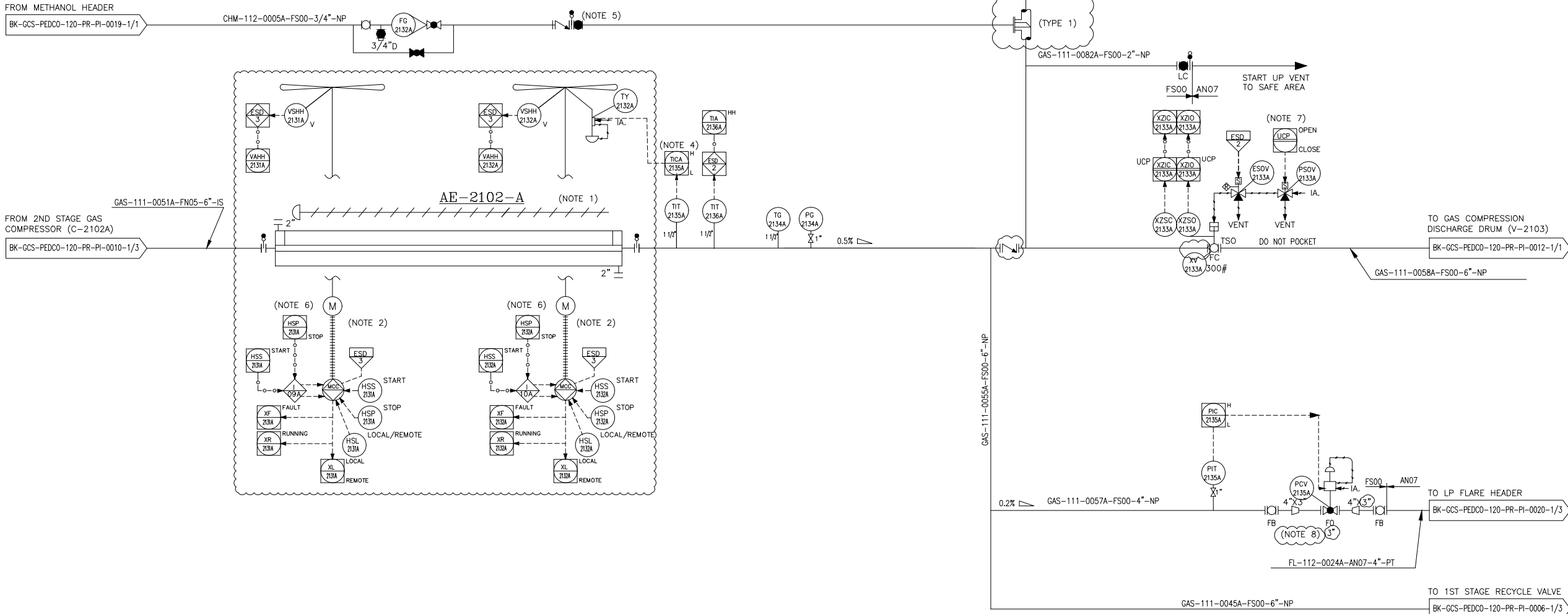
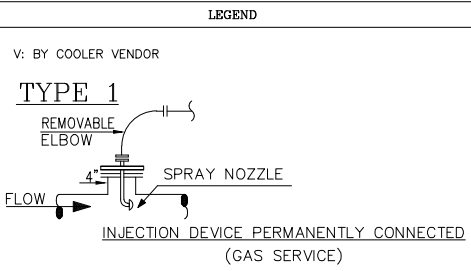


AE-2102A  
2ND STAGE GAS COMPRESSION AIR COOLER  
TRAIN #A

RATED DUTY : 545 kW  
DESIGN TEMP. : 175 °C  
DESIGN PRESS. : 62 barg  
TRIM LINE : TRM-AE-2102-0511-FN05-IS  
TRIM LINE : TRM-AE-2102-0513-FS00-NP



- NOTES
- 1- MANUAL LOUVER CONTROL.
  - 2- HALF OF FANS SHALL BE EQUIPPED WITH VARIABLE PITCH AUTOMATIC SYSTEM TO CONTROL FLUID OUTLET TEMPERATURE.
  - 3- THIS ESD VALVE SHOULD BE OPENED DURING START-UP OF COMPRESSOR.
  - 4- TEMPERATURE TO BE ADJUSTED BY BLADE CONTROL SYSTEM.
  - 5- BEFORE IN CASE OF COLD DEPRESSURIZING, MANUAL VALVE WILL BE OPEN BY OPERATOR.
  - 6- TO BE PROVIDED BY COOLER VENDOR.
  - 7-SHALL BECONTROLLED BY COMPRESSOR PACKAGE UCP DURING START UP.
  - 8- CONTROL VALVE SIZING WILL BE FINALIZED BY VENDOR.
  - 9-PARTIAL STROK DEVICE TO BE CONSIDERED FOR ALL ESDV'S ACTIVATED BY ESD 1.0.



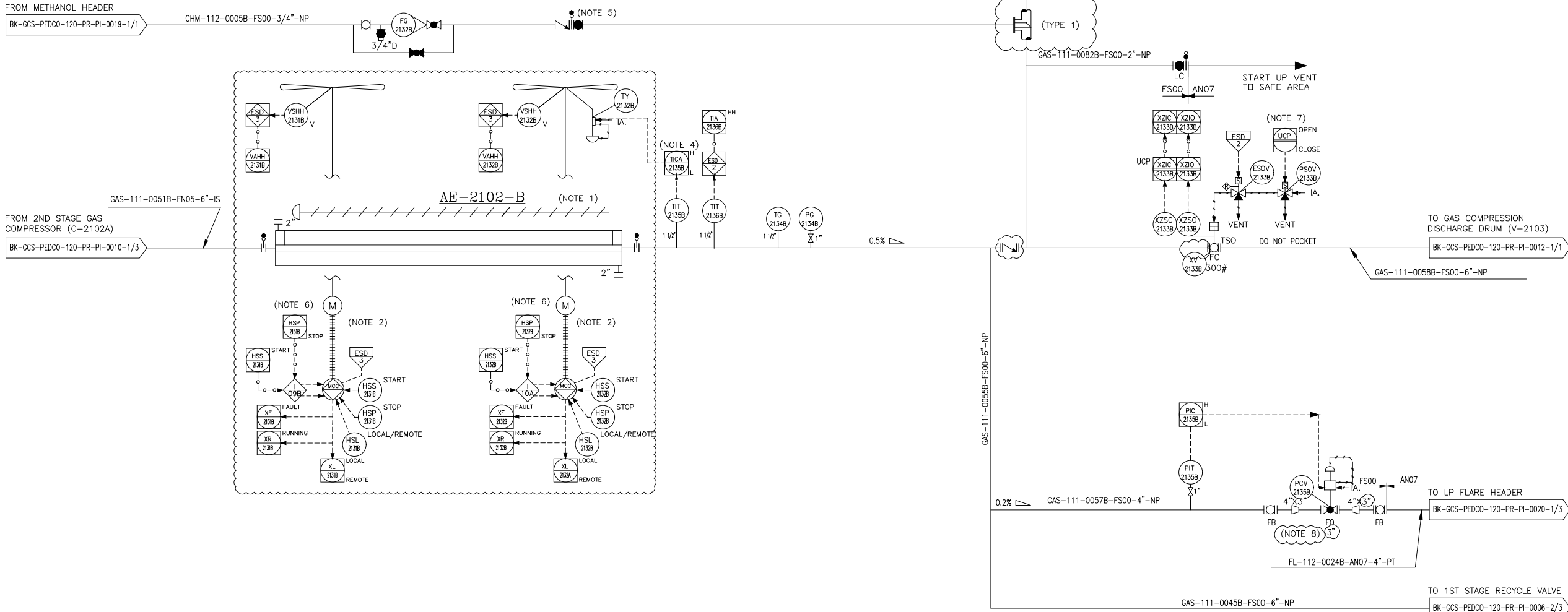
| REFERENCE DRAWING                | DRG. No.                    |
|----------------------------------|-----------------------------|
| Process Flow Diagram             | BK-GCS-PEDCO-120-PR-PF-0001 |
| Symbol & Legend For PFD and P&ID | BK-GCS-PEDCO-120-PR-PI-0001 |

KEY PLAN

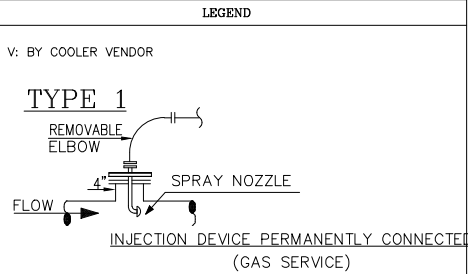
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|----------------------------------------------------------------------------------------------------------------------------------------|----------|-----|------------------------------------------------------------------------------------------------------------------------|-------------|------------|-------|-----------------------------------------------------------------------------------------------------------------------------|-------------|---------|-------|--------|
| D05                                                                                                                                    | DEC.2022 | IFA | M.ARYAPAR                                                                                                              | M.PAKHARIAN | M.MEHRSHAD |       |                                                                                                                             |             |         |       |        |
| D04                                                                                                                                    | AUG.2022 | IFA | M.ARYAPAR                                                                                                              | M.PAKHARIAN | M.MEHRSHAD |       |                                                                                                                             |             |         |       |        |
| D03                                                                                                                                    | JUN.2022 | IFA | M.ARYAPAR                                                                                                              | M.PAKHARIAN | M.MEHRSHAD |       |                                                                                                                             |             |         |       |        |
| D02                                                                                                                                    | MAR.2022 | IFA | M.ARYAPAR                                                                                                              | M.PAKHARIAN | M.MEHRSHAD | ** ** | *****                                                                                                                       | ** **       | *** **  | ** ** | *** ** |
| D01                                                                                                                                    | JAN.2022 | IFA | M.ARYAPAR                                                                                                              | M.PAKHARIAN | M.MEHRSHAD | ** ** |                                                                                                                             | BY          | DATE    | BY    | DATE   |
| D00                                                                                                                                    | SEP.2021 | IPC | M.ARYAPAR                                                                                                              | M.PAKHARIAN | M.MEHRSHAD | ** ** | REV.                                                                                                                        | DESCRIPTION | CHECKED | REV.  | APPR.  |
| REV. DATE P.O.I.S                                                                                                                      |          |     | PREP.                                                                                                                  | CHK.        | APP.       | AUT.  | اصل و کلیه نسخ این نقشه و حق اقتباس متعلق به شرکت ملی مناطق نفت خیز جنوب میباشد.                                            |             |         |       |        |
| PROJECT NAME:                                                                                                                          |          |     | BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION                                                   |             |            |       | THE ORIGINAL AND ALL COPIES OF THIS DRAWING TOGETHER WITH THE COPYRIGHT THEREIN ARE THE SOLE PROPERTY OF N.I.S.O.C./ FIELDS |             |         |       |        |
| PROJECT NO.:                                                                                                                           |          |     | 971020                                                                                                                 |             |            |       | BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES GAS COMPRESSOR STATION                                                        |             |         |       |        |
| EPC CONTRACTOR:                                                                                                                        |          |     | EPD/EPC CONTRACTOR (GC):                                                                                               |             |            |       |                                                                                                                             |             |         |       |        |
| <br>HIRGAN ENERGY - DESIGN & INSPECTION COMPANIES |          |     | <br>PETROIRAN DEVELOPMENT COMPANY |             |            |       |                                                                                                                             |             |         |       |        |
| DRAWING TITLE:                                                                                                                         |          |     | P&ID - 2nd STAGE GAS COMPRESSION AIR COOLERS                                                                           |             |            |       | NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED                                                                           |             |         |       |        |
| SCALE                                                                                                                                  |          |     | BUDGET REF. LOCATION SIZE CLASS                                                                                        |             |            |       | APPROVED FOR CONSTRUCTION BY: DATE:                                                                                         |             |         |       |        |
| NS                                                                                                                                     |          |     | BK-GCS-PEDCO-120-PR-PI-0011                                                                                            |             |            |       | 708789                                                                                                                      |             |         |       |        |
| 1 OF 3                                                                                                                                 |          |     | D05                                                                                                                    |             |            |       | 1 OF 3                                                                                                                      |             |         |       |        |

AE-2102B  
2ND STAGE GAS COMPRESSION AIR COOLER  
TRAIN #B

RATED DUTY : 545 kW  
DESIGN TEMP. : 175 °C  
DESIGN PRESS. : 62 barg  
TRIM LINE : TRM-AE-2102-0511-FN05-IS  
TRIM LINE : TRM-AE-2102-0513-FS00-NP



- NOTES
- 1- MANUAL LOUVER CONTROL.
  - 2- HALF OF FANS SHALL BE EQUIPPED WITH VARIABLE PITCH AUTOMATIC SYSTEM TO CONTROL FLUID OUTLET TEMPERATURE.
  - 3- THIS ESD VALVE SHOULD BE OPENED DURING START-UP OF COMPRESSOR.
  - 4- TEMPERATURE TO BE ADJUSTED BY BLADE CONTROL SYSTEM.
  - 5- BEFORE IN CASE OF COLD DEPRESSURIZING, MANUAL VALVE WILL BE OPEN BY OPERATOR.
  - 6- TO BE PROVIDED BY COOLER VENDOR.
  - 7-SHALL BECONTROLLED BY COMPRESSOR PACKAGE UCP DURING START UP.
  - 8- CONTROL VALVE SIZING WILL BE FINALIZED BY VENDOR.
  - 9-PARTIAL STROK DEVICE TO BE CONSIDERED FOR ALL ESDV'S ACTIVATED BY ESD 1,0.



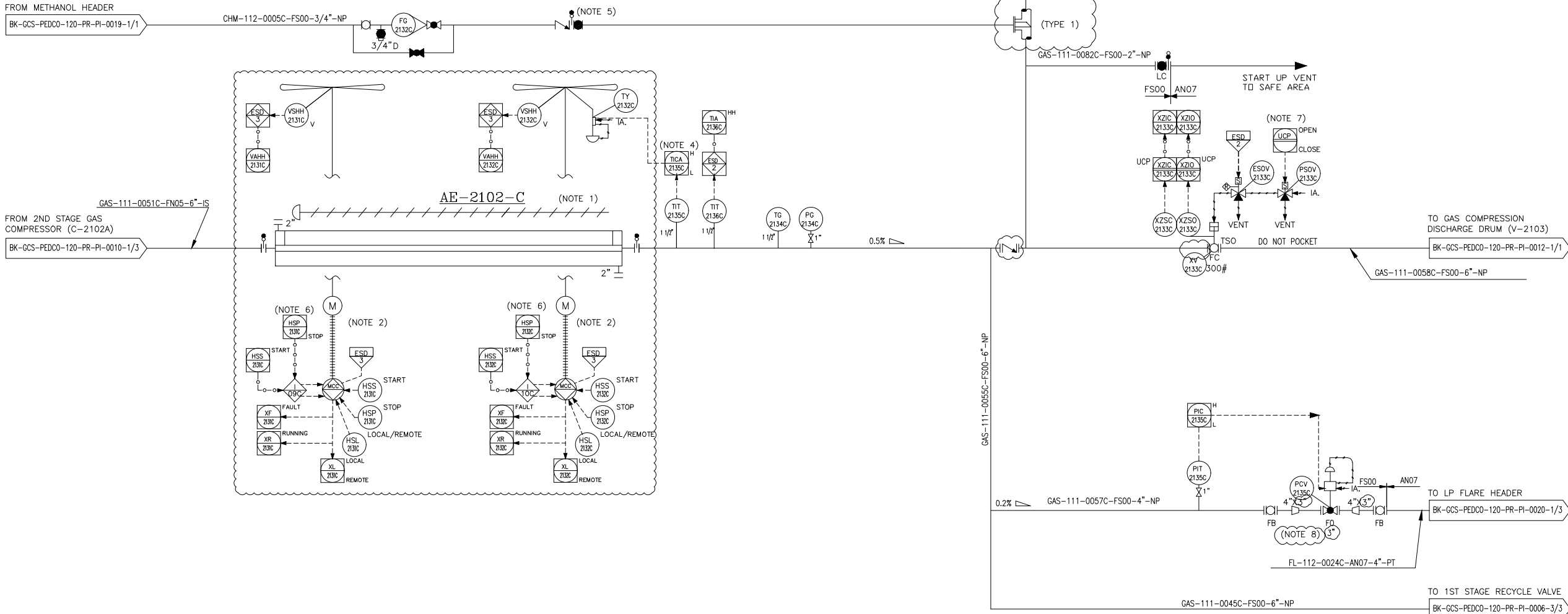
| REFERENCE DRAWING                | DRG. No.                    |
|----------------------------------|-----------------------------|
| Process Flow Diagram             | BK-GCS-PEDCO-120-PR-PF-0001 |
| Symbol & Legend For PFD and P&ID | BK-GCS-PEDCO-120-PR-PI-0001 |

KEY PLAN

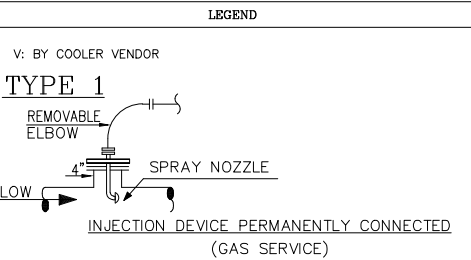
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|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------|---------|------------|------------|----------|
| D05                                                                                                                                                          | DEC.2022 | IFA                         | M.ARYAPAR                                                                                                                                                                                                             | M.PAKHARIAN | M.MEHRSHAD |      |                                                                                       |                                                                                                                                   |       |         |            |            |          |
| D04                                                                                                                                                          | AUG.2022 | IFA                         | M.ARYAPAR                                                                                                                                                                                                             | M.PAKHARIAN | M.MEHRSHAD |      |                                                                                       |                                                                                                                                   |       |         |            |            |          |
| D03                                                                                                                                                          | JUN.2022 | IFA                         | M.ARYAPAR                                                                                                                                                                                                             | M.PAKHARIAN | M.MEHRSHAD |      |                                                                                       |                                                                                                                                   |       |         |            |            |          |
| D02                                                                                                                                                          | MAR.2022 | IFA                         | M.ARYAPAR                                                                                                                                                                                                             | M.PAKHARIAN | M.MEHRSHAD | **   | ***                                                                                   | *****                                                                                                                             | **    | ***     | **         |            |          |
| D01                                                                                                                                                          | JAN.2022 | IFA                         | M.ARYAPAR                                                                                                                                                                                                             | M.PAKHARIAN | M.MEHRSHAD | **   | REV.                                                                                  | DESCRIPTION                                                                                                                       | BY    | DATE    | BY         | DATE       |          |
| D00                                                                                                                                                          | SEP.2021 | IPC                         | M.ARYAPAR                                                                                                                                                                                                             | M.PAKHARIAN | M.MEHRSHAD | **   |                                                                                       |                                                                                                                                   |       | CHECKED |            | REV. APPR. |          |
| REV.                                                                                                                                                         | DATE     | P.O.I.S                     | PREP.                                                                                                                                                                                                                 | CHK.        | APP.       | AUT. | اصل و کلیه نسخ این نقشه و حق اقتباس متعلق به شرکت ملی مناطق نفت خیز جنوب می باشد.     |                                                                                                                                   |       |         |            |            |          |
| PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES<br>GAS COMPRESSOR STATION                                                                        |          |                             |                                                                                                                                                                                                                       |             |            |      |  | THE ORIGINAL AND ALL COPIES OF THIS DRAWING TOGETHER WITH<br>THE COPYRIGHT THEREIN ARE THE SOLE PROPERTY OF<br>N.I.S.O.C./ FIELDS |       |         |            |            |          |
| PROJECT NO.: 971020                                                                                                                                          |          |                             | EPD/EPC CONTRACTOR (GC):                                                                                                                                                                                              |             |            |      |                                                                                       | BINAK OILFIELD DEVELOPMENT<br>SURFACE FACILITIES<br>GAS COMPRESSOR STATION                                                        |       |         |            |            |          |
| EPC CONTRACTOR:<br><br>HIRGAN ENERGY – DESIGN & INSPECTION<br>COMPANIES |          |                             | <br><br>PETROIRAN<br>DEVELOPMENT<br>COMPANY |             |            |      | DATE SCALE DRAWING BY CHECKED BY PROJECT ENG.                                         |                                                                                                                                   |       |         |            |            |          |
| DRAWING TITLE: P&ID - 2nd STAGE GAS COMPRESSION AIR COOLERS                                                                                                  |          |                             |                                                                                                                                                                                                                       |             |            |      | NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED                                     |                                                                                                                                   |       |         |            |            |          |
| APPROVED FOR CONSTRUCTION                                                                                                                                    |          |                             |                                                                                                                                                                                                                       |             |            |      | BY:                                                                                   |                                                                                                                                   | DATE: |         |            |            |          |
| SCALE                                                                                                                                                        | SIZE     | DRAWING NO.                 |                                                                                                                                                                                                                       |             | SHEET NO.  | REV. | BUDGET REF.                                                                           | LOCATION                                                                                                                          | SIZE  | CLASS   | SERIAL NO. | SHEET      | REVISION |
| NS                                                                                                                                                           | A3       | BK-GCS-PEDCO-120-PR-PI-0011 |                                                                                                                                                                                                                       |             | 2 OF 3     | D05  | 053-073-9184                                                                          | F                                                                                                                                 | 2     | A       | 708789     | 2 OF 3     | D05      |

AE-2102C  
2ND STAGE GAS COMPRESSION AIR COOLER  
TRAIN #C

RATED DUTY : 545 kW  
DESIGN TEMP. : 175 °C  
DESIGN PRESS. : 62 barg  
TRIM LINE : TRM-AE-2102-0511-FN05-IS  
TRIM LINE : TRM-AE-2102-0513-FS00-NP



- NOTES
- 1- MANUAL LOUVER CONTROL.
  - 2- HALF OF FANS SHALL BE EQUIPPED WITH VARIABLE PITCH AUTOMATIC SYSTEM TO CONTROL FLUID OUTLET TEMPERATURE.
  - 3- THIS ESD VALVE SHOULD BE OPENED DURING START-UP OF COMPRESSOR.
  - 4- TEMPERATURE TO BE ADJUSTED BY BLADE CONTROL SYSTEM.
  - 5- BEFORE IN CASE OF COLD DEPRESSURIZING, MANUAL VALVE WILL BE OPEN BY OPERATOR.
  - 6- TO BE PROVIDED BY COOLER VENDOR.
  - 7-SHALL BECONTROLLED BY COMPRESSOR PACKAGE UCP DURING START UP.
  - 8- CONTROL VALVE SIZING WILL BE FINALIZED BY VENDOR.
  - 9-PARTIAL STROK DEVICE TO BE CONSIDERED FOR ALL ESDV'S ACTIVATED BY ESD 1,0.



| REFERENCE DRAWING                | DRG. No.                    |
|----------------------------------|-----------------------------|
| Process Flow Diagram             | BK-GCS-PEDCO-120-PR-PF-0001 |
| Symbol & Legend For PFD and P&ID | BK-GCS-PEDCO-120-PR-PI-0001 |

KEY PLAN

|                                                                                                                                                                             |          |                             |           |             |            |       |                                                                                       |             |            |            |              |           |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------|-----------|-------------|------------|-------|---------------------------------------------------------------------------------------|-------------|------------|------------|--------------|-----------|----------|
| D05                                                                                                                                                                         | DEC.2022 | IFA                         | M.ARYAPAR | M.PAKHARIAN | M.MEHRSHAD |       |                                                                                       |             |            |            |              |           |          |
| D04                                                                                                                                                                         | AUG.2022 | IFA                         | M.ARYAPAR | M.PAKHARIAN | M.MEHRSHAD |       |                                                                                       |             |            |            |              |           |          |
| D03                                                                                                                                                                         | JUN.2022 | IFA                         | M.ARYAPAR | M.PAKHARIAN | M.MEHRSHAD |       |                                                                                       |             |            |            |              |           |          |
| D02                                                                                                                                                                         | MAR.2022 | IFA                         | M.ARYAPAR | M.PAKHARIAN | M.MEHRSHAD | ** ** | ***                                                                                   | *****       | ** **      | *** ****   | ** **        | *** ***** |          |
| D01                                                                                                                                                                         | JAN.2022 | IFA                         | M.ARYAPAR | M.PAKHARIAN | M.MEHRSHAD | ** ** | REV.                                                                                  | DESCRIPTION | BY         | DATE       | BY           | DATE      |          |
| D00                                                                                                                                                                         | SEP.2021 | IPC                         | M.ARYAPAR | M.PAKHARIAN | M.MEHRSHAD | ** ** |                                                                                       |             | CHECKED    | REV.       | APPR.        |           |          |
| REV.                                                                                                                                                                        | DATE     | P.O.I.S                     | PREP.     | CHK.        | APP.       | AUT.  | اصل و کلیه نسخ این نقشه و حق اقتباسی متعلق به شرکت ملی مناطق نفت خیز جنوب میباشد.     |             |            |            |              |           |          |
| PROJECT NAME:                                                                                                                                                               |          |                             |           |             |            |       | BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES<br>GAS COMPRESSOR STATION               |             |            |            |              |           |          |
| PROJECT NO.:                                                                                                                                                                |          |                             |           |             |            |       | 971020                                                                                |             |            |            |              |           |          |
| EPC CONTRACTOR:                                                                                                                                                             |          |                             |           |             |            |       | EPD/EPC CONTRACTOR (GC):                                                              |             |            |            |              |           |          |
|   |          |                             |           |             |            |       |  |             |            |            |              |           |          |
| HIRGAN ENERGY – DESIGN & INSPECTION COMPANIES                                                                                                                               |          |                             |           |             |            |       | PETROIRAN DEVELOPMENT COMPANY                                                         |             |            |            |              |           |          |
| DRAWING TITLE:                                                                                                                                                              |          |                             |           |             |            |       | BINAK OILFIELD DEVELOPMENT<br>SURFACE FACILITIES<br>GAS COMPRESSOR STATION            |             |            |            |              |           |          |
|                                                                                                                                                                             |          |                             |           |             |            |       | DATE                                                                                  | SCALE       | DRAWING BY | CHECKED BY | PROJECT ENG. |           |          |
|                                                                                                                                                                             |          |                             |           |             |            |       |                                                                                       |             |            |            |              |           |          |
| DRAWING TITLE:                                                                                                                                                              |          |                             |           |             |            |       | NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED                                     |             |            |            |              |           |          |
| P&ID – 2nd STAGE GAS COMPRESSION AIR COOLERS                                                                                                                                |          |                             |           |             |            |       | APPROVED FOR CONSTRUCTION                                                             |             |            |            |              |           |          |
|                                                                                                                                                                             |          |                             |           |             |            |       | BY:                                                                                   |             |            | DATE:      |              |           |          |
| SCALE                                                                                                                                                                       | SIZE     | DRAWING NO.                 |           |             | SHEET NO.  | REV.  | BUDGET REF.                                                                           | LOCATION    | SIZE       | CLASS      | SERIAL NO.   | SHEET     | REVISION |
| NS                                                                                                                                                                          | A3       | BK-GCS-PEDCO-120-PR-PI-0011 |           |             | 3 OF 3     | D05   | 053-073-9184                                                                          | F           | 2          | A          | 708789       | 3 OF 3    | D05      |