*	-	*Redundant CV OPEN @ OVDC & IS TYPE
2	FY-44164A	COMP. SECTION-2 ANTI SURGE CONTROL VALVE SOV	PLC	UCP-441	-	-	-	-	WET	24VDC	SOV	L	-	-	-	*	-	*Redundant CV OPEN @ OVDC & IS TYPE
3	FY-44166A	COMP. SECTION-3 ANTI SURGE CONTROL VALVE SOV	PLC	UCP-441	-	-	-	-	WET	24VDC	SOV	L	-	-	-	*	-	*Redundant CV OPEN @ OVDC & IS TYPE
VD-1208-301A-PID-303 LUBE OIL SYSTEM TANK																		
4	XL-44101	STANDBY OIL PUMP MOTOR 40-PM-452B RUNNING LAMP	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LCS	*	-	-	-	-	Exd
5	XL-44103	EMERGENCY OIL PUMP MOTOR 40-PM-452C RUNNING LAMP	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LCS	*	-	-	-	-	
6	XL-44105	ELECTRIC OIL HEATER 40-H-441 RUNNING LAMP	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LCS	*	-	-	-	-	
7	XL-44107	OIL MIST FAN 40-X-441-FM RUNNING LAMP	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LCS	*	-	-	-	-	
8	XP-452B-M-ST	STANDBY OIL PUMP MOTOR 40-PM-452B START COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	-	24VDC (2 SEC. POSITIVE PULSE)
9	XP-452B-M-SP	STANDBY OIL PUMP MOTOR 40-PM-452B STOP COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	-	OVDC AT STOP COMMAND
10	XP-452C-M-ST	EMERGENCY OIL PUMP MOTOR 40-PM-452C START COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	-	24VDC (2 SEC. POSITIVE PULSE)
11	XP-452C-M-SP	EMERGENCY OIL PUMP MOTOR 40-PM-452C STOP COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	-	OVDC AT STOP COMMAND
12	XH-441-ST	ELECTRIC OIL HEATER 40-H-441 ON COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	-	24VDC (2 SEC. POSITIVE PULSE)
13	XH-441-SP	ELECTRIC OIL HEATER 40-H-441 OFF COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	-	OVDC AT STOP COMMAND
14	XP-441-FM-M-ST	OIL MIST FAN 40-X-441-FM START COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	-	24VDC (2 SEC. POSITIVE PULSE)
15	XP-441-FM-M-SP	OIL MIST FAN 40-X-441-FM STOP COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	-	OVDC AT STOP COMMAND

1-3. Digital Output from PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	NOR. OPE.	CONTACT ACTION		SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.			OPEN	CLOSE	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
VD-1208-301A-PID-305 MACHINE MONITORING DIAGRAM																		
16	XS-44150	3500 MODULE RESET	PLC	UCP-441	-	-	-	RESET	DRY	-	BN	UCP-441	-	-	-	-		
VD-1208-301A-PID-308 TURBINE GOVENING SYSTEM																		
17	XL-44130	COMMON TRIP LAMP	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LGB	*	-	-	-	Exd	
18	XL-44131	COMMON ALARM LAMP	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LGB	*	-	-	-		
19	XL-44132	TURBINE LOCAL OPERATION LAMP (LOCAL MODE)	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LGB	*	-	-	-		
20	XL-44142	TURNING MOTOR 40-M-413 RUNNING LAMP	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LGB	*	-	-	-		
21	XL-44133	READY TO START LAMP	PLC	UCP-441	-	-	-	-	WET	24VDC	LAMP	LGB	*	-	-	-		
22	XP-413-M-ST	TURNING MOTOR 40-M-413 START COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	24VDC (2 SEC. POSITIVE PULSE)	
23	XP-413-M-SP	TURNING MOTOR 40-M-413 STOP COMMAND	PLC	UCP-441	-	-	-	-	WET	24VDC	CUST MCC	AMM MCC	-	*	-	-	OVDC AT STOP COMMAND	
24	XY-44141A	TURBINE TRIP SOV-A TRIP	PLC	UCP-441	-	-	-	-	WET	24VDC	SOV	L	-	-	-	*	VALVE OPEN @ 0 VDC/*Redundant Exd	
25	XY-44141B	TURBINE TRIP SOV-B TRIP	PLC	UCP-441	-	-	-	-	WET	24VDC	SOV	L	-	-	-	*	VALVE OPEN @ 0 VDC/*Redundant Exd	
26	XS-44151	OVERSPEED TRIP MODULE RESET	PLC	UCP-441	-	-	-	RESET	DRY	-	OSTM	UCP-441	-	*	-	-		
27	XS-4410	Compressore Tripped signal to ESD	PLC	UCP-441	-	-	TRIPPED	NORMAL	DRY	-	RELAY	ESD	-	-	-	*	*Redundant	
28	XS-44149	REMOTE/LOCAL SELECTOR (LOCAL)	PLC	UCP-441	-	-	REMOTE	LOCAL	DRY	-	505	UCP-441	-	-	-	-		
29	XS-44130	EXTERENAL TURBINE TRIP	PLC	UCP-441	-	-	TRIP	-	DRY	-	505	UCP-441	-	-	-	*	*Redundant	
30	XS-44131	TRIP RESET	PLC	UCP-441	-	-	-	RESET	DRY	-	505	UCP-441	-	-	-	-		
31	XS-44132	TURBINE START	PLC	UCP-441	-	-	-	START	DRY	-	505	UCP-441	-	-	-	-		

1-4. Analog Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	INSTRUMENT RANGE		NOR. OPE.	SETPOINT				SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.		MIN	MAX		LL	L	H	HH	TYPE	RANGE	TYPE	LOC.	INDI	CONT.	ALRM	TRIP	INT.	
VD-1208-301A-PID-301 PROCESS GAS PID																						
1	PT-44161	COMP. SECTION-1 SUCTION PRESS.	TRANS	L	BarG	0	0.1	0.03	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	*	-	-	-	*Redundant
2	FT-44161	COMP. SECTION-1 SUCTION FLOW	TRANS	L	Nm3/h	0	17550	11600	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	*	-	-	-	*Redundant
3	TT-44161	COMP. SECTION-1 SUCTION TEMP.	TRANS	L	°C	-50	50	0	-	-	28	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	*Redundant
4	PT-44162	COMP. SECTION-1 DISCHARGE PRESS.	TRANS	L	BarG	0	4	2.5	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-	
5	TT-44162	COMP. SECTION-1 DISCHARGE TEMP.	TRANS	L	°C	0	200	118.8	-	-	128	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	-	
6	PT-44163	COMP. SECTION-2 SUCTION PRESS.	TRANS	L	BarG	0	4	2.49	-	2	-	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	*Redundant
7	TT-44163	COMP. SECTION-2 SUCTION TEMP.	TRANS	L	°C	0	100	5.6	-	-	15	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	*Redundant
8	FT-44164	COMP. SECTION-2 DISCHARGE FLOW	TRANS	L	Nm3/h	0	70000	54263	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	*	-	-	-	*Redundant
9	PT-44164	COMP. SECTION-2 DISCHARGE PRESS.	TRANS	L	BarG	0	10	5.24	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	*	-	-	-	*Redundant
10	TT-44164	COMP. SECTION-2 DISCHARGE TEMP.	TRANS	L	°C	0	100	60.3	-	-	71	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	*Redundant
11	TT-44165	COMP. SECTION-3 SUCTION TEMP.	TRANS	L	°C	0	100	28.4	-	-	38	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	*Redundant
12	PT-44165	COMP. SECTION-3 SUCTION PRESS.	TRANS	L	BarG	0	10	5	-	4	-	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	*Redundant
13	FT-44166	COMP. SECTION-3 DISCHARGE FLOW	TRANS	L	Nm3/h	0	150000	118661	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	*	-	-	-	*Redundant
14	PT-44166	COMP. SECTION-3 DISCHARGE PRESS.	TRANS	L	BarG	0	40	19	-	-	21	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	*Redundant
15	TT-44166	COMP. SECTION-3 DISCHARGE TEMP.	TRANS	L	°C	0	200	139.6	-	-	149	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	*Redundant
16	FT-44167	LIQUID AMMONIA SUPPLY FLOW	TRANS	L	t/h	0	21	NNF	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-	
17	PIC-5022	FLASH VESSEL 50-V-503 PRESSURE	TRANS	FCS	BarG	0	-1	30	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	*	-	-	-	*Redundant

1-4. Analog Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	INSTRUMENT RANGE		NOR. OPE.	SETPOINT				SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS	
			TYPE	LOC.		MIN	MAX		LL	L	H	HH	TYPE	RANGE	TYPE	LOC.	INDI	CONT.	ALRM	TRIP	INT.		
VD-1208-301A-PID-302 STEAM TURBINE PID																							
18	FT-44102	TURBINE STEAM INLET FLOW	TRANS	L	kg/h	0 (0)	212467.2	153733	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-		
19	TT-44119	TURBINE INLET STEAM TEMP.	TRANS	L	°C	0	800	510	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-		
20	PT-44122	TURBINE GOV. VALVE CHEST PRESS.	TRANS	LGB	BarG	0	160	110	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-		
21	PT-44123	TURBINE AFTER 1ST STAGE PRESS.	TRANS	LGB	BarG	0	160	85.5	-	-	102	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	-		
22	PT-44124	TURBINE EXHAUST STEAM PRESS	TRANS	LGB	BarG	0	100	45	-	-	54	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	-		
23	TT-44118	TURBINE EXHAUST STEAM TEMP.	TRANS	L	°C	0	600	393.5	-	-	410	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	-		
24	PT-44125	TURBINE INLET STEAM PRESS.	TRANS	L	BarG	0	160	110	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-		
VD-1208-301A-PID-303 LUBE OIL SYSTEM TANK PID																							
25	TT-44101	OIL RESERVOIR TEMP.	TRANS	L	°C	0	160	70	-	38	75	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	HEATER ON/OFF COMMAND	
26	PT-44111	MAIL OIL PUMP OUTLET PRESS.	TRANS	LGB	BarG	0	25	11.8	-	9.5	11.8	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	L @ AOP AUTO START H @ MOP RUNNING	
27	PT-44112	STANDBY OIL PUMP OUTLET PRESS.	TRANS	LGB	BarG	0	25	11.8	-	-	11.8	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	H @ AOP RUNNING	
28	PT-44113	EMERGENCY OIL PUMP OUTLET PRESS.	TRANS	LGB	BarG	0	6	2.5	-	-	2.5	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	H @ EOP RUNNING	
29	TT-44105	OIL COOLER OUTLET TEMP.	TRANS	L	°C	0	160	59	-	44	65	-	ANA	4-20mA	PLC	UCP-441	*	*	*	-	-	NOT L @ START PERMISSIVE *Redundant	
30	PDT-44102	OIL FILTER DIFF. PRESS.	TRANS	LGB	BarG	0	4	0.15	-	-	2.3	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*		
31	TT-44110	STEAM TURBINE FOR OIL UNIT EXHAUST TEMP	TRANS	L	°C	0	400	190	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	*	-	-	-	*Redundant	
32	FT-44101	MAIL OIL PUMP TURBINE STEAM INLET FLOW	TRANS	L	Kg/h	0	2120	1869	-	1495	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	-		
33	LT-44101	OIL RESERVOIR LEVEL	TRANS	L	mm KPa	0 -16.12	1750 -1.2	850 -7.83	-	800 -7.37	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	L @ HEATER OFF COMMAND

1-4. Analog Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	INSTRUMENT RANGE		NOR. OPE.	SETPOINT				SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.		MIN	MAX		LL	L	H	HH	TYPE	RANGE	TYPE	LOC.	INDI	CONT.	ALRM	TRIP	INT.	
VD-1208-301A-PID-304 LUBE OIL SYSTEM (BASE) PID																						
34	LT-44102	LUBE OIL RUNDOWN TANK LEVEL	TRANS	L	mm KPa	0	4000 34.104	3900 33.251	-	3850 32.825	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	NOT L @ START PERMISSIVE
35	PT-44114	LUBE OIL HEADER PRESS.	TRANS	LGB	BarG	0	4	1.4	-	0.84	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	NOT L @ TURNING MOTOR / COMP. START PERMISSIVE
36	PT-44115A	LUBE OIL HEADER PRESS. (TRIP) (A)	TRANS	LGB	BarG	0	4	1.4	0.56	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	LL (2003) @ TRIP
37	PT-44115B	LUBE OIL HEADER PRESS. (TRIP) (B)	TRANS	LGB	BarG	0	4	1.4	0.56	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	
38	PT-44115C	LUBE OIL HEADER PRESS. (TRIP) (C)	TRANS	LGB	BarG	0	4	1.4	0.56	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	
VD-1208-301A-PID-306-2 SEAL GAS PID																						
39	PT-44191A	HP COMP. PRIMARY SEAL GAS VENT PRESS (DE)	TRANS	DGS	BarG	0	5	1.15	-	-	2	4	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	HH(1002) @ TRIP, *Redundant
40	PT-44191B	HP COMP. PRIMARY SEAL GAS VENT PRESS (DE)	TRANS	DGS	BarG	0	5	1.15	-	-	2	4	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	
41	PDT-44190	HP COMP. PRIMARY SEAL GAS SUPPLY DIFF. PRESS.	TRANS	DGS	Bar	0	5	3	0.5	1	-	-	ANA	4-20mA	PLC	UCP-441	*	*	*	*	*	LL @ TRIP *Redundant
42	FT-44190	HP COMP. PRIMARY SEAL GAS SUPPLY FLOW (NDE)	TRANS	DGS	Nm3/h	0	30	7.5	-	4	15	30	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	HH @ TRIP, *Redundant
43	PT-44192	HP COMP. N2 SEAL GAS PRESS.	TRANS	DGS	BarG	0	10	5	-	3	8	-	ANA	4-20mA	PLC	UCP-441	*	-	*		*	NOT L @ START PERMISSIVE
44	FT-44191	HP COMP. PRIMARY SEAL GAS SUPPLY FLOW (DE)	TRANS	DGS	Nm3/h	0	30	7.5	-	4	15	30	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	HH @ TRIP, *Redundant
45	PT-44190B	HP COMP. PRIMARY SEAL GAS VENT PRESS (NDE)	TRANS	DGS	BarG	0	5	1.15	-	-	2	4	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	HH(1002) @ TRIP, *Redundant
46	PT-44190A	HP COMP. PRIMARY SEAL GAS VENT PRESS (NDE)	TRANS	DGS	BarG	0	5	1.15	-	-	2	4	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	
VD-1208-301A-PID-306-1 SEAL GAS PID																						
47	PT-44181A	LP COMP. PRIMARY SEAL GAS VENT PRESS (DE)	TRANS	DGS	BarG	0	5	0.15	-	-	0.7	1	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	HH(1002) @ TRIP, *Redundant
48	PT-44181B	LP COMP. PRIMARY SEAL GAS VENT PRESS (DE)	TRANS	DGS	BarG	0	5	0.15	-	-	0.7	1	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	

1-4. Analog Input to PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	INSTRUMENT RANGE		NOR. OPE.	SETPOINT				SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.		MIN	MAX		LL	L	H	HH	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
49	PDT-44180A	LP COMP. PRIMARY SEAL GAS SUPPLY DIFF. PRESS.	TRANS	DGS	Bar	0	1	0.4	0.2	0.3	-	-	ANA	4-20mA	PLC	UCP-441	*	*	*	*	*	LL @ TRIP, *Redundant
50	FT-44180	LP COMP. PRIMARY SEAL GAS SUPPLY FLOW (NDE)	TRANS	DGS	Nm3/h	0	30	5.5	-	4	15	30	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	HH @ TRIP, *Redundant
51	FT-44181	LP COMP. PRIMARY SEAL GAS SUPPLY FLOW (DE)	TRANS	DGS	Nm3/h	0	30	5.5	-	4	15	30	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	HH @ TRIP, *Redundant
52	PT-44180A	LP COMP. PRIMARY SEAL GAS VENT PRESS (NDE)	TRANS	DGS	BarG	0	5	0.15	-	-	0.7	1	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	HH(1002) @ TRIP, *Redundant
53	PT-44180B	LP COMP. PRIMARY SEAL GAS VENT PRESS (NDE)	TRANS	DGS	BarG	0	5	0.15	-	-	0.7	1	ANA	4-20mA	PLC	UCP-441	*	-	*	*	*	
54	PT-44185	LP COMP. N2 SEAL GAS PRESS.	TRANS	DGS	BarG	0	10	5	-	3	8	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	*	NOT L @ START PERMISSIVE
55	PDT-44181	LP COMP. SECONDARY SEAL GAS FILTER DIFF.	TRANS	DGS	Bar	0	1	<0.4	-	-	0.4	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	-	
56	PDT-44182	LP COMP. PRIMARY SEAL GAS FILTER DIFF.	TRANS	DGS	Bar	0	1	<0.4	-	-	0.4	-	ANA	4-20mA	PLC	UCP-441	*	-	*	-	-	
57	PDT-44180B	LP COMP. PRIMARY SEAL GAS SUPPLY DIFF. PRESS.	TRANS	DGS	Bar	0	1	0.6	0.3	0.45	-	-	ANA	4-20mA	PLC	UCP-441	*	*	*	*	*	LL @ TRIP, *Redundant
VD-1208-301A-PID-308 TURBINE GOVERNING SYSTEM PID																						
58	SI-44130	ACTURAL SPEED TO PLC	ANA	505	rpm	0	15000		-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-	
59	SY-44131	GOVERNOR SPEED SETPOINT TO PLC	ANA	505	rpm	0	15000		-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-	
60	GZT-44141	E/H ACTUATOR POSITION FEEDBACK	TRANS	L	%	0	100	-	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-	
61	PT-44143A	TURBINE CONTROL OIL PRESS. (TRIP)(A)	TRANS	LGB	BarG	0	25	9	5.5	7	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	*	-	LL (2003) @ TRIP DETECTED, GOVERNOR EXTERNAL TRIP
62	PT-44143B	TURBINE CONTROL OIL PRESS. (TRIP)(B)	TRANS	LGB	BarG	0	25	9	5.5	7	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	*	-	
63	PT-44143C	TURBINE CONTROL OIL PRESS. (TRIP)(C)	TRANS	LGB	BarG	0	25	9	5.5	7	-	-	ANA	4-20mA	PLC	UCP-441	*	-	*	*	-	
64	PIC-5014	STEAM INLET PRESSURE SIGNAL	FCS	CCR	%	0	100	-	-	-	-	-	ANA	4-20mA	PLC	UCP-441	*	-	-	-	-	

1-5. Analog Output from PLC

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	INSTRUMENT RANGE		NOR. OPE.	ACTION		SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.		MIN	MAX		0%	100%	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
VD-1208-301A-PID-301 PROCESS GAS PID																				
1	FY-44161B	COMP. SECTION-1 ANTI SURGE CONTROL VALVE	PLC	UCP-441	%	0	100	-	20mA @ CLOSE	4mA @ OPEN	ANA	4-20mA	CV	L	-	*	-	-	-	*Redundant
2	FY-44164B	COMP. SECTION-2 ANTI SURGE CONTROL VALVE	PLC	UCP-441	%	0	100	-	20mA @ CLOSE	4mA @ OPEN	ANA	4-20mA	CV	L	-	*	-	-	-	*Redundant
3	FY-44166B	COMP. SECTION-3 ANTI SURGE CONTROL VALVE	PLC	UCP-441	%	0	100	-	20mA @ CLOSE	4mA @ OPEN	ANA	4-20mA	CV	L	-	*	-	-	-	*Redundant
4	TY-44161	COMP. SECTION-1 SUCTION TEMPERATURE VALVE	PLC	UCP-441	%	0	100	-	4mA @ CLOSE	20mA @ OPEN	ANA	4-20mA	CV	L	-	*	-	-	-	*Redundant
5	TY-44163	COMP. SECTION-2 SUCTION TEMPERATURE VALVE	PLC	UCP-441	%	0	100	-	4mA @ CLOSE	20mA @ OPEN	ANA	4-20mA	CV	L	-	*	-	-	-	*Redundant
6	TY-44165	COMP. SECTION-3 SUCTION TEMPERATURE VALVE	PLC	UCP-441	%	0	100	-	4mA @ CLOSE	20mA @ OPEN	ANA	4-20mA	CV	L	-	*	-	-	-	*Redundant
VD-1208-301A-PID-303 LUBE OIL SYSTEM TANK PID																				
7	TY-44110	EXHAUST TEMP. CONTROL VALVE FOR OIL UNIT STEAM TURBINE	PLC	UCP-441	%	0	100	-	20mA @ CLOSE	4mA @ OPEN	ANA	4-20mA	CV	L	-	*	-	-	-	*Redundant
8	TY-44105	OIL COOLER OUTLET TEMP. CONTROL VALVE	PLC	UCP-441	%	0	100	-	4mA @ COOL OIL OPEN	20mA @ HOT OIL OPEN	ANA	4-20mA	CV	L	-	*	-	-	-	*Redundant
VD-1208-301A-PID-306 SEAL GAS PID																				
9	PDV-44190	LP COMP. PRIMARY SEAL GAS SUPPLY DIFF. PRESS. CONTROL VALVE	PLC	UCP-441	%	0	100	-	20mA @ CLOSE	4mA @ OPEN	ANA	4-20mA	CV	DGS	-	*	-	-	-	*Redundant
10	PDV-44180	HP COMP. PRIMARY SEAL GAS SUPPLY DIFF. PRESS. CONTROL VALVE	PLC	UCP-441	%	0	100	-	20mA @ CLOSE	4mA @ OPEN	ANA	4-20mA	CV	DGS	-	*	-	-	-	*Redundant
VD-1208-301A-PID-308 TURBINE GOVERNING SYSTEM PID																				
11	SIC-44130	REMOTE SPEED SETPOINT	PLC	UCP-441	rpm	1800	9255	-	-	-	ANA	4-20mA	505	UCP-441	-	*	-	-	-	*Redundant
12	GY-44141	E/H ACTUATOR FOR GV	505	UCP-441	%	0	100	-	4mA @ CLOSE	20mA @ OPEN	ANA	4-20mA	CV	UCP-441	-	*	-	-	-	
VD-1208-301A-PID-302 STEAM TURBINE PID																				
13	FY-4018A	TURBINE STEAM INLET FLOW	PLC	UCP-441	Kg/h	0	212467.2	153733	4mA	20mA	ANA	4-20mA	PLC	FCS	-	*	-	-	-	

2-1. Analog Input to BENTLY MONITOR

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	INSTRUMENT RANGE		NOR. OPE.	SETPOINT				SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.		MIN	MAX		LL	L	H	HH	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
VD-1208-301A-PID-305 MACHINE MONITORING DIAGRAM																						
1	VXT-44101	TURBINE RADIAL VIBRATION (GOV. SIDE X)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	HH (1002) @ TRIP
2	VYT-44101	TURBINE RADIAL VIBRATION (GOV. SIDE Y)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	
3	VXT-44102	TURBINE RADIAL VIBRATION (EXH. SIDE X)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	HH (1002) @ TRIP
4	VYT-44102	TURBINE RADIAL VIBRATION (EXH. SIDE Y)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	
5	VXT-44103	LP COMP. RADIAL VIBRATION (NDE X)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	HH (1002) @ TRIP
6	VYT-44103	LP COMP. RADIAL VIBRATION (NDE Y)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	
7	VXT-44104	LP COMP. RADIAL VIBRATION (DE X)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	HH (1002) @ TRIP
8	VYT-44104	LP COMP. RADIAL VIBRATION (DE Y)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	
9	VXT-44105	HP COMP. RADIAL VIBRATION (NDE X)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	HH (1002) @ TRIP
10	VYT-44105	HP COMP. RADIAL VIBRATION (NDE Y)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	
11	VXT-44106	HP COMP. RADIAL VIBRATION (DE X)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	HH (1002) @ TRIP
12	VYT-44106	HP COMP. RADIAL VIBRATION (DE Y)	PROX	L	μ mPP	0	150	<25.4	-	-	51	89	ANA	mV	BN	UCP-441	*	-	*	*	-	
13	ZT-44101A	TURBINE AXIAL POSITION (A)	PROX	L	mm	-1	1	-0.5-0.5	-	-	±0.5	±0.75	ANA	mV	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
14	ZT-44101B	TURBINE AXIAL POSITION (B)	PROX	L	mm	-1	1	-0.5-0.5	-	-	±0.5	±0.75	ANA	mV	BN	UCP-441	*	-	*	*	-	
15	ZT-44102A	LP COMP. AXIAL POSITION (A)	PROX	L	mm	-1	1	-0.5-0.5	-	-	±0.5	±0.75	ANA	mV	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
16	ZT-44102B	LP COMP. AXIAL POSITION (B)	PROX	L	mm	-1	1	-0.5-0.5	-	-	±0.5	±0.75	ANA	mV	BN	UCP-441	*	-	*	*	-	

2-1. Analog Input to BENTLY MONITOR

NO.	PRODUCER TAG NO.	SERVICE	PRODUCER		ENG. UNIT	INSTRUMENT RANGE		NOR. OPE.	SETPOINT				SIGNAL		CONSUMER		APPLICATION/OUTPUT					REMARKS
			TYPE	LOC.		MIN	MAX		LL	L	H	HH	TYPE	RANGE	TYPE	LOC.	INDI.	CONT.	ALRM	TRIP	INT.	
VD-1208-301A-PID-305 MACHINE MONITORING DIAGRAM																						
1	TE-44131A	TURBINE THRUST BEARING TEMP. (ACTIVE SIDE A)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
2	TE-44132A	TURBINE THRUST BEARING TEMP. (ACTIVE SIDE B)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	
3	TE-44133A	TURBINE THRUST BEARING TEMP. (NON-ACTIVE SIDE A)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
4	TE-44134A	TURBINE THRUST BEARING TEMP. (NON-ACTIVE SIDE B)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	
5	TE-44135A	TURBINE JOURNAL BEARING TEMP. (GOV. SIDE A)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
6	TE-44136A	TURBINE JOURNAL BEARING TEMP. (GOV. SIDE B)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	
7	TE-44137A	TURBINE JOURNAL BEARING TEMP. (EXH. SIDE A)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
8	TE-44138A	TURBINE JOURNAL BEARING TEMP. (EXH. SIDE B)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	
9	TE-44139A	LP COMP. THRUST BEARING TEMP. (ACTIVE SIDE A)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
10	TE-44140A	LP COMP. THRUST BEARING TEMP. (ACTIVE SIDE B)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	
11	TE-44141A	LP COMP. THRUST BEARING TEMP. (NON-ACTIVE SIDE A)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
12	TE-44142A	LP COMP. THRUST BEARING TEMP. (NON-ACTIVE SIDE B)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	
13	TE-44143A	LP COMP. JOURNAL BEARING TEMP. (NDE A)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
14	TE-44144A	LP COMP. JOURNAL BEARING TEMP. (NDE B)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	
15	TE-44145A	LP COMP. JOURNAL BEARING TEMP. (DE A)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	HH (2002) @ TRIP
16	TE-44146A	LP COMP. JOURNAL BEARING TEMP. (DE B)	RTD	L	°C	0	150	<105	-	-	105	115	ANA	PT100	BN	UCP-441	*	-	*	*	-	

