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| Vendor: NEWJCM Job No.: 5657 | EPC Contractor :  Project No. : 1208 | HENGAM FERTILIZER PROJECT SYNGAS COMPRESSOR I/O LIST WITH SET POINTS Doc. No.: VD-1208-301A-LST-251 | | Owner:  | MC:  |
| | | Rev. : 10 | | | |

VENDOR : Jinzhou NEWJCM Machinery Manufacturer Co. Ltd.

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

ITEM NO. : **40-C-431**

ITEM DESCRIPTION : **SYNGAS Compressor**

PURCHASER DOC. NO. : -




VENDOR DOC. NO. : **VD-1208-301A-LST-251**

TOTAL PAGES : **28** (Excluding Attachments)

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- Comment as marked** manufacturing may proceed To Vendor
- Major Comment as marked** manufacturing is on hold for the next rev To Vendor
- Rejected**, new document with the same rev. no. To Vendor
- Used as for information To Vendor**

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| Name : | Req. No.: | Seq. No.: |
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| Date: | | |
| PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment | | |

| DE | | EXT | A | | | |
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|---|---|--|--|--|
| Vendor: NEWJCM Job No.: 5657 | EPC Contractor :  Project No. : 1208 | HENGAM FERTILIZER PROJECT SYNGAS COMPRESSOR I/O LIST WITH SET POINTS Doc. No.: VD-1208-301A-LST-251 | Owner:  Rev. : 10 | MC:  |
|---|---|--|--|--|




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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 |
| DGS : Dry Gas Seal | 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 |
| 505E :Electronic Governor | IS :Intrinsically Safe |
| NIS :No-Intrinsically Safe | DE:DRIVE END |
| NDE:NON-DRIVE END | AMM-MCC:Ammonia MCC |
| U-MCC:UREA MCC | DCCP:Door of Comp.Control Panel |
| UCP-431:SYNGAS Compressor Unit Control Panel | |

| | | | | | |
|---------------|---|---|--|---|---|
| Vendor: | EPC Contractor : | HENGAM FERTILIZER PROJECT | | Owner: | MC: |
| NEWJCM |  | SYNGAS COMPRESSOR I/O LIST WITH SET POINTS | |  |  |
| | | | | | |

VC: Voltage Converter 110VAC to 24VDC
EXH.SIDE: Exhaust Side

GOV.SIDE:Governor Side
INT.: Interlock

- NOTE1: All instruments have prefix No.40 for example 40-HS-43101.
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 | 17 | yes | no | IS | 83 | 16 | 99 | | | | | | | | | | | | | | | | | |
| | | | | no | | | | | | | | | | | | | | | | | | | | | | |
| AI | LGB | PLC | 15 | yes | no | IS | | | | | 83 | 16 | 99 | | | | | | | | | | | | | |
| | | | | no | | | | | | | | | | | | | | | | | | | | | | |
| AI | L | PLC | 19 | yes | yes | IS | | | | | | | | | 83 | 16 | 99 | | | | | | | | | |
| | | | | no | | | | | | | | | | | | | | | | | | | | | | |
| AI | LGB | PLC | 1 | yes | yes | IS | | | | | | | | | | | | | 83 | 16 | 99 | | | | | |
| | | | | no | | | | | | | | | | | | | | | | | | | | | | |
| AI | DGS | PLC | 27 | yes | no | IS | | | | | | | | | | | | | | | | | 83 | 16 | 99 | |
| | | | | no | | | | | | | | | | | | | | | | | | | | | | |
| AI | CCR | PLC | | yes | no | NIS | 83 | 16 | 99 | | | | | | | | | | | | | | | | | |
| | | | 2 | no | | | | | | | | | | | | | | | | | | | | | | |
| AI | 505E | PLC | | yes | no | NIS | | | | | 83 | 16 | 99 | | | | | | | | | | | | | |
| | | | 2 | no | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AO | PLC | L/DGS | | yes | yes | IS | | | | | | | | | 20 | 4 | 24 | | | | | | | | | |
| | | | 13 | no | | | | | | | | | | | | | | | | | | | | | | |
| AO | PLC | 505E | | yes | yes | NIS | | | | | | | | | | | | | 20 | 4 | 24 | | | | | |
| | | | 4 | no | | | | | | | | | | | | | | | | | | | | | | |
| AO | PLC | FCS | 1 | | no | NIS | | | | | | | | | | | | | | | | | 20 | 4 | 24 | |
| AO | 505E | L | | yes | no | NIS | 20 | 4 | 24 | | | | | | | | | | | | | | | | | |
| | | | 2 | 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 | 505E | | 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 | 27 | yes | no | IS | | | | |
| | | | | no | | | | | | |
| | | | | | | | | | | |
| DI | L | PLC | | yes | no | NIS(Exd) | | | | |
| | | | 2 | no | | | | | | |
| DI | LCS | PLC | | yes | no | NIS(Exd) | | | | |
| | | | 17 | no | | | | | | |
| DI | LGB | PLC | | yes | no | NIS(Exd) | | | | |
| | | | 11 | no | | | | | | |
| DI | LGB | PLC | | yes | yes | NIS(Exd) | | | | |
| | | | 1 | no | | | | | | |
| DI | MCC | PLC | | yes | no | NIS | | | | |
| | | | 14 | no | | | | | | |
| DI | CCR | PLC | | yes | yes | NIS | | | | |
| | | | 1 | no | | | | | | |
| DI | 505E | PLC | | yes | yes | NIS | 94 | 19 | 113 | |
| | | | 1 | no | | | | | | |
| DI | 505E | PLC | | yes | no | NIS | | | | |
| | | | 1 | no | | | | | | |
| DI | OSTM | PLC | | yes | yes | NIS | | | | |
| | | | 1 | no | | | | | | |
| DI | OSTM | PLC | | yes | no | NIS | | | | |
| | | | 1 | no | | | | | | |
| DI | BN | PLC | | yes | yes | NIS | | | | |
| | | | 9 | no | | | | | | |
| DI | BN | PLC | | yes | no | NIS | | | | |
| | | | 1 | no | | | | | | |
| DI | CCR | PLC | | yes | no | NIS | | | | |
| | | | 2 | no | | | | | | |
| DI | PLC CABINET | PLC | | yes | no | NIS | | | | |
| | | | 4 | no | | | | | | |
| DI | PLC CABINET | PLC | | yes | yes | NIS | | | | |
| | | | 1 | 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 |
|-------------|---------------|--------------------|-----------------------------|-----|--------------------------|----------|----------|-------|-------|--------|
| DO | PLC | LCS | 6 | yes | no | NIS(Exd) | 50 | 10 | 60 | |
| | | | | no | | | | | | |
| DO | PLC | LGB | 5 | yes | no | NIS(Exd) | | | | |
| | | | | no | | | | | | |
| DO | PLC | L | 2 | yes | yes | NIS(Exd) | | | | |
| | | | | no | | | | | | |
| DO | PLC | L | 10 | yes | yes | IS | | | | |
| | | | | no | | | | | | |
| DO | PLC | OSTM | | yes | no | NIS | | | | |
| | | | 1 | no | | | | | | |
| DO | PLC | BN | | yes | no | NIS | | | | |
| | | | 1 | no | | | | | | |
| DO | PLC | 505E | | yes | no | NIS | | | | |
| | | | 9 | no | | | | | | |
| DO | PLC | 505E | | yes | yes | NIS | | | | |
| | | | 1 | no | | | | | | |
| DO | PLC | MCC | 14 | yes | no | NIS | | | | |
| | | | | no | | | | | | |
| DO | PLC | ESD | | yes | yes | NIS | | | | |
| | | | 1 | no | | | | | | |
| | | | | | | | | | | |
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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-201 SYNTHESIS GAS COMPRESSOR PID | | | | | | | | | | | | | | | | | | |
| 1 | FZSH-43161 | LP COMP. ANTI-SURGE CONTROL VALVE OPEN | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | 1 @ START PERMISSIVE |
| 2 | FZSL-43161 | LP COMP. ANTI-SURGE CONTROL VALVE CLOSE | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 3 | FZSH-43162 | COMP. SECTION-3 ANTI-SURGE CONTROL VALVE OPEN | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | 1 @ START PERMISSIVE |
| 4 | FZSL-43162 | COMP. SECTION-3 ANTI-SURGE CONTROL VALVE CLOSE | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 5 | FZSH-43163 | COMP. RECYCLE ANTI-SURGE CONTROL VALVE OPEN | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | 1 @ START PERMISSIVE |
| 6 | FZSL-43163 | COMP. RECYCLE ANTI-SURGE CONTROL VALVE CLOSE | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 7 | XZSH-43164 | LP COMP. SUCTION BALL VALVE OPEN | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | 1 @ START PERMISSIVE |
| 8 | XZSL-43164 | LP COMP. SUCTION BALL VALVE CLOSE | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 9 | XZSH-43165 | LP COMP. RECYCLE GAS TO HEADER BALL VALVE OPEN | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 10 | XZSL-43165 | LP COMP. RECYCLE GAS TO HEADER BALL VALVE CLOSE | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | 1 @ START PERMISSIVE |
| 11 | XZSH-43166 | HP 3rd STAGE DISCHARGE BALL VALVE OPEN | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 12 | XZSL-43166 | HP 3rd STAGE DISCHARGE BALL VALVE CLOSE | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | 1 @ START PERMISSIVE |
| 13 | XZSH-43167 | HP COMP. RECYCLE SUCTION BALL VALVE OPEN | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 14 | XZSL-43167 | HP COMP. RECYCLE SUCTION BALL VALVE CLOSE | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | 1 @ START PERMISSIVE |
| 15 | XZSH-43168 | HP COMP. RECYCLE DISCHARGE BALL VALVE OPEN | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 16 | XZSL-43168 | HP COMP. RECYCLE DISCHARGE BALL VALVE CLOSE | SW | L | - | - | | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | 1 @ START PERMISSIVE |
| | | | | | | | | | | | | | | | | | | |

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. | |
| 17 | LSHH-43164A | DRAIN SEPARATOR LIQUID LEVEL SWITCH FOR LP COMP. SECTION-2 | SW | L | - | - | TRIP | - | DRY | - | PLC | UCP-431 | * | - | - | * | - | HH @2003 |
| 18 | LSHH-43164B | DRAIN SEPARATOR LIQUID LEVEL SWITCH FOR LP COMP. SECTION-2 | SW | L | - | - | TRIP | - | DRY | - | PLC | UCP-431 | * | - | - | * | - | |
| 19 | LSHH-43164C | DRAIN SEPARATOR LIQUID LEVEL SWITCH FOR LP COMP. SECTION-2 | SW | L | - | - | TRIP | - | DRY | - | PLC | UCP-431 | * | - | - | * | - | |
| 20 | LSHH-43165A | DRAIN SEPARATOR LIQUID LEVEL SWITCH FOR HP COMP. SECTION-3 | SW | L | - | - | TRIP | - | DRY | - | PLC | UCP-431 | * | - | - | * | - | HH @2003 |
| 21 | LSHH-43165B | DRAIN SEPARATOR LIQUID LEVEL SWITCH FOR HP COMP. SECTION-3 | SW | L | - | - | TRIP | - | DRY | - | PLC | UCP-431 | * | - | - | * | - | |
| 22 | LSHH-43165C | DRAIN SEPARATOR LIQUID LEVEL SWITCH FOR HP COMP. SECTION-3 | SW | L | - | - | TRIP | - | DRY | - | PLC | UCP-431 | * | - | - | * | - | |
| VD-1208-301A-PID-203 LUBE OIL SYSTEM (TANK) PID | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | DELETED |
| 24 | HS-43101 | STANDBY OIL PUMP MOTOR 40-PM-451B START PB | PB | LCS | - | - | - | START | DRY | - | PLC | UCP-431 | * | - | - | - | - | Exd |
| 25 | HS-43102 | STANDBY OIL PUMP MOTOR 40-PM-451B STOP PB | PB | LCS | - | - | STOP | - | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 26 | HS-43103 | STANDBY OIL PUMP MOTOR 40-PM-451B REMOTE/LOCAL SELECTOR | COS | LCS | - | - | MANUAL | REMOTE | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 27 | HS-43104 | EMERGENCY OIL PUMP MOTOR 40-PM-451C START PB | PB | LCS | - | - | - | START | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 28 | HS-43105 | EMERGENCY OIL PUMP MOTOR 40-PM-451C STOP PB | PB | LCS | - | - | STOP | - | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 29 | HS-43106 | EMERGENCY OIL PUMP MOTOR 40-PM-451C REMOTE/LOCAL SELECTOR | COS | LCS | - | - | MANUAL | REMOTE | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 30 | HS-43107 | ELECTRIC OIL HEATER 40-H-431 ON PB | PB | LCS | - | - | - | ON | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 31 | HS-43108 | ELECTRIC OIL HEATER 40-H-431 OFF PB | PB | LCS | - | - | OFF | - | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 32 | HS-43109 | ELECTRIC OIL HEATER 40-H-431 REMOTE/LOCAL SELECTOR | COS | LCS | - | - | MANUAL | REMOTE | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 33 | HS-43110 | OIL MIST FAN 40-X-431-FM START PB | PB | LCS | - | - | - | START | DRY | - | PLC | UCP-431 | * | - | - | - | - | |

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. | |
| 34 | HS-43111 | OIL MIST FAN 40-X-431-FM STOP PB | PB | LCS | - | - | STOP | - | DRY | - | PLC | UCP-431 | * | - | - | - | - | Exd |
| 35 | XP-451B-M-R | STANDBY OIL PUMP MOTOR 40-PM-451B RUNNING | SW | AMM MCC | - | - | - | RUNNING | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 36 | XP-451C-M-R | EMERGENCY OIL PUMP MOTOR 40-PM-451C RUNNING | SW | AMM MCC | - | - | - | RUNNING | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 37 | XH-431-R | ELECTRIC OIL HEATER 40-H-431 ON STATUS | SW | AMM MCC | - | - | - | ON | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 38 | XP-431-FM-R | OIL MIST FAN 40-X-431-FM RUNNING | SW | AMM MCC | - | - | - | RUNNING | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 39 | XP-451B-M-T | STANDBY OIL PUMP MOTOR 40-PM-451B ELECTRIC FAULT | SW | AMM MCC | - | - | FAULT | - | DRY | - | PLC | UCP-431 | - | - | * | - | * | |
| 40 | XP-451C-M-T | EMERGENCY OIL PUMP MOTOR 40-PM-451C ELECTRIC FAULT | SW | AMM MCC | - | - | FAULT | - | DRY | - | PLC | UCP-431 | - | - | * | - | * | |
| 41 | XH-431-T | ELECTRIC OIL HEATER 40-H-431 ELECTRIC FAULT | SW | AMM MCC | - | - | FAULT | - | DRY | - | PLC | UCP-431 | - | - | * | - | * | |
| 42 | XP-431-FM-T | OIL MIST FAN 40-X-431-FM ELECTRIC FAULT | SW | AMM MCC | - | - | FAULT | - | DRY | - | PLC | UCP-431 | - | - | * | - | * | |
| VD-1208-301A-PID-205 MACHINE MONITORING DIAGRAM | | | | | | | | | | | | | | | | | | |
| 43 | XA-43150 | BENTLY MONITOR COMMON ALARM | BN | UCP-431 | - | - | ALARM | - | DRY | - | PLC | UCP-431 | - | - | * | - | - | |
| 44 | VSHH-43151 | TURBINE RADIAL VIBRATION COMMON HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| 45 | VSHH-43152 | LP COMP. RADIAL VIBRATION COMMON HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| 46 | VSHH-43153 | HP COMP. RADIAL VIBRATION COMMON HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| 47 | ZSHH-43151 | TURBINE AXIAL POSITION COMMON HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| 48 | ZSHH-43152 | LP COMP. AXIAL POSITION COMMON HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| 49 | ZSHH-43153 | HP COMP. AXIAL POSITION COMMON HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| 50 | TSHH-43151 | TURBINE BEARING TEMPRETURE HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *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. | |
| 51 | TSHH-43152 | LP COMP. BEARING TEMPRETURE HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| 52 | TSHH-43153 | HP COMP. BEARING TEMPRETURE HIGH HIGH | BN | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| VD-1208-301A-PID-207 TURBINE STEAM CONDENSER PID | | | | | | | | | | | | | | | | | | |
| 53 | HS-43134 | CONDENSATE PUMP-A MOTOR 40-PM-403A START PB | PB | LCS | - | - | - | START | DRY | - | PLC | UCP-431 | * | - | - | - | - | Exd |
| 54 | HS-43135 | CONDENSATE PUMP-A MOTOR 40-PM-403A STOP PB | PB | LCS | - | - | STOP | - | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 55 | HS-43136 | CONDENSATE PUMP-A 40-PM-403A REMOTE/MANUAL SELECTOR | COS | LCS | - | - | MANUAL | REMOTE | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 56 | HS-43137 | CONDENSATE PUMP-B MOTOR 40-PM-403B START PB | PB | LCS | - | - | - | START | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 57 | HS-43138 | CONDENSATE PUMP-B MOTOR 40-PM-403B STOP PB | PB | LCS | - | - | STOP | - | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 58 | HS-43139 | CONDENSATE PUMP-B 40-PM-403B REMOTE/MANUAL SELECTOR | COS | LCS | - | - | MANUAL | REMOTE | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 59 | XP-403A-M-R | CONDENSATE PUMP-A MOTOR 40-PM-403A RUNNING | SW | AMM MCC | - | - | - | RUNNING | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 60 | XP-403B-M-R | CONDENSATE PUMP-B MOTOR 40-PM-403B RUNNING | SW | AMM MCC | - | - | - | RUNNING | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 61 | XP-403A-M-T | CONDENSATE PUMP-A MOTOR 40-PM-403A ELECTRIC FAULT | SW | AMM MCC | - | - | FAULT | - | DRY | - | PLC | UCP-431 | - | - | * | - | * | |
| 62 | XP-403B-M-T | CONDENSATE PUMP-B MOTOR 40-PM-403B ELECTRIC FAULT | SW | AMM MCC | - | - | FAULT | - | DRY | - | PLC | UCP-431 | - | - | * | - | * | |
| VD-1208-301A-PID-208 TURBINE GOVERNING SYSTEM PID | | | | | | | | | | | | | | | | | | |
| 63 | XZSH-43121 | TTV OPEN DETECTION | SW | L | - | - | - | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | - | |
| 64 | XZSL-43121 | TTV TRIP DETECTION | SW | L | - | - | - | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | TTV CLOSE @ TURNING MOTOR / COMP. START PERMISSIVE |
| 65 | XZS-43142 | TURNING GEAR ENGAGED | SW | L | - | - | - | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | - | - | - | * | ENGAGED @ TURNING DEVICE (MOTOR) START PERMISSIVE |
| 66 | HS-43149 | REMOTE/LOCAL SELECTOR | COS | LGB | - | - | LOCAL | REMOTE | DRY | - | PLC | UCP-431 | - | * | - | - | - | Exd |

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. | |
| 67 | HS-43130A | SHUTDOWN PB ON LOCAL(FIELD) | PB | LGB | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | * | - | - | - | (Mushroom & Lockable Type) REDUNDANT Exd |
| 68 | HS-43131 | TRIP RESET PB | PB | LGB | - | - | - | RESET | DRY | - | PLC | UCP-431 | - | * | - | - | - | Exd |
| 69 | HS-43132 | TURBINE START PB | PB | LGB | - | - | - | START | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 70 | HS-43133R | TURBINE SPEED RAISE | PB | LGB | - | - | - | RAISE | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 71 | HS-43133L | TURBINE SPEED LOWER | PB | LGB | - | - | - | LOWER | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 72 | HS-43141 | OVERSPEED TRIP TEST ENABLE | COS | LGB | - | - | - | EOST | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 73 | HS-43142 | TURNING MOTOR START PB | PB | LGB | - | - | - | START | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 74 | HS-43143 | TURNING MOTOR STOP PB | PB | LGB | - | - | STOP | - | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 75 | HS-43144 | LOCAL LAMP TEST PB | PB | LGB | - | - | - | TEST | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 76 | HS-43145 | TURBINE TRIP SOV-A TEST PB | PB | LGB | - | - | - | TEST | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 77 | HS-43146 | TURBINE TRIP SOV-B TEST PB | PB | LGB | - | - | - | TEST | DRY | - | PLC | UCP-431 | - | * | - | - | - | |
| 78 | XZS-43141A | MANUAL BLOCK VALVE FOR TURBINE TRIP SOV-A TEST | SW | L | - | - | - | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | * | - | - | * | NOT 1 @ START PERMISSIVE |
| 79 | XZS-43141B | MANUAL BLOCK VALVE FOR TURBINE TRIP SOV-B TEST | SW | L | - | - | - | 1 | PRO(N AMUR) | - | PLC | UCP-431 | * | * | - | - | * | NOT 1 @ START PERMISSIVE |
| 80 | XP-424-M-R | TURNING MOTOR 40-M-424 RUNNING | SW | AMM MCC | - | - | - | RUNNING | DRY | - | PLC | UCP-431 | * | - | - | - | - | |
| 81 | XP-424-M-T | TURNING MOTOR 40-M-424 ELECTRIC FAULT | SW | AMM MCC | - | - | FAULT | - | DRY | - | PLC | UCP-431 | - | - | * | - | * | |
| 82 | XS-4311 | COMPRESSOR PARTIAL TRIP | FCS | CCR | - | - | PARTIAL TRIP | - | DRY | - | PLC | UCP-431 | - | - | * | - | - | *Redundant |
| 83 | XA-43121 | 505E COMMON ALARM | 505E | UCP-431 | - | - | ALARM | - | DRY | - | PLC | UCP-431 | - | - | * | - | - | |
| 84 | XS-43125 | 505E TRIP | 505E | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *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. | |
| 85 | XA-43122 | OVERSPEED TRIP MODULE COMMON ALARM | OSTM | UCP-431 | - | - | ALARM | - | DRY | - | PLC | UCP-431 | - | - | * | - | - | |
| 86 | XS-43122 | TURBINE OVERSPEED TRIP | OSTM | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *Redundant |
| 87 | XA-43152A | POWER EXCHANGE BOX POWER 1 FAULT | VC | L | - | - | FAULT | - | DRY | - | PLC | UCP-431 | * | - | * | - | - | Exd |
| 88 | XA-43152B | POWER EXCHANGE BOX POWER 2 FAULT | VC | L | - | - | FAULT | - | DRY | - | PLC | UCP-431 | * | - | * | - | - | Exd |
| 89 | XS-4315 | TIME SYNCHRONIZATION PULSE FROM FCS | SW | CCR | - | - | - | AT 5:00AM | PULSE | - | PLC | UCP-431 | - | - | - | - | - | As pulse type for 5 second duration(contact is closed for 5 sec,time will be adjust in rising edge plus) |
| | | | | | | | | | | | | | | | | | | |
| | | PLC CABINET | | | | | | | | | | | | | | | | |
| 90 | HS-43130C | SHUTDOWN PB (ON DOOR OF COMP. CONTROL PANEL) | PLC | UCP-431 | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | (Mushroom & Lockable Type) *Redundant |
| 91 | XA-43143 | AUXILIARY POWER SUPPLY COMMON FAILURE ALARM | SW | UCP-431 | - | - | ALARM | - | DRY | - | PLC | UCP-431 | - | - | * | - | - | |
| 92 | XA-43145 | 24VDC POWER SUPPLY FAILURE ALARM FOR 20A | SW | UCP-431 | - | - | ALARM | - | DRY | - | PLC | UCP-431 | - | - | * | - | - | |
| 93 | | | | | | | | | | | | | | | | | | DELETED |
| 94 | XA-43144A | PLC UCP-431A PANEL INTERNAL TEMP. | SW | UCP-431 | - | - | ALARM | - | DRY | - | PLC | UCP-431 | - | - | * | - | - | |
| 95 | XA-43144B | PLC UCP-431C PANEL INTERNAL TEMP. | SW | UCP-431 | - | - | ALARM | - | DRY | - | PLC | UCP-431 | - | - | * | - | - | |
| | | HARDWARE CONSOLE | | | | | | | | | | | | | | | | |
| 96 | HS-43130D | EMERGENCY SHUTDOWN PB(ON THE HARDWARE CONSOLE) | PB | CCR | - | - | TRIP | - | DRY | - | PLC | UCP-431 | - | - | - | * | - | *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-201 SYNTHESIS GAS COMPRESSOR PID | | | | | | | | | | | | | | | | | | |
| 1 | FY-43161A | LP COMP. ANTI-SURGE CONTROL VALVE SOV | PLC | UCP-431 | - | - | - | - | WET | 24VDC | SOV | L | - | - | - | * | - | *Redundant CV OPEN @ OVDC & IS TYPE |
| 2 | FY-43162A | HP COMP. ANTI-SURGE CONTROL VALVE SOV | PLC | UCP-431 | - | - | - | - | WET | 24VDC | SOV | L | - | - | - | * | - | *Redundant CV OPEN @ OVDC & IS TYPE |
| 3 | FY-43163A | COMP. RECYCLE ANTI-SURGE CONTROL VALVE SOV | PLC | UCP-431 | - | - | - | - | WET | 24VDC | SOV | L | - | - | - | * | - | *Redundant CV OPEN @ OVDC & IS TYPE |
| 4 | XY-43164 | LP 1st STAGE SUCTION BALL VALVE SOV | PLC | UCP-431 | - | - | - | - | WET | 24VDC | SOV | L | - | - | - | * | - | *Redundant CV CLOSE @ OVDC & IS TYPE |
| 5 | XY-43165 | LP 1st STAGE DISCHARGE BALL VALVE SOV | PLC | UCP-431 | - | - | - | - | WET | 24VDC | SOV | L | - | - | - | * | - | *Redundant CV CLOSE @ OVDC & IS TYPE |
| 6 | XY-43166 | HP 3rd STAGE DISCHARGE BALL VALVE SOV | PLC | UCP-431 | - | - | - | - | WET | 24VDC | SOV | L | - | - | - | * | - | *Redundant CV CLOSE @ OVDC & IS TYPE |
| 7 | XY-43167 | HP COMP. RECYCLE SUCTION BALL VALVE SOV | PLC | UCP-431 | - | - | - | - | WET | 24VDC | SOV | L | - | - | - | * | - | *Redundant CV CLOSE @ OVDC & IS TYPE |
| 8 | XY-43168 | HP COMP. RECYCLE DISCHARGE BALL VALVE SOV | PLC | UCP-431 | - | - | - | - | WET | 24VDC | SOV | L | - | - | - | * | - | *Redundant CV CLOSE @ OVDC & IS TYPE |
| VD-1208-301A-PID-203 LUBE OIL SYSTEM (TANK) PID | | | | | | | | | | | | | | | | | | |
| 9 | XL-43101 | STANDBY OIL PUMP MOTOR 40-PM-451B RUNNING LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LCS | * | - | - | - | - | Exd |
| 10 | XL-43103 | EMERGENCY OIL PUMP MOTOR 40-PM-451C RUNNING LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LCS | * | - | - | - | - | |
| 11 | XL-43105 | ELECTRIC OIL HEATER 40-H-431 ON LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LCS | * | - | - | - | - | |
| 12 | XL-43107 | OIL MIST FAN 40-X-431-FM RUNNING LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LCS | * | - | - | - | - | |
| 13 | XP-451B-M-ST | STANDBY OIL PUMP MOTOR 40-PM-451B START COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | 24VDC (2 SEC. POSITIVE PULSE) |
| 14 | XP-451B-M-SP | STANDBY OIL PUMP MOTOR 40-PM-451B STOP COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | OVDC AT STOP COMMAND |
| 15 | XP-451C-M-ST | EMERGENCY OIL PUMP MOTOR 40-PM-451C START COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | 24VDC (2 SEC. POSITIVE PULSE) |
| 16 | XP-451C-M-SP | EMERGENCY OIL PUMP MOTOR 40-PM-451C STOP COMMAND | PLC | UCP-431 | - | - | - | - | 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. | |
| 17 | XH-431-ST | ELECTRIC OIL HEATER 40-H-431 ON COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | 24VDC (2 SEC. POSITIVE PULSE) |
| 18 | XH-431-SP | ELECTRIC OIL HEATER 40-H-431 OFF COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | OVDC AT STOP COMMAND |
| 19 | XP-431-FM-ST | OIL MIST FAN 40-X-431-FM START COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | 24VDC (2 SEC. POSITIVE PULSE) |
| 20 | XP-431-FM-SP | OIL MIST FAN 40-X-431-FM STOP COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | OVDC AT STOP COMMAND |
| VD-1208-301A-PID-205 MACHINE MONITORING DIAGRAM | | | | | | | | | | | | | | | | | | |
| 21 | XS-43150 | 3500 MODULE RESET | PLC | UCP-431 | - | - | - | RESET | DRY | - | BN | UCP-431 | - | - | - | - | - | |
| VD-1208-301A-PID-206-01 SEAL GAS PID | | | | | | | | | | | | | | | | | | |
| 22 | XY-43180 | LP DRY SEAL BOOSTER PUMP SOV | PLC | UCP-431 | - | - | START | STOP | WET | 24VDC | SOV | L | - | - | - | - | - | *Redundant & Exd TYPE |
| VD-1208-301A-PID-206-02 SEAL GAS PID | | | | | | | | | | | | | | | | | | |
| 23 | XY-43190 | HP DRY SEAL BOOSTER PUMP SOV | PLC | UCP-431 | - | - | START | STOP | WET | 24VDC | SOV | L | - | - | - | - | - | *Redundant & Exd TYPE |
| VD-1208-301A-PID-207 TURBINE STEAM CONDENSER PID | | | | | | | | | | | | | | | | | | |
| 24 | XL-43134A | CONDENSATE PUMP-A 40-M-403A RUNNING LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LCS | * | - | - | - | - | Exd |
| 25 | XL-43134B | CONDENSATE PUMP-B 40-M-403B RUNNING LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LCS | * | - | - | - | - | |
| 26 | XP-403A-M-ST | CONDENSATE PUMP-A 40-M-403A START COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | 24VDC (2 SEC. POSITIVE PULSE) |
| 27 | XP-403A-M-SP | CONDENSATE PUMP-A 40-M-403A STOP COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | OVDC AT STOP COMMAND |
| 28 | XP-403B-M-ST | CONDENSATE PUMP-B 40-M-403B START COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | 24VDC (2 SEC. POSITIVE PULSE) |
| 29 | XP-403B-M-SP | CONDENSATE PUMP-B 40-M-403B STOP COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | OVDC AT STOP COMMAND |
| VD-1208-301A-PID-208 TURBINE GOVERNING SYSTEM PID | | | | | | | | | | | | | | | | | | |

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. | |
| 30 | XL-43130 | COMMON TRIP LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LGB | * | - | - | - | - | Exd |
| 31 | XL-43131 | COMMON ALARM LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LGB | * | - | - | - | - | |
| 32 | XL-43132 | TURBINE LOCAL OPERATION LAMP (LOCAL MODE) | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LGB | * | - | - | - | - | |
| 33 | XL-43133 | READY TO START LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LGB | * | - | - | - | - | |
| 34 | XL-43142 | TURNING MOTOR 40-M-424 RUNNING LAMP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | LAMP | LGB | * | - | - | - | - | |
| 35 | XP-424-M-ST | TURNING MOTOR 40-M-424 START COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | 24VDC (2 SEC. POSITIVE PULSE) |
| 36 | XP-424-M-SP | TURNING MOTOR 40-M-424 STOP COMMAND | PLC | UCP-431 | - | - | - | - | WET | 24VDC | CUST MCC | AMM MCC | - | * | - | - | - | OVDC AT STOP COMMAND |
| 37 | XY-43141A | TURBINE TRIP SOV-A TRIP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | sov | L | - | - | - | * | - | VALVE OPEN @ 0 VDC/*Redundant Exd |
| 38 | XY-43141B | TURBINE TRIP SOV-B TRIP | PLC | UCP-431 | - | - | - | - | WET | 24VDC | sov | L | - | - | - | * | - | VALVE OPEN @ 0 VDC/*Redundant Exd |
| 39 | XS-4310 | COMPRESSORE TRIPPED SIGNAL TO ESD | PLC | UCP-431 | - | - | TRIPPED | NORMAL | DRY | - | RELAY | ESD | - | - | - | * | - | *Redundant |
| 40 | XS-43130 | EXTERENAL TURBINE TRIP | PLC | UCP-431 | - | - | TRIP | - | DRY | - | 505E | UCP-431 | - | - | - | * | - | *Redundant |
| 41 | XS-43131 | TRIP RESET | PLC | UCP-431 | - | - | - | RESET | DRY | - | 505E | UCP-431 | - | - | - | * | - | |
| 42 | XS-43132 | TURBINE START | PLC | UCP-431 | - | - | - | START | DRY | - | 505E | UCP-431 | - | - | - | - | - | |
| 43 | XS-43133R | TURBINE SPEED RAISE | PLC | UCP-431 | - | - | - | RAISE | DRY | - | 505E | UCP-431 | - | - | - | - | - | |
| 44 | XS-43133L | TURBINE SPEED LOWER | PLC | UCP-431 | - | - | - | LOWER | DRY | - | 505E | UCP-431 | - | - | - | - | - | |
| 45 | XS-43140 | START PERMISSIVE | PLC | UCP-431 | - | - | - | ENALBE | DRY | - | 505E | UCP-431 | - | - | - | - | - | |
| 46 | XS-43141 | OVERSPEED TRIP TEST ENABLE | PLC | UCP-431 | - | - | - | EOST | DRY | - | 505E | UCP-431 | - | - | - | - | - | |
| 47 | HS-43147 | REMOTE SPEED SETPOINT ENABLE | PLC | UCP-431 | - | - | - | REMOTE | DRY | - | 505E | UCP-431 | - | - | - | - | - | |

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. | |
| 48 | XS-43149 | REMOTE/LOCAL SELECTOR | PLC | UCP-431 | - | - | REMOTE | LOCAL | DRY | - | 505E | UCP-431 | - | - | - | - | - | |
| 49 | XS-43151 | OVERSPEED TRIP MODULE RESET | PLC | UCP-431 | - | - | - | RESET | DRY | - | OSTM | UCP-431 | - | * | - | - | - | |
| 50 | HS-43148 | EXT. PRESS. SET POINT ENABLE | PLC | UCP-431 | - | - | - | ENALBE | DRY | - | 505E | UCP-431 | - | - | - | - | - | |

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-201 SYNTHESIS GAS COMPRESSOR PID | | | | | | | | | | | | | | | | | | | | | | |
| 1 | PT-43161 | LP COMP. SECTION-1 SUCTION PRESS. | TRANS | L | BarG | 0 | 100 | 31 | - | 27.9 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | *Redundant |
| 2 | FT-43161 | LP COMP. SECTION-1 SUCTION FLOW | TRANS | L | Nm3/h | 0 | 312742 | 270096 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | * | - | - | - | *Redundant |
| 3 | TT-43161 | LP COMP. SECTION-1 SUCTION TEMP. | TRANS | L | °C | 0 | 100 | 45 | - | - | 50 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | *Redundant |
| 4 | TT-43163 | LP COMP. SECTION-1 DISCHARGE TEMP. | TRANS | L | °C | 0 | 200 | 109 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 5 | PT-43163 | LP COMP. SECTION-1 DISCHARGE PRESS. | TRANS | L | BarG | 0 | 100 | 54.27 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 6 | LT-43162 | DRAIN SEPARATOR LEVEL FOR LP COMP. SECTION-2 | TRANS | L | mm kPa | 0 -11.28 | 1200 0.72 | 760 -3.68 | - | 660 -4.68 | 860 -2.68 | - | ANA | 4-20mA | PLC | UCP-431 | * | * | * | - | - | *Redundant |
| 7 | PT-43165 | LP COMP. SECTION-2 SUCTION PRESS. | TRANS | L | BarG | 0 | 100 | 53.57 | - | 48.21 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| 8 | TT-43165 | LP COMP. SECTION-2 SUCTION TEMP. | TRANS | L | °C | 0 | 100 | 49 | - | - | 54 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 9 | TT-43167 | LP COMP. SECTION-2 DISCHARGE TEMP. | TRANS | L | °C | 0 | 200 | 108 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 10 | PT-43167 | LP COMP. SECTION-2 DISCHARGE PRESS. | TRANS | L | BarG | 0 | 160 | 87.73 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | *Redundant |
| 11 | LT-43163 | DRAIN SEPARATOR LEVEL FOR HP COMP. SECTION-3 | TRANS | L | mm kPa | 0 -9.4 | 1000 -0.6 | 560 -3.8 | - | 460 -4.8 | 660 -2.8 | - | ANA | 4-20mA | PLC | UCP-431 | * | * | * | - | - | *Redundant |
| 12 | PT-43169 | HP COMP. SECTION-3 SUCTION PRESS. | TRANS | L | BarG | 0 | 160 | 87.23 | - | 78.5 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | *Redundant |
| 13 | FT-43162 | HP COMP. SECTION-3 SUCTION FLOW | TRANS | L | Nm3/h | 0 | 308522 | 266451 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | * | - | - | - | *Redundant |
| 14 | TT-43169 | HP COMP. SECTION-3 SUCTION TEMP. | TRANS | L | °C | 0 | 100 | 49 | - | - | 54 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | *Redundant |
| 15 | TT-43171 | HP COMP. SECTION-3 DISCHARGE TEMP. | TRANS | L | °C | 0 | 300 | 153 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | *Redundant |
| 16 | PT-43171 | HP COMP. SECTION-3 DISCHARGE PRESS. | TRANS | L | BarG | 0 | 250 | 185.4 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | *Redundant |
| 17 | PT-43173 | HP COMP. RECYCLE SUCTION PRESS. | TRANS | L | BarG | 0 | 250 | 181.91 | - | 163.7 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | *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. | |
| 18 | TT-43173 | HP COMP. RECYCLE SUCTION TEMP. | TRANS | L | °C | 0 | 100 | 39 | - | - | 43 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | *Redundant |
| 19 | TT-43175 | HP COMP. RECYCLE DISCHARGE TEMP. | TRANS | L | °C | 0 | 100 | 45 | - | - | 49.5 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | *Redundant |
| 20 | PT-43175 | HP COMP. RECYCLE DISCHARGE PRESS. | TRANS | L | BarG | 0 | 250 | 193.68 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | *Redundant |
| 21 | FT-43163 | HP COMP. RECYCLE DISCHARGE FLOW | TRANS | L | Nm3/h | 0 | 1068425 | 922731 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | * | - | - | - | *Redundant |
| VD-1208-301A-PID-202 STEAM TURBINE PID | | | | | | | | | | | | | | | | | | | | | | |
| 22 | FT-43102 | TURBINE INLET STEAM FLOW | TRANS | L | Kg/h | 0 | 365659.8 | 291960 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 23 | PT-43125 | TURBINE INLET STEAM PRESS. | TRANS | LGB | BarG | 0 | 250 | 108 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 24 | TT-43119 | TURBINE INLET STEAM TEMP. | TRANS | L | °C | 0 | 600 | 510 | - | 485 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| 25 | PT-43123 | TURBINE AFTER 1ST STAGE PRESS. | TRANS | LGB | BarG | 0 | 160 | 64.3 | - | - | 67.5 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| 26 | PT-43126 | TURBINE EXTRACTION STEAM PRESS. | TRANS | LGB | BarG | 0 | 100 | 45 | - | - | 47 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| 27 | PT-43124 | TURBINE EXHAUST STEAM PRESS. | TRANS | LGB | BarG | -1 | 1.5 | -0.86 | - | - | -0.4 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | * | NOT H @ START PERMISSIVE |
| 28 | TT-43118 | TURBINE EXHAUST STEAM TEMP. | TRANS | L | °C | 0 | 200 | 52.57 | - | - | 120 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| 29 | PT-43127 | TURBINE GLAND SEALING STEAM PRESS. | TRANS | LGB | BarG | 0 | 0.6 | 0.2 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | * | - | - | - | *Redundant |
| 30 | FT-43103 | TURBINE EXTRACTION STEAM FLOW | TRANS | L | Kg/h | 0 | 300000 | 248133 | - | - | 267000 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| VD-1208-301A-PID-203 LUBE OIL SYSTEM (TANK) PID | | | | | | | | | | | | | | | | | | | | | | |
| 31 | LT-43101 | OIL RESERVOIR LEVEL | TRANS | L | mm kPa | 0 -16.12 | 1750 1.2 | 850 -8.8 | - | 800 -9.3 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | * | L @ HEATER OFF COMMAND |
| 32 | TT-43101 | OIL RESERVOIR TEMP. | TRANS | L | °C | 0 | 160 | 70 | - | 38 | 75 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | * | HEATER ON/OFF COMMAND |
| 33 | PT-43111 | MAIN OIL PUMP OUTLET PRESS. | TRANS | LGB | BarG | 0 | 25 | 11.8 | - | 9.5 | 11.8 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | * | L @ AOP AUTO START H @ MOP RUNNING |

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. | |
| 34 | PT-43112 | STANDBY OIL PUMP OUTLET PRESS. | TRANS | LGB | BarG | 0 | 25 | 11.8 | - | - | 11.8 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | * | H @ AOP RUNNING |
| 35 | PT-43113 | EMERGENCY OIL PUMP OUTLET PRESS. | TRANS | LGB | BarG | 0 | 6 | 2.5 | - | - | 2.5 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | * | H @ EOP RUNNING |
| 36 | TT-43105 | OIL COOLER OUTLET TEMP. | TRANS | L | °C | 0 | 160 | 59 | - | 44 | 65 | - | ANA | 4-20mA | PLC | UCP-431 | * | * | * | - | * | NOT L @ START PERMISSIVE *Redundant |
| 37 | PDT-43102 | OIL FILTER DIFF. PRESS. | TRANS | LGB | BarG | 0 | 4 | 0.15 | - | - | 2.3 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| 38 | FT-43101 | STEAM TURBINE FOR OIL UNIT FLOW | TRANS | L | ton/h | 0 | 2.12 | 1.869 | - | 1.459 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| 39 | TT-43110 | STEAM TURBINE FOR OIL UNIT EXHAUST TEMP. | TRANS | L | °C | 0 | 400 | 190 | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | * | - | - | - | *Redundant |
| VD-1208-301A-PID-204 LUBE OIL SYSTEM (BASE) PID | | | | | | | | | | | | | | | | | | | | | | |
| 40 | LT-43102 | LUBE OIL RUNDOWN TANK LEVEL | TRANS | L | mm kpa | 0 0 | 4000 34.104 | 3900 33.251 | | 3850 32.825 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | * | NOT L @ START PERMISSIVE |
| 41 | PT-43114 | LUBE OIL HEADER PRESS. | TRANS | LGB | BarG | 0 | 4 | 1.4 | - | 0.84 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | * | NOT L @ TURNING MOTOR / COMP. START PERMISSIVE |
| 42 | PT-43115A | LUBE OIL HEADER PRESS. (TRIP) (A) | TRANS | LGB | BarG | 0 | 4 | 1.4 | 0.56 | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | * | * | LL (2003) @ TRIP |
| 43 | PT-43115B | LUBE OIL HEADER PRESS. (TRIP) (B) | TRANS | LGB | BarG | 0 | 4 | 1.4 | 0.56 | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | * | * | |
| 44 | PT-43115C | LUBE OIL HEADER PRESS. (TRIP) (C) | TRANS | LGB | BarG | 0 | 4 | 1.4 | 0.56 | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | * | * | |
| VD-1208-301A-PID-206-1 SEAL GAS PID | | | | | | | | | | | | | | | | | | | | | | |
| 45 | PDT-43180 | LP COMP. PRIMARY SEAL GAS FILTER DIFF. PRESS. | TRANS | DGS | Bar | 0 | 1 | 0.4 | - | - | ≥0.4 | - | ANA | 4-20mA | PLC | AMMCCR | * | - | * | - | - | |
| 46 | PDT-43181 | LP COMP. LOW PRESS. SIDE INLET DIFF. PRESS. | TRANS | DGS | Bar | 0 | 5 | 3 | ≤0.5 | ≤1 | - | - | ANA | 4-20mA | PLC | AMMCCR | * | * | * | - | * | |
| 47 | PDT-43182 | LP COMP. HIGH PRESS. SIDE INLET DIFF. PRESS. | TRANS | DGS | Bar | 0 | 5 | 3 | ≤0.5 | ≤1 | - | - | ANA | 4-20mA | PLC | AMMCCR | * | * | * | - | * | |
| 48 | PT-43186 | LP COMP. NITROGEN GAS PRESS. | TRANS | DGS | BarG | 0 | 10 | 5 | - | ≤3 | ≥8 | - | ANA | 4-20mA | PLC | AMMCCR | * | - | * | - | * | NOT L @ OIL PUMP START PERMISSIVE |
| 49 | PDT-43183 | LP COMP. SECONDARY SEAL GAS FILTER DIFF. PRESS. | TRANS | DGS | Bar | 0 | 1 | 0.4 | - | - | ≥0.4 | - | ANA | 4-20mA | PLC | AMMCCR | * | - | * | - | - | |

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. | |
| 50 | PT-43187A | LP COMP. PRIMARY SEAL LEAKAGE (LOW PRESS. SIDE)PRESS (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | HH (2003) @ TRIP |
| 51 | PT-43187B | LP COMP. PRIMARY SEAL LEAKAGE (LOW PRESS. SIDE)PRESS (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | |
| 52 | PT-43187C | LP COMP. PRIMARY SEAL LEAKAGE (LOW PRESS. SIDE)PRESS (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | |
| 53 | FT-43182 | LP COMP. PRIMARY SEAL LEAKAGE (LOW PRESS. SIDE) | TRANS | DGS | Nm3/h | 0 | 30 | 7.5 | - | ≤4 | ≥15 | ≥30 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | *Redundant |
| 54 | PT-43188A | LP COMP. PRIMARY SEAL LEAKAGE (HIGH PRESS. SIDE)PRESS (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | HH (2003) @ TRIP |
| 55 | PT-43188B | LP COMP. PRIMARY SEAL LEAKAGE (HIGH PRESS. SIDE)PRESS (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | |
| 56 | PT-43188C | LP COMP. PRIMARY SEAL LEAKAGE (HIGH PRESS. SIDE)PRESS (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | |
| 57 | FT-43183 | LP COMP. PRIMARY SEAL LEAKAGE (HIGH PRESS. SIDE) | TRANS | DGS | Nm3/h | 0 | 30 | 8.5 | - | ≤4 | ≥15 | ≥30 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | *Redundant |
| 58 | PT-43189 | LP COMP. SEAL GAS BOOSTER LEAKAGE PRESS. | TRANS | DGS | BarG | 0 | 10 | 2 | - | - | ≥2 | - | ANA | 4-20mA | PLC | AMM CCR | * | - | * | - | - | |
| VD-1208-301A-PID-206-2 SEAL GAS PID | | | | | | | | | | | | | | | | | | | | | | |
| 59 | PDT-43190 | HP COMP. PRIMARY SEAL GAS FILTER DIFF. PRESS. | TRANS | DGS | Bar | 0 | 1 | 0.4 | - | - | ≥0.4 | - | ANA | 4-20mA | PLC | AMM CCR | * | - | * | - | - | |
| 60 | PDT-43191 | HP COMP. PRIMARY SEAL GAS INLET DIFF. PRESS. | TRANS | DGS | Bar | 0 | 5 | 3 | ≤0.5 | ≤1 | - | - | ANA | 4-20mA | PLC | AMM CCR | * | * | * | - | * | |
| 61 | PDT-43192 | HP COMP. SECONDARY SEAL GAS FILTER DIFF. PRESS. | TRANS | DGS | Bar | 0 | 1 | 0.4 | - | - | ≥0.4 | - | ANA | 4-20mA | PLC | AMM CCR | * | - | * | - | - | |
| 62 | PT-43196 | HP COMP. NITROGEN GAS PRESS. | TRANS | DGS | BarG | 0 | 10 | 5 | - | ≤3 | ≥8 | - | ANA | 4-20mA | PLC | AMM CCR | * | - | * | - | * | NOT L @ OIL PUMP START PERMISSIVE |
| 63 | PT-43197A | HP COMP. PRIMARY SEAL LEAKAGE(LOW PRESS. SIDE) PRESS. (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | HH (2003) @ TRIP |
| 64 | PT-43197B | HP COMP. PRIMARY SEAL LEAKAGE(LOW PRESS. SIDE) PRESS. (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | |
| 65 | PT-43197C | HP COMP. PRIMARY SEAL LEAKAGE(LOW PRESS. SIDE) PRESS. (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | |
| 66 | FT-43192 | HP COMP. PRIMARY SEAL GAS VENT FLOW (LOW PRESS. SIDE) | TRANS | DGS | Nm3/h | 0 | 32 | 10 | - | ≤4 | ≥20 | ≥30 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | *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. | |
| 67 | PT-43198A | HP COMP. PRIMARY SEAL LEAKAGE(HIGH PRESS. SIDE) PRESS. (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | HH (2003) @ TRIP |
| 68 | PT-43198B | HP COMP. PRIMARY SEAL LEAKAGE(HIGH PRESS. SIDE) PRESS. (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | |
| 69 | PT-43198C | HP COMP. PRIMARY SEAL LEAKAGE(HIGH PRESS. SIDE) PRESS. (TRIP) | TRANS | DGS | BarG | 0 | 10 | 1.15 | - | - | ≥2 | ≥4 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | |
| 70 | FT-43193 | HP COMP. PRIMARY SEAL LEAKAGE(HIGH PRESS. SIDE) | TRANS | DGS | Nm3/h | 0 | 32 | 10 | - | ≤4 | ≥20 | ≥30 | ANA | 4-20mA | PLC | AMM CCR | * | - | * | * | - | *Redundant |
| 71 | PT-43199 | HP COMP. BOOSTER LEAKAGE PRESS. | TRANS | DGS | BarG | 0 | 10 | 2 | - | - | ≥2 | - | ANA | 4-20mA | PLC | AMM CCR | * | - | * | - | - | |
| VD-1208-301A-PID-207 TURBINE STEAM CONDENSER PID | | | | | | | | | | | | | | | | | | | | | | |
| 72 | LT-43105A | MAIN CONDENSER HOT WELL WATER LEVEL | TRANS | L | mm kpa | 0 -10.81 | 1150 0.69 | 575 -5.06 | 460 -6.2 | 517.5 -5.64 | 635 -4.46 | 690 -3.91 | ANA | 4-20mA | PLC | UCP-431 | * | * | * | - | * | LEVEL A HH @STANDBY PUMP AUTO START LL @STANDBY PUMP AUTO STOP COMMAND *Redundant |
| 73 | LT-43105B | MAIN CONDENSER HOT WELL WATER LEVEL | TRANS | L | mm kpa | 0 -10.81 | 1150 0.69 | 575 -5.06 | - | 517.5 -5.64 | 635 -4.46 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| 74 | FT-43105 | MAIN CONDENSER WATER DISCHARGE FLOW | TRANS | L | Kg/h | 0 | 67893 | 43827 | - | 39444 | 61000 | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | - | - | |
| VD-1208-301A-PID-208 TURBINE GOVERNING SYSTEM PID | | | | | | | | | | | | | | | | | | | | | | |
| 75 | SI-43130 | ACTURAL SPEED TO PLC | ANA | 505E | rpm | 0 | 15000 | | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 76 | SY-43131 | GOVERNOR SPEED SETPOINT TO PLC | ANA | 505E | rpm | 0 | 15000 | | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 77 | GZT-43141 | E/H ACTUATOR POSITION FEEDBACK | TRANS | L | % | 0 | 100 | - | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 78 | EZT-43141 | E/H ACTUATOR POSITION FEEDBACK | TRANS | L | % | 0 | 100 | - | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 79 | PT-43143A | TURBINE CONTROL OIL PRESS. (TRIP)(A) | TRANS | LGB | BarG | 0 | 25 | 9 | 5.5 | 7 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | * | - | LL (2003) @ TRIP DETECTED, GOVERNOR EXTERNAL TRIP |
| 80 | PT-43143B | TURBINE CONTROL OIL PRESS. (TRIP)(B) | TRANS | LGB | BarG | 0 | 25 | 9 | 5.5 | 7 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | * | - | |
| 81 | PT-43143C | TURBINE CONTROL OIL PRESS. (TRIP)(C) | TRANS | LGB | BarG | 0 | 25 | 9 | 5.5 | 7 | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | * | * | - | |
| 82 | PIC-3038 | SUCTION OF COMP.PRESS CONTROL | FCS | CCR | % | 0 | 100 | - | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |
| 83 | PIC-4001 | STEAM INLET PRESSURE SIGNAL | FCS | CCR | % | 0 | 100 | - | - | - | - | - | ANA | 4-20mA | PLC | UCP-431 | * | - | - | - | - | |

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-201 SYNTHESIS GAS COMPRESSOR PID | | | | | | | | | | | | | | | | | | | | |
| 1 | LY-43162 | LP COMP. SECTION-2 SEPARATOR LEVEL CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 4mA @ CLOSE | 20mA @ OPEN | ANA | 4-20mA | CV | L | - | * | - | - | - | *Redundant |
| 2 | LY-43163 | HP COMP. SECTION-3 SEPARATOR LEVEL CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 4mA @ CLOSE | 20mA @ OPEN | ANA | 4-20mA | CV | L | - | * | - | - | - | *Redundant |
| 3 | FY-43161B | COMP. SECTION-2 ANTI-SURGE CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 20mA @ CLOSE | 4mA @ OPEN | ANA | 4-20mA | CV | L | - | * | - | - | - | *Redundant |
| 4 | FY-43162B | COMP. SECTION-3 ANTI-SURGE CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 20mA @ CLOSE | 4mA @ OPEN | ANA | 4-20mA | CV | L | - | * | - | - | - | *Redundant |
| 5 | FY-43163B | COMP. RETURN ANTI-SURGE CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 20mA @ CLOSE | 4mA @ OPEN | ANA | 4-20mA | CV | L | - | * | - | - | - | *Redundant |
| VD-1208-301A-PID-202 STEAM TURBINE PID | | | | | | | | | | | | | | | | | | | | |
| 6 | PY-43110 | TURBINE SEALING STEAM PRESS. CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 4mA @ CLOSE | 20mA @ OPEN | ANA | 4-20mA | CV | L | - | * | - | - | - | *Redundant |
| 7 | FY-43103 | TURBINE EXTRACTON FLOW | PLC | UCP-431 | Kg/h | 0 | 300000 | 248133 | - | - | ANA | 4-20mA | | FCS | - | * | - | - | - | |
| VD-1208-301A-PID-203 LUBE OIL SYSTEM (TANK) PID | | | | | | | | | | | | | | | | | | | | |
| 8 | TY-43105 | OIL COOLER OUTLET TEMP. CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 4mA @ COOL OIL OPEN | 20mA @ HOT OIL OPEN | ANA | 4-20mA | CV | L | - | * | - | - | - | *Redundant |
| 9 | TY-43110 | STEAM TURBINE FOR OIL UNIT EXHAUST TEMP. CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 20mA @ CLOSE | 4mA @ OPEN | ANA | 4-20mA | CV | L | - | * | - | - | - | *Redundant |
| VD-1208-301A-PID-206-1 SEAL GAS PID | | | | | | | | | | | | | | | | | | | | |
| 10 | PDV-43181 | LP COMP. PRIMARY SEAL GAS SUPPLY DIFF. PRESS. CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 20mA @ CLOSE | 4mA @ OPEN | ANA | 4-20mA | CV | DGS | - | * | - | - | - | *Redundant |
| 11 | PDV-43182 | LP COMP. PRIMARY SEAL GAS SUPPLY DIFF. PRESS. CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 20mA @ CLOSE | 4mA @ OPEN | ANA | 4-20mA | CV | DGS | - | * | - | - | - | *Redundant |
| VD-1208-301A-PID-206-2 SEAL GAS PID | | | | | | | | | | | | | | | | | | | | |
| 12 | PDV-43191 | HP COMP. PRIMARY SEAL GAS SUPPLY DIFF. PRESS. CONTROL VALVE | PLC | UCP-431 | % | 0 | 100 | - | 20mA @ CLOSE | 4mA @ OPEN | ANA | 4-20mA | CV | DGS | - | * | - | - | - | *Redundant |

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-205 MACHINE MONITORING DIAGRAM | | | | | | | | | | | | | | | | | | | | | | |
| 1 | VXT-43101 | TURBINE RADIAL VIBRATION (GOV. SIDE X) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (1002) @ TRIP |
| 2 | VYT-43101 | TURBINE RADIAL VIBRATION (GOV. SIDE Y) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |
| 3 | VXT-43102 | TURBINE RADIAL VIBRATION (EXH. SIDE X) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (1002) @ TRIP |
| 4 | VYT-43102 | TURBINE RADIAL VIBRATION (EXH. SIDE Y) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |
| 5 | VXT-43103 | LP COMP. RADIAL VIBRATION (NDE X) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (1002) @ TRIP |
| 6 | VYT-43103 | LP COMP. RADIAL VIBRATION (NDE Y) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |
| 7 | VXT-43104 | LP COMP. RADIAL VIBRATION (DE X) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (1002) @ TRIP |
| 8 | VYT-43104 | LP COMP. RADIAL VIBRATION (DE Y) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |
| 9 | VXT-43105 | HP COMP. RADIAL VIBRATION (NDE X) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (1002) @ TRIP |
| 10 | VYT-43105 | HP COMP. RADIAL VIBRATION (NDE Y) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |
| 11 | VXT-43106 | HP COMP. RADIAL VIBRATION (DE X) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (1002) @ TRIP |
| 12 | VYT-43106 | HP COMP. RADIAL VIBRATION (DE Y) | PROX | L | μ mPP | 0 | 150 | <25.4 | - | - | 51 | 89 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |
| 13 | ZT-43101A | TURBINE AXIAL POSITION (A) | PROX | L | mm | -1 | 1 | -0.5-0.5 | - | - | ±0.5 | ±0.75 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 14 | ZT-43101B | TURBINE AXIAL POSITION (B) | PROX | L | mm | -1 | 1 | -0.5-0.5 | - | - | ±0.5 | ±0.75 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |
| 15 | ZT-43102A | LP COMP. AXIAL POSITION (A) | PROX | L | mm | -1 | 1 | -0.5-0.5 | - | - | ±0.5 | ±0.75 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 16 | ZT-43102B | LP COMP. AXIAL POSITION (B) | PROX | L | mm | -1 | 1 | -0.5-0.5 | - | - | ±0.5 | ±0.75 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |

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. | |
| 17 | ZT-43103A | HP COMP. AXIAL POSITION (A) | PROX | L | mm | -1 | 1 | -0.5-0.5 | - | - | ±0.5 | ±0.75 | ANA | mV | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 18 | ZT-43103B | HP COMP. AXIAL POSITION (B) | PROX | L | mm | -1 | 1 | -0.5-0.5 | - | - | ±0.5 | ±0.75 | ANA | mV | BN | UCP-431 | * | - | * | * | - | |
| 19 | KT-43101 | TURBINE KEYPHASOR | PROX | L | rpm | 0 | 15000 | - | - | - | - | - | ANA | mV | BN | UCP-431 | * | - | - | - | - | |
| VD-1208-301A-PID-205 MACHINE MONITORING DIAGRAM | | | | | | | | | | | | | | | | | | | | | | |
| 1 | TE-43131A | TURBINE THRUST BEARING TEMP. (ACTIVE SIDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 2 | TE-43132A | TURBINE THRUST BEARING TEMP. (ACTIVE SIDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | |
| 3 | TE-43133A | TURBINE THRUST BEARING TEMP. (NON-ACTIVE SIDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 4 | TE-43134A | TURBINE THRUST BEARING TEMP. (NON-ACTIVE SIDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | |
| 5 | TE-43135A | TURBINE JOURNAL BEARING TEMP. (GOV. SIDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 6 | TE-43136A | TURBINE JOURNAL BEARING TEMP. (GOV. SIDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | |
| 7 | TE-43137A | TURBINE JOURNAL BEARING TEMP. (EXH. SIDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 8 | TE-43138A | TURBINE JOURNAL BEARING TEMP. (EXH. SIDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | |
| 9 | TE-43139A | LP COMP. THRUST BEARING TEMP. (ACTIVE SIDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 10 | TE-43140A | LP COMP. THRUST BEARING TEMP. (ACTIVE SIDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | |
| 11 | TE-43141A | LP COMP. THRUST BEARING TEMP. (NON-ACTIVE SIDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 12 | TE-43142A | LP COMP. THRUST BEARING TEMP. (NON-ACTIVE SIDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | |
| 13 | TE-43143A | LP COMP. JOURNAL BEARING TEMP. (NDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP |
| 14 | TE-43144A | LP COMP. JOURNAL BEARING TEMP. (NDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | |

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. | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | TE-43145A | LP COMP. JOURNAL BEARING TEMP. (DE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP | |
| 16 | TE-43146A | LP COMP. JOURNAL BEARING TEMP. (DE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | | |
| 17 | TE-43147A | HP COMP. THRUST BEARING TEMP. (ACTIVE SIDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP | |
| 18 | TE-43148A | HP COMP. THRUST BEARING TEMP. (ACTIVE SIDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | | |
| 19 | TE-43149A | HP COMP. THRUST BEARING TEMP. (NON-ACTIVE SIDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP | |
| 20 | TE-43150A | HP COMP. THRUST BEARING TEMP. (NON-ACTIVE SIDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | | |
| 21 | TE-43151A | HP COMP. JOURNAL BEARING TEMP. (NDE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP | |
| 22 | TE-43152A | HP COMP. JOURNAL BEARING TEMP. (NDE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | | |
| 23 | TE-43153A | HP COMP. JOURNAL BEARING TEMP. (DE A) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | HH (2002) @ TRIP | |
| 24 | TE-43154A | HP COMP. JOURNAL BEARING TEMP. (DE B) | RTD | L | °C | 0 | 150 | <105 | - | - | 105 | 115 | ANA | PT100 | BN | UCP-431 | * | - | * | * | - | | |
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|--------------------------|---|---|-----------|---|--|
| Vendor: NEWJCM | EPC Contractor :  | HENGAM FERTILIZER PROJECT | | Owner:  | MC:  |
| Job No.: 5657 | Project No. : 1208 | SYNGAS COMPRESSOR I/O LIST WITH SET POINTS | | | |
| | | Doc. No.: VD-1208-301A-LST-251 | Rev. : 09 | | |

VENDOR : Jinzhou NEWJCM Machinery Manufacturing Co., Ltd.

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

ITEM NO. : 40-C-431 / 40-CT-431

ITEM DESCRIPTION : SynGas Compressor Train

PURCHASER D **Update as per revised instrument data sheet**

VENDOR DOC.

TOTAL PAGES : 28 (Excluding Attachments)

No Comment To Vendor

Comment as marked manufacturing may proceed To Vendor

Major Comment as marked manufacturing is on hold for the next rev To Vendor

Rejected, new document with the same rev. no. To Vendor

Used as for information To Vendor

Name : **REVIEWED** Seq. No.:

Signature: **By root at 9:52 pm, Nov 10, 2020**

Date:

PIDEC 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 | |
| 09 | 2020.09.20 | Issued for Approval | | SunWei | WuQing | WangZhijun | |
| 08 | 2020.01.09 | Issued for Approval | | SunWei | WuQing | WangZhijun | |
| 07 | 2018.04.30 | Issued for Approval | | SunWei | WuQing | WangZhijun | |
| 06 | 2017.11.16 | Issued for Approval | | SunWei | WuQing | WangZhijun | |
| 05 | 2016.09.20 | Issued for Approval | | SunWei | WuQing | WangZhijun | |
| Rev. | Date | Description | | Prepared by | Checked by | Approved by | Authorized by |