



Hengyi Industries Sdn Bhd

恒逸实业（文莱）有限公司

HYBN-T7-13-5029-2021-1

## Process parameter alarm list of FXK Unit

## 灵活焦化装置工艺参数报警一览表

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| <br>HENGYI | Hengyi Industries Sdn Bhd 恒逸实业（文莱）有限公司    |                                                          |         |                        |          |          |            |    |        |        |              |
|---------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------|---------|------------------------|----------|----------|------------|----|--------|--------|--------------|
|                                                                                             | Process parameter alarm list<br>工艺参数报警一览表 |                                                          |         |                        |          |          |            |    |        |        |              |
|                                                                                             | Record No.记录编号                            |                                                          |         | HYBN-T7-13-5029-2024-1 |          |          |            |    |        |        | Page 1 of 1  |
| NO.序号                                                                                       | Tag No.<br>位号                             | Name名称                                                   | Unit 单位 | Alarm Value 报警值        |          |          |            |    | DCS    |        | Remark<br>备注 |
|                                                                                             |                                           |                                                          |         | HHA<br>高高报             | HA<br>高报 | LA<br>低报 | LLA<br>低低报 | DH | Light光 | Sound声 |              |
| 1                                                                                           | TIC10510(A/B)                             | 反应温度 Reaction Temperature                                | ℃       | 550                    | 550      | 525      | 510        |    | √      | √      |              |
| 2                                                                                           | LI10401                                   | 洗涤塔底液位 Scrubber Level                                    | %       | 70                     | 63       | 29.5     | 0          |    | √      | √      |              |
| 3                                                                                           | PI31201                                   | 灵活气脱硫塔出口压力 Flexigas Scrubber Top Pressure                | MPa     | 0.25                   | 0.135    | 0.111    | 0          |    | √      | √      |              |
| 4                                                                                           | PDIC10902A/B                              | 两器差压 Differential Pressure of Heater and Reactor         | kPa     | 140                    | 120      | 100      | 0          |    | √      | √      |              |
| 5                                                                                           | LIC12301                                  | D103液位 D103 Level                                        | %       | 80                     | 65       | 57       | 12         |    | √      | √      |              |
| 6                                                                                           | FIQ10505B                                 | 反应器处理量 Reactor Throughput                                | t/h     | 100                    | 100      | 0        | 0          |    | √      | √      |              |
| 7                                                                                           | FIC11704                                  | 污泥回炼量 Sludge Capacity                                    | m3/h    | 5                      | 5        | 0        | 0          |    | √      | √      |              |
| 8                                                                                           | PDI10201                                  | STR101/AB过滤器差压 STR101/AB Pressure Drop                   | kPa     | 250                    | 172      | 0        | 0          |    | √      | √      |              |
| 9                                                                                           | LIC10101                                  | D107液位 D107 Level                                        | %       | 88                     | 70       | 40       | 20         |    | √      | √      |              |
| 10                                                                                          | PIC10502                                  | 中压蒸汽进料环管压力 Atomizing Steam Pressure                      | MPa     | 4                      | 3.1      | 2.8      | 2.511      |    | √      | √      |              |
| 11                                                                                          | LIC10502                                  | 反应器料位 Reactor Bed Level                                  | %       | 45                     | 34       | 12       | 10         |    | √      | √      |              |
| 12                                                                                          | TIC10413                                  | 洗涤塔底液相温度 Scrubber Liquid Phase Temperature               | ℃       | 400                    | 371.5    | 0        | 0          |    | √      | √      |              |
| 13                                                                                          | TI10403(A/B/C)                            | 洗涤塔顶温度 Scrubber Top Temperature                          | ℃       | 460                    | 410      | 0        | 0          |    | √      | √      |              |
| 14                                                                                          | TI11203(A/B/C)                            | D101温度 D101 Temperature                                  | ℃       | 300                    | 250      | 0        | 0          |    | √      | √      |              |
| 15                                                                                          | TIC11304                                  | F101出口温度F101 Outlet Temperature                          | ℃       | 800                    | 800      | 100      | 0          |    | √      | √      |              |
| 16                                                                                          | TIC10910                                  | 加热器床层温度 Heater Bed Temperature                           | ℃       | 650                    | 625      | 300      | 0          |    | √      | √      |              |
| 17                                                                                          | TIC11003                                  | 加热器急冷段上部温度 Heater Upper Quench Section Temperature       | ℃       | 700                    | 682.5    | 0        | 0          |    | √      | √      |              |
| 18                                                                                          | LI10903                                   | 加热器密相料位 Heater Density Phase Bed Level                   | %       | 65                     | 62       | 40       | 30         |    | √      | √      |              |
| 19                                                                                          | TIC11604(A)                               | 焦炭气化温度 Gasifier Bed Temperature                          | ℃       | 1200                   | 1200     | 0        | 0          |    | √      | √      |              |
| 20                                                                                          | LI11602                                   | 气化器料位 Gasifier Bed Level                                 | %       | 62                     | 55       | 45       | 39         |    | √      | √      |              |
| 21                                                                                          | FIC11607                                  | 气化器主风量 Gasifier Air Rate                                 | Nm3/h   | 200000                 | 200000   | 83935    | 54565      |    | √      | √      |              |
| 22                                                                                          | TIC12202                                  | 灵活气出E103温度 E103 Outlet Temperature                       | ℃       | 260                    | 230      | 205      | 0          |    | √      | √      |              |
| 23                                                                                          | PI12301                                   | D103压力 D103 Pressure                                     | MPa     | 4.45                   | 4.25     | 0        | 0          |    | √      | √      |              |
| 24                                                                                          | TI12402                                   | E104冷后凝结水温度 E104 Outlet Condensate Temperature           | ℃       | 100                    | 100      | 0        | 0          |    | √      | √      |              |
| 25                                                                                          | PI12601                                   | 仪表瓦斯压力 Instrument Fuel Gas Pressure                      | MPa     | 1.6                    | 1.6      | 0.7      | 0          |    | √      | √      |              |
| 26                                                                                          | TIC12508                                  | F102出口蒸汽温度 F102 Outlet Temperature                       | ℃       | 460                    | 446      | 420      | 390        |    | √      | √      |              |
| 27                                                                                          | FIQ12502                                  | F102入口蒸汽流量 F102 Inlet Steam Flowrate                     | t/h     | 120                    | 120      | 50       | 46         |    | √      | √      |              |
| 28                                                                                          | TIC13208                                  | F104出口蒸汽温度 F104 Outlet Temperature                       | ℃       | 700                    | 545      | 490      | 0          |    | √      | √      |              |
| 29                                                                                          | FI13201(A/B/C/D)                          | F104入口蒸汽流量 F104 Inlet Steam Flowrate                     | t/h     | 18                     | 18       | 7.4      | 0          |    | √      | √      |              |
| 30                                                                                          | PIC12701                                  | F102炉膛负压 F102 Chamber Pressure                           | Pa      | 0                      | -10      | -80      | -100       |    | √      | √      |              |
| 31                                                                                          | PI13301                                   | F104炉膛负压 F104 Chamber Pressure                           | Pa      | 0                      | -10      | -70      | -100       |    | √      | √      |              |
| 32                                                                                          | TIC13402                                  | 低低压饱和蒸汽温度 Saturated LLPS Temperature                     | ℃       | 175                    | 170      | 150      | 145        |    | √      | √      |              |
| 33                                                                                          | LIC13501                                  | DH101液位 DH101 Level                                      | %       | 90.6                   | 81.9     | 50       | 9.4        |    | √      | √      |              |
| 34                                                                                          | TI11702                                   | 油浆出冷却水箱去减渣罐温度指示 Emergency Pumpout Temperature            | ℃       | 170                    | 160      | 140      | 120        |    | √      | √      |              |
| 35                                                                                          | LI20103                                   | 分馏塔底缩颈段液位 Fractionator Bottom Level                      | %       | 80                     | qq       | 45       | 40         |    | √      | √      |              |
| 36                                                                                          | LIC20102                                  | HKGO抽出集油箱液位 HKGO Draw Chimney Tray Level                 | %       | 53                     | 50       | 41       | 38         |    | √      | √      |              |
| 37                                                                                          | LIC20101                                  | LKGO抽出集油箱液位 LKGO Draw Chimney Tray Level                 | %       | 56                     | 55       | 35       | 35         |    | √      | √      |              |
| 38                                                                                          | LIC20202                                  | 分馏塔中段抽出集油箱液位 Fractionator Middle Draw Chimney Tray Level | %       | 56                     | 55       | 40       | 40         |    | √      | √      |              |
| 39                                                                                          | LIC20201                                  | 分馏塔11层酸性水集液箱液位 Fractionator 11 Sour Water Draw Level     | %       | 100                    | 70       | 0        | 0          |    | √      | √      |              |
| 40                                                                                          | LIC20501                                  | C202液位 C202 Level                                        | %       | 90                     | 50       | 25       | 20         |    | √      | √      |              |
| 41                                                                                          | LIC20802                                  | C203液位 C203 Level                                        | %       | 90                     | 60       | 40       | 30         |    | √      | √      |              |
| 42                                                                                          | LIC20901                                  | E207壳程液位 E207 Shell Level                                | %       | 80                     | 70       | 40       | 30         |    | √      | √      |              |

|    |          |                                                            |     |       |      |      |      |  |   |   |  |
|----|----------|------------------------------------------------------------|-----|-------|------|------|------|--|---|---|--|
| 43 | LIC21201 | D210液位 D210 Level                                          | %   | 68    | 66   | 55   | 52   |  | √ | √ |  |
| 44 | TI20401  | D201顶富气温度 D201 OVHD Rich Gas Temperature                   | ℃   | 48    | 45   | 40.5 | 39   |  | √ | √ |  |
| 45 | LIC20401 | D201液位 D201 Level                                          | %   | 44    | 43   | 27   | 26   |  | √ | √ |  |
| 46 | LIC20402 | D201界位 D201 Interface Level                                | %   | 80    | 70   | 40   | 35   |  | √ | √ |  |
| 47 | TI22201  | D202顶富气温度 D202 OVHD Rich Gas Temperature                   | ℃   | 100   | 90   | 0    | 0    |  | √ | √ |  |
| 48 | LIC22201 | D202液位 D202 Level                                          | %   | 43    | 42   | 30   | 27   |  | √ | √ |  |
| 49 | LIC22202 | D202界位 D202 Interface Level                                | %   | 48    | 45   | 35   | 34   |  | √ | √ |  |
| 50 | LIC22301 | D203液位 D203 Level                                          | %   | 43    | 42   | 30   | 27   |  | √ | √ |  |
| 51 | LIC22302 | D203界位 D203 Interface Level                                | %   | 48    | 45   | 35   | 34   |  | √ | √ |  |
| 52 | LIC22401 | D204液位 D204 Level                                          | %   | 45    | 43   | 30   | 27   |  | √ | √ |  |
| 53 | LIC22402 | D204界位 D204 Interface                                      | %   | 60    | 55   | 35   | 33   |  | √ | √ |  |
| 54 | FIC23201 | LKGO返分馏塔流量 LKGO Returning Flowrate                         | t/h | 40    | 40   | 9    | 5.31 |  | √ | √ |  |
| 55 | FIC21401 | HKGO返分馏塔底流量 HKGO Returning Flowrate                        | t/h | 45    | 45   | 13   | 0    |  | √ | √ |  |
| 56 | FIC21701 | HKGO 回流量 HKGO Reflux Flowrate                              | t/h | 200   | 190  | 78   | 0    |  | √ | √ |  |
| 57 | FIC20101 | HHKGO油返分馏塔底流量 HHKGO Returning Flowrate                     | t/h | 16    | 16   | 7    | 0    |  | √ | √ |  |
| 58 | PI20201  | 分馏塔顶压力 Fractionator OVHD Pressure                          | MPa | 0.099 | 0.08 | 0.03 | 0    |  | √ | √ |  |
| 59 | TIC20201 | 分馏塔顶温度 Fractionator OVHD Temperature                       | ℃   | 115   | 113  | 108  | 95   |  | √ | √ |  |
| 60 | FI20301  | 分馏塔空冷前注水量 Fractionator OVHD Air Cooler Wash Water Flowrate | t/h | 16    | 16   | 1    | 0    |  | √ | √ |  |
| 61 | TI20607  | 柴油至加氢装置温度 Diesel Product To Hydrocracking Unit Temperature | ℃   | 300   | 300  | 0    | 0    |  | √ | √ |  |
| 62 | TI20605  | 柴油至罐区温度 Diesel Product To Tankage Temperature              | ℃   | 44    | 43.5 | 36   | 35.5 |  | √ | √ |  |
| 63 | LIC23102 | C210底液位 C210 Level                                         | %   | 90    | 68   | 40   | 0    |  | √ | √ |  |
| 64 | TI21104  | LKGO至下游装置/储罐温度 LKGO to Downstream Unit Temperature         | ℃   | 135   | 120  | 50   | 50   |  | √ | √ |  |
| 65 | TI21004  | HKGO至下游装置/储罐温度 HKGO to Downstream Unit Temperature         | ℃   | 400   | 135  | 70   | 70   |  | √ | √ |  |
| 66 | TIC21105 | LKGO作冲洗油温度 Flushing Oil Temperature                        | ℃   | 400   | 160  | 100  | 0    |  | √ | √ |  |
| 67 | PIC21302 | 冲洗油的设备冲洗压力 Equipment Flushing Oil Pressure                 | MPa | 1.1   | 1.1  | 0.95 | 0.95 |  | √ | √ |  |
| 68 | PIC21303 | 冲洗油的仪表冲洗压力 Instrument Flushing Oil Pressure                | MPa | 1.25  | 1.2  | 0.9  | 0.8  |  | √ | √ |  |
| 69 | PIC21304 | 冲洗油的高压机泵冲洗压力 Equipment High Pressure Flushing Oil Pressure | MPa | 2.2   | 2.2  | 1.9  | 1.9  |  | √ | √ |  |
| 70 | TI22102  | 气压机一级出口温度 Compressor First Stage Outlet Temperature        | ℃   | 150   | 120  | 0    | 0    |  | √ | √ |  |
| 71 | TI22104  | 气压机二级出口温度 Compressor Second Stage Outlet Temperature       | ℃   | 200   | 120  | 0    | 0    |  | √ | √ |  |
| 72 | TI22106  | 气压机三级出口温度 Compressor Third Stage Outlet Temperature        | ℃   | 200   | 120  | 0    | 0    |  | √ | √ |  |
| 73 | PI22501  | C204顶压力 C204 OVHD Pressure                                 | MPa | 4     | 2.17 | 1.7  | 0    |  | √ | √ |  |
| 74 | TI22501  | C204顶温度 C204 OVHD Temperature                              | ℃   | 49.5  | 49   | 40   | 0    |  | √ | √ |  |
| 75 | TIC22705 | C204（下部温度）灵敏板温度 C204 Bottom Temperature(Tray 4)            | ℃   | 118   | 117  | 109  | 100  |  | √ | √ |  |
| 76 | LI22501  | C204中段抽出集液箱液位 C204 Middle Draw Chimney Level               | %   | 70    | 70   | 3    | 0    |  | √ | √ |  |
| 77 | LI22703  | C204底液位 C204 Bottom Level                                  | %   | 70    | 65   | 40   | 35   |  | √ | √ |  |
| 78 | LIC22601 | D205界位 D205 Interface Level                                | %   | 90    | 70   | 30   | 0    |  | √ | √ |  |
| 79 | LIC22704 | D206界位 D206 Interface Level                                | %   | 90    | 50   | 0    | 0    |  | √ | √ |  |
| 80 | PIC22901 | C205顶压力 C205 OVHD Pressure                                 | MPa | 2.3   | 2.1  | 0    | 0    |  | √ | √ |  |
| 81 | LIC22901 | C205液位 C205 Level                                          | %   | 90    | 70   | 30   | 0    |  | √ | √ |  |
| 82 | TI22901  | C205顶温度 C205 OVHD Temperature                              | ℃   | 100   | 100  | 0    | 0    |  | √ | √ |  |
| 83 | TIC23401 | C207底饱和蒸汽的温度 C207 Saturated Steam Temperature              | ℃   | 500   | 239  | 0    | 0    |  | √ | √ |  |
| 84 | TIC23306 | C207（下部温度）灵敏板温度 C207 Bottom Temperature(Tray 4)            | ℃   | 170   | 168  | 158  | 158  |  | √ | √ |  |
| 85 | PIC23501 | C207顶压力 C207 OVHD Pressure                                 | MPa | 2.5   | 1.4  | 1    | 0    |  | √ | √ |  |
| 86 | LIC23302 | C207底液位 C207 Bottom Level                                  | %   | 58    | 55   | 45   | 42   |  | √ | √ |  |
| 87 | LIC23501 | D208液位 D208 Level                                          | %   | 60    | 55   | 35   | 0    |  | √ | √ |  |
| 88 | LIC23502 | D208界位 D208 Interface Level                                | %   | 100   | 70   | 0    | 0    |  | √ | √ |  |
| 89 | TI23806  | 稳定石脑油至罐区温度 Debutanizer Bottom to Unit Temperature          | ℃   | 60    | 55   | 31   | 30.5 |  | √ | √ |  |
| 90 | TI23807  | 稳定石脑油至下游装置温度 Debutanizer Bottom to Unit Temperature        | ℃   | 200   | 120  | 50   | 0    |  | √ | √ |  |
| 91 | LIC23901 | D209液位 D209 Level                                          | %   | 90    | 70   | 30   | 0    |  | √ | √ |  |

|     |                   |                                                           |      |      |      |        |        |  |   |   |  |
|-----|-------------------|-----------------------------------------------------------|------|------|------|--------|--------|--|---|---|--|
| 92  | LI24002           | D211液位 D211 Level                                         | %    | 75   | 50   | 5      | 4.5    |  | √ | √ |  |
| 93  | LI24004           | D211界位 D211 Interface Level                               | %    | 50   | 50   | 25     | 0      |  | √ | √ |  |
| 94  | LIC30101          | D-301锥段料位 D-301 Bottom Cone Level                         | %    | 60   | 14   | 10     | 5      |  | √ | √ |  |
| 95  | FIC30202          | 洗涤液进DY302流量 CirculatingSlurry to DY302 Flowrate           | t/h  | 380  | 380  | 260    | 0      |  | √ | √ |  |
| 96  | TI30201           | D302顶温度 D302 OVHD Temperature                             | ℃    | 300  | 100  | 0      | 0      |  | √ | √ |  |
| 97  | TIC30302          | C302顶温 C302 OVHD Temperature                              | ℃    | 100  | 65   | 40     | 0      |  | √ | √ |  |
| 98  | FIC30402          | C302水洗水量 C302 Wash Water Rate                             | t/h  | 1200 | 1050 | 800    | 0      |  | √ | √ |  |
| 99  | TI30501/TI30504   | COS预热器出口温度 COS Preheater Outlet Temperature               | ℃    | 400  | 150  | 115    | 0      |  | √ | √ |  |
| 100 | TI30507           | COS 反应器出口温度 COS Reactor Outlet Temperature                | ℃    | 400  | 150  | 40     | 0      |  | √ | √ |  |
| 101 | PDI30501/PDI30502 | COS反应器压降 COS Reactor Pressure Drop                        | kPa  | 60   | 38   | 0      | 0      |  | √ | √ |  |
| 102 | TIC30602          | C303顶温 C303 OVHD Temperature                              | ℃    | 100  | 55   | 35     | 0      |  | √ | √ |  |
| 103 | FIC30601          | C303水洗水量 C303 Wash Water Rate                             | t/h  | 900  | 850  | 570    | 0      |  | √ | √ |  |
| 104 | TI30701           | C303 底温 C303 Bottom Temperature                           | ℃    | 100  | 65   | 0      | 0      |  | √ | √ |  |
| 105 | FIC31201          | C304胺液循环量 C304 Amine Circulation Rate                     | t/h  | 700  | 530  | 280    | 0      |  | √ | √ |  |
| 106 | TIC31303          | T302胺液温度 T302 Amine Temperature                           | ℃    | 100  | 60   | 35     | 0      |  | √ | √ |  |
| 107 | FIC31203          | C304上段循环量 C304 Upper Circulation Rate                     | t/h  | 150  | 135  | 90     | 0      |  | √ | √ |  |
| 108 | TIC31301          | E310/AB后富液温度 E310A/B Outlet Rich Flexisorb SE Temperature | ℃    | 200  | 120  | 50     | 0      |  | √ | √ |  |
| 109 | TIC31401          | C305顶温度 C305 OVHD Temperature                             | ℃    | 150  | 120  | 112    | 100    |  | √ | √ |  |
| 110 | PIC31501          | 酸性气压力 Sour Gas Pressure                                   | MPa  | 0.16 | 0.13 | 0      | 0      |  | √ | √ |  |
| 111 | FIC31503          | C305酸性水回流量 C305 Sour Water Returning Flowrate             | t/h  | 40   | 20   | 6      | 0      |  | √ | √ |  |
| 112 | PIC32201          | D312罐顶压力 D312 OVHD Pressure                               | MPa  | 0.4  | 0.29 | 0.19   | 0      |  | √ | √ |  |
| 113 | PIC32202          | 泵322出口压力 P322 Outlet Pressure                             | MPa  | 1.6  | 1.6  | 0.5    | 0.5    |  | √ | √ |  |
| 114 | TI40102           | T401顶温度 T401 OVHD Temperature                             | ℃    | 100  | 80   | 0      | 0      |  | √ | √ |  |
| 115 | TI40201/TI40202   | 焦炭至BN-401温度 Coke to BN-401 Temperature                    | ℃    | 250  | 80   | 0      | 0      |  | √ | √ |  |
| 116 | TI40501           | D401至布袋过滤器温度 D401 OVHD Temperature                        | ℃    | 350  | 250  | 0      | 0      |  | √ | √ |  |
| 117 | PIC40301          | D401顶压力（开工时） D401 OVHD Pressure(Starting up)              | MPa  | 0.6  | 0.38 | -0.002 | -0.002 |  | √ | √ |  |
| 118 | TI40501           | 布袋过滤器入口温度 Filter Bag Package Inlet Temperature            | ℃    | 350  | 250  | 0      | 0      |  | √ | √ |  |
| 119 | FIC40301          | 布袋过滤器入口流量 Filter Bag Package Inlet Flowrate               | kg/h | 5000 | 4800 | 0      | 0      |  | √ | √ |  |
| 120 | LI40501           | T402水封罐液位 T402 Water Seal Tank                            | %    | 90   | 62   | 38     | 0      |  | √ | √ |  |
| 121 | PIC40501          | DY402入口压力 DY402 Inlet Pressure                            | kPa  | 0.6  | 0.1  | -0.004 | -0.004 |  | √ | √ |  |
| 122 | PIC40301          | D401顶压力（开工时） D401 OVHD Pressure(Starting up)              | MPa  | 0.6  | 0.1  | -0.003 | -0.004 |  | √ | √ |  |
| 123 | FIC41001          | 刮泥机进料量 Slurry Thickener Tank Feed Rate                    | t/h  | 75   | 69   | 25     | 15     |  | √ | √ |  |
| 124 | FIC41002          | 泵403出口流量 P403 Outlet Flowrate                             | t/h  | 60   | 45   | 28     | 12     |  | √ | √ |  |
| 125 | FIC41101          | 泵404出口返回量 P404 Outlet Returning Flowrate                  | t/h  | 90   | 85   | 30     | 0      |  | √ | √ |  |
| 126 | PI52501           | 循环水进水压力 CR Temperature                                    | MPa  | 0.6  | 0.6  | 0      | 0      |  | √ | √ |  |
| 127 | TI52401           | 中压蒸汽进装置温度 MPS Temperature from Utility                    | ℃    | 600  | 600  | 0      | 0      |  | √ | √ |  |
| 128 | TI52402           | 低压蒸汽进装置温度 LPS Temperature from Utility                    | ℃    | 400  | 400  | 0      | 0      |  | √ | √ |  |
| 129 | PI52402           | 低压蒸汽进装置压力 LPS Pressure from Utility                       | MPa  | 1.45 | 1.3  | 0.88   | 0.7    |  | √ | √ |  |
| 130 | TI13401           | 低低压蒸汽进、出装置温度 LLPS Temperature to Refinery                 | ℃    | 400  | 400  | 0      | 0      |  | √ | √ |  |
| 131 | PI13401           | 低低压蒸汽进、出装置压力 LLPS Pressure to Refinery                    | MPa  | 0.68 | 0.64 | 0.45   | 0.38   |  | √ | √ |  |
| 132 | PI52101           | 工厂风进装置压力 Plant Air Pressure from Utility                  | MPa  | 1.6  | 1.6  | 0      | 0      |  | √ | √ |  |
| 133 | PI52201           | 仪表风进装置压力 Instrument Air Pressure from Utility             | MPa  | 1    | 1    | 0      | 0      |  | √ | √ |  |
| 134 | PI52302           | 低压氮气进装置压力 Low Pressure Nitrogen Pressure from Utility     | MPa  | 0.78 | 0.7  | 0.48   | 0.4    |  | √ | √ |  |
| 135 | PI52301           | 中压氮气进装置压力 Middle Pressure Nitrogen Pressure from Utility  | MPa  | 2.85 | 2.6  | 2.1    | 2      |  | √ | √ |  |
| 136 | PI12615           | 燃料气进装置压力 Fuel Gas Pressure from Refinery                  | MPa  | 0.6  | 0.56 | 0.44   | 0.38   |  | √ | √ |  |