# **DCS Framework**



Shanghai Morimatsu Pharmaceutical Equipment Engineering Co.,Ltd No.29, Jinwen Road, Airport Industrial Park, Zhuqiao Town, Pudong, Shanghai



Innovent Biologics(Suzhou), Ltd 168 Dongping Streer, Suzhou Industrial Park, Suzhou, Jiangsu

| Project               | Document No.       | Revision |
|-----------------------|--------------------|----------|
| M2项目下游工艺管罐系统与工艺自控系统工程 | PP20-0098-T-000482 | 2.0      |

|                      | Initials | Date       | Signature |
|----------------------|----------|------------|-----------|
| Morimatsu prepared:- | 杜林茂      | 2021-04-26 | 张蓉蓉       |
| Morimatsu approved:  | 杜林茂      | 2021-04-26 | 张蓉蓉       |
| Innovent reviewed:   |          |            |           |

| Innovent approved: |  |  |  |
|--------------------|--|--|--|
|                    |  |  |  |

#### 1. Purpose

The DCS Framework provides an overview on the entities of the Physical Model

(Unit Classes, Equipment Module Classes) and the entities of the Procedural Model (Phase Classes) to be implemented in the DeltaV DCS Software for the stainless steel media and buffer systems.

A separate DCS Framework will be provided for the single-use Process Units.

The Automation Framework will be a living document, which will be updated and extented as required during the specification and implementation of the DCS Software.

#### 2. Method

The Automation Framework is an Excel spread sheet that is subdivided in two sections for the Physical Model and the Procedural Model.

The section for the Physical Model identifies all Unit Classes with Unit Instances and all Equipment Module Classes and the location of the Equipment Module Classes.

The spread sheet identifies by X all Equipment Modules that belong to one particular Unit.

The spread sheet identifies by **S** all Equipment Modules that are shared Equipment Modules, which do not belong to one particular Unit but can be acquired from Phases that run on particular Units.

The section for the Procedural Model is a Phase Map that identifies all required Phases.

The spread sheet identifies by  ${\bf X}$  all Units at which the Phase can be executed .

The spread sheet identifies by **X** or by **S** all Equipment Modules that will be acquired from the Phase.

The following information is provided in the individual columns of the Spread Sheet:

| Index                     | Numerical index for     | further reference  |
|---------------------------|-------------------------|--|
| Phase Name                | Phase Name per Na       | ming Conventions   |
| Phase Descriptions        | Short description of    | functionality of the Phase   |
| Ref. PFD                  | Reference to Page       | of marked up PFD's, that show SIP, CIP, XFER flow paths                    |
| Phase is executed at Unit | Identification of Unit  | s at which an instance of the Phase will be executed                       |
| Phase acquires            | Identification of all E | quipment Modules that will be acquired by the Phase per following keys     |
| Equipment Modules         | Х                       | Euipment Module from own Unit is acquired                                  |
|                           | S                       | Equipment Module from another Unit or from no Unit (Shared EM) is acquired |

#### 3. Naming Conventions

| Entity | Naming Convention  | Example            |
|--------|--|--------------------|
| Phase  | max. 16 characters, capital letters, _ for delimiter     | SIP_TANK_EMPTY     |
| Unit   | Free text  | Buffer Hold Tank 1 |
| EM     | max. 16 characters, capital letters, _ for delimiter, EM | EM_Bottom_Group    |

### 4. Change Log

The Automation Framework is a living document, that will be updated as required.

Changes to last version will be identified with text in red letters.

Major revisions will be done only if structural elements (Units, Equipment Modules, Phases) are added or deleted, and for milestones in project execution. All intermediate versions are indicated by the major revision and subsequent number, e.g. 02-2

| Rev. | Date       | Name | Description   |
|------|------------|------|---|
| 0    | 2020-10-28 | 张予婧  | draft   |
| 0.1a | 2020-11-06 | 张予婧  | add UF phase  |
| 0.1b | 2020-11-18 | 张予婧  | 更新部分描述增加层析排气phase                                   |
| 0.1c | 2020-11-20 | 张予婧  | BP_BH launch unit 更新                                |
| 0.1d | 2020-11-25 | 张予婧  | launch unit 更新 add abbreviation list                |
| 0.1e | 2020-12-10 | 张予婧  | add alarm phase                                     |
| 1.0  | 2021-03-03 | 杜林茂  | 新增PH_S_PUR_PA, PH_X_PT_DF, PH_X_PT_VF, PH_PRES_CONT |
| 2.0  | 2021-04-26 | 杜林茂  | 新增PH_BUF_VD_TM, PH_PUR_VD_TM; 删除PH_SET_STATE        |

## 5 Acronyms and Abbreviations

| Abbreviation | on                      |
|--------------|-------------------------|
| S            | SIP                     |
| С            | CIP                     |
| LT           | Leak test               |
| DR           | Drain                   |
| X            | Transfer                |
| P            | Preparation             |
| TC           | Temperature control     |
| VAL          | Validition              |
| BP           | Buffer preparation tank |
| ВН           | Buffer holding tank     |
| PUR          | Purification tank       |
| CHT          | Chromatography          |
| DF           | Depth filter            |
| VF           | Virus filter            |
| UF           | Ultra filter            |
| POU          | Point of use            |
| ALW          | Alkali and WFI          |
| DIS          | Distribution pipe       |
| GEL          | Gel tank                |
| PU           | Pump                    |
| HV           | Harvest tank            |
| VT           | Vent                    |
| Sample       | Sample                  |
| INST         | Install                 |
| STOR         | Storage                 |
| MSG          | Message                 |
| AG           | Agitator                |
| TK           | Tank                    |
| ALK          | Alkali                  |
| RTN          | Return                  |
| WT           | Wash tank               |
| RT           | Rinse tank              |
| AT           | Alkali tank             |
| DSF          | Drug substance filling  |

|  | SECTION 1  | PHYSICAL MODEL ( UNIT CLASSES AND EQUIPMENT MODULE CLASSES )   |          |          |          |          |          |          |          |          |         |          |          |          |          |          |          |          |          |          |          |          | U        | Init     |          |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
|--|--|--|----------|----------|----------|----------|----------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|----------|-----------|-----------|-----------|----------|----------|----------|----------|-----------|-----------|-----------|-----|
| Unit   | Unit<br>Classs   | Unit<br>Description  | DSX-TA12 | DSX-TA13 | DSX-TA14 | DSX-TA15 | DSX-TA17 | DSX-TA18 | DSX-TA19 | DSX-TA20 | (工艺用水罐) | DSX-TA21 | DSX-TA22 | DSX-TA23 | DSX-TA24 | DSX-TA26 | DSX-TA27 | DSX-TA29 | DSX-TA30 | DSX-TA31 | DSX-TA32 | DSX-TA33 | DSX-TA34 | TON TANK | DSX-TA35 | DSX-TA02 | DSX-TA03 | DSX-TA04 | DSX-TA05 | DSX-TA06 | DSX-TA08 | DSX-TA07 | (勾浆罐) | DSX-DF03 | DSX-VF01 | DSX-CHT01 | DSX-CHT02 | DSX-CHT03 | DSY-UF01 | DSY-UF02 | DSZ-UF01 | DSX-PT07 | DSX-CIP02 | DSX-CIP03 | DSX-CIP05 | ALK |
| DSX-TA12 DSX-TA13 DSX-TA14 DSX-TA15                            | - BP Tank  | 3000L BUFFER PREPARATION TANK UNIT TA12 3000L BUFFER PREPARATION TANK UNIT TA13 6000L BUFFER PREPARATION TANK UNIT TA14 9000L BUFFER PREPARATION TANK UNIT TA15  | х        | х        | x        | x        |          |          |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| DSX-TA16 DSX-TA17 DSX-TA18 DSX-TA19                            |  | 3000L BUFFER HOLDING TANK UNIT TA16 3000L BUFFER HOLDING TANK UNIT TA17 3000L BUFFER HOLDING TANK UNIT TA18 3000L BUFFER HOLDING TANK UNIT TA19  |          |          |          | X        | X        | х        | х        |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| DSX-TA21 DSX-TA22 DSX-TA23                                     |  | 3000L PROCESS WATER TANK UNIT TA20 3000L BUFFER HOLDING TANK UNIT TA21 3000L BUFFER HOLDING TANK UNIT TA22 3000L BUFFER HOLDING TANK UNIT TA23 3000L BUFFER HOLDING TANK UNIT TA24   |          |          |          |          |          |          |          | ,        | x       | x        | х        | x        | x        |          | +        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| DSX-TA24  DSX-TA26  DSX-TA27  DSX-TA28  DSX-TA29               | BH Tank  | 6000L BUFFER HOLDING TANK UNIT TA24 6000L BUFFER HOLDING TANK UNIT TA25 6000L BUFFER HOLDING TANK UNIT TA27 6000L BUFFER HOLDING TANK UNIT TA28 6000L BUFFER HOLDING TANK UNIT TA29  |          |          |          |          |          |          |          |          |         |          |          |          |          | x        | x :      | ( X      |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| DSX-TA30 DSX-TA31 DSX-TA32 DSX-TA33                            |  | 3000L BUFFER HOLDING TANK UNIT TA30 6000L BUFFER HOLDING TANK UNIT TA31 9000L 0.5M NaOH TANK UNIT TA32 9000L BUFFER HOLDING TANK UNIT TA33   |          |          |          |          |          |          |          |          |         |          |          |          |          |          |          |          | х        | х        | х        | x        |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| DSX-TA34 DSX-TA35 DSX-TA02 DSX-TA03                            |  | 9000L BUFFER HOLDING TANK UNIT TA34 9000L BUFFER HOLDING TANK UNIT TA35 4000L HARVEST TANK UNIT TA02 4000L PURIFICATION TANK UNIT TA03   |          |          |          |          |          |          |          |          |         |          |          |          |          |          |          |          |          |          |          |          | х        | +        | x        | х        | x        |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| DSX-TA04 DSX-TA05 DSX-TA06 DSX-TA08 DSX-TA07                   | Process Tank(DPS) Slurry Tank匀浆罐   | 4000L PURIFICATION TANK UNIT TA04 4000L PURIFICATION TANK UNIT TA05 3000L PURIFICATION TANK UNIT TA06 3000L PURIFICATION TANK UNIT TA08 1500L Slurry TANK UNIT TA07  |          |          |          |          |          |          |          |          |         |          |          |          |          |          | +        |          | +        |          |          |          |          |          | +        |          |          | х        | X        | х        | х        | ×        | 1     |          |          | +         |           |           |          |          |          |          |           |           |           |     |
| DSX-DF03 DSX-VF01 DSX-CHT01 DSX-CHT02                          | Process Equipment<br>无需信号交互<br>Process Equipment<br>都是DCS系统,内部交互   | DEPTH FILTRATION UNIT DF03 NF WORK UNIT NF01 HPLC #1 WORK UNIT CHT01 HPLC #2 WORK UNIT CHT02   |          |          |          |          |          |          |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       | X        | х        | х         | х         |           |          |          |          |          |           |           |           |     |
| DSX-CHT03 DS1_3-UF01 DS1_3-UF02 DSZ_4-UF01                     | 超滤<br>都是DCS系统,内部交互   | HPLC #3 WORK UNIT CHT03  UF/DF WORK UNIT UF01 for Line 1 and Line 3  UF/DF WORK UNIT UF02 for Line 1 and Line 3  UF/DF WORK UNIT UF01 for Line 2 and Line 4  |          |          |          |          |          |          |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           | X         | х        | х        | X        |          |           |           | <br> -    |     |
| 原液分裝系统<br>DSX-CIPO2<br>DSX-CIPO3<br>DSX-CIPO5                  | 都是DCS系统,内部交互<br>CIP Station<br>都是DCS系统,内部交互  | PALLET TANK DS1-PT07  CIPO2 UNIT TA-CIPO201  CIPO3 UNIT TA-CIPO301  CIPO5 UNIT TA-CIPO501  2500L CONCENTRATED ALKALI TANK UNIT XXX   |          |          |          |          |          |          |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          | X        | x         | х         | x         | x   |
|  | SECTION 2  | PROCEDURAL MODEL ( PHASES )  |          |          |          |          |          |          |          |          |         |          |          | _        | _        | _        | _        | t        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           | _         |          |          |          |          |           |           | _         | ᅶ   |
|  |  |  |          |          |          |          |          |          |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| IndeX  | Phase Class SIP Phases   | Phase Description  |          |          |          | _        |          |          | _        |          |         |          |          |          |          |          |          | _        |          | _        |          | _        | _        |          |          |          |          |          |          |          | _        |          | _     | _        |          | _         | _         | _         |          | _        | _        |          | _         |           |           |     |
|  | Phase Class  SIP Phases  PH_S_BUF  | Phase Description  Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌  Sterilization of buffer tank and transfer pipe to chromatography   | х        | x        | x x      | x x      | x x      | x        | ×        | ,        | x       | ×        | x        | x        | x        | x        | x :      | c x      | ×        | x        | x        | x        | x        | : ;      | ×        |          |          |          |          |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| 1-1-1-1-2  | SIP Phases PH_S_BUF PH_S_PUR_CHT   | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling   | х        | x        | x >      | x x      | x x      | x        | x        | ,        | ×       | x        | x        | x        | x        | x        | x :      | x x      | x        | x        | x        | x        | x        | ; ;      |          | x        |          | x        | x        |          |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| 1-1  | SIP Phases PH_S_BUF  | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam.  | х        | x        | x )      | x x      | x x      | x        | x        | ,        | x       | x        | x        | x        | x        | x        | x :      | × ×      | ×        | x        | x        | x        | x        |          |          | +        | ×        | ×        | x        | x        |          |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| 1-1-1-1-2-1-3  | SIP Phases PH_S_BUF PH_S_PUR_CHT PH_S_PUR_DF   | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling  | х        | x        | x 3      | x x      | x x      | x        | x        | ,        | x       | x        | x        | x        | x        | ×        | x :      | х х      | ×        | x        | x        | ×        | ×        |          |          | +        |          | ×        |          | x        | x        |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4  | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_VF   | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 With cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到除病毒过滤的管道灭菌。3种选项  | x        |          | x 2      |          | ( x      | ×        | ×        | ,        | ×       | ×        | x        | ×        | ×        | x        | x :      | ( X      | ×        | x        | x        | ×        | ×        |          |          | +        |          | ×        | x        | ×        | ×        |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4 1-5  | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_VF  PH_S_PUR_UF  | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到除病毒过滤的管道灭菌。1种选项 Sterilization for buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到超滤的管道灭菌。1种选项 Sterilization transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路SIP介别有15个选项 TA14的出料管路SIP有18个选项 TA15的出料管路SIP有9个选项 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到纯化系统。包括到上游缓冲液(通过PCS7信号交互)   | x        |          |          |          |          |          | x        |          | ×       |          |          |          | x        |          | x :      |          |          |          |          | ×        |          |          |          | +        |          | ×        | x        | ×        | ×        |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4 1-5 1-6                                      | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_VF  PH_S_PUR_UF  | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。1种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到超滤的管道灭菌。1种选项 Sterilization transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA128TA13,出种管路SIP分别有15个选项 TA14的出料管路SIP有9个选项 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路SIP有9个选项   | x        |          |          | x        | ( x      |          |          |          | x       | x        |          | ×        | ×        |          |          | ( x      | x        | x        |          |          | ×        |          |          | +        |          | ×        | x        | ×        | ×        |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4 1-5 1-6 1-7                                  | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_VF  PH_S_PUR_UF  PH_S_BP_BH  PH_S_BH_POU_DS1_3   | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。1种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到超滤的管道灭菌。1种选项 TA12&TA13,出料管路SIP分别有15个选项 TA12&TA13,出料管路SIP分别有15个选项 TA14的出料管路SIP有8个选项 TA15的出料管路SIP有9个选项 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路SIP在罐子包工。 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路SIP在罐子包工。   | x x      |          |          | x        | ( x      | x        | x        | ,        | ×       | x        | x        | ×        | x        |          | x :      | ( x      | x        | x        |          | x        | ×        |          |          | +        |          | X        | x        | ×        | ×        |          |       |          |          |           |           |           |          |          |          |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9                          | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_VF  PH_S_BH_UF  PH_S_BP_BH  PH_S_BH_POU_DS1_3  PH_S_BH_POU_DS2_4  PH_S_ALW_DIS1_3  | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到超滤的管道灭菌。1种选项 Sterilization transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路SIP分别有15个选项 TA14的出料管路SIP有18个选项 TA14的出料管路SIP有9个选项 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路SIP在195个定为( Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到绝化系统。 包括到上游缓冲液(通过PCS7信号交互) Sterilization transfer line from holding tank bottom to main pipe (TA20/TA26/TA32)缓冲液出料管路从罐底灭菌到缓冲液分配阀组。 Sterilization transfer line from holding tank bottom to main pipe (TA20/TA26/TA32)  | x x      |          |          | x        | ( x      | x        | x        | ,        | ×       | x        | x        | ×        | x        |          | x :      | ( x      | x        | x        |          | x        | ×        |          |          |          |          | x        | x        | x        | ×        |          |       | X        | ×        | X         | ××        | ×         | ×        | x        | X        |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11                | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_VF  PH_S_BP_BH  PH_S_BH_POU_DS1_3  PH_S_BH_POU_DS2_4  PH_S_ALW_DIS1_3  PH_S_ALW_DIS1_3  PH_S_POU_DIS1_3  PH_S_POU_DIS1_3   | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到超滤的管道灭菌。1种选项 Sterilization transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路SIP分别有15个选项 TA14的出料管路SIP有18个选项 TA15的出料管路SIP有18个选项 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) Sterilization transfer line from holding tank bottom to main pipe(TA2O/TA26/TA32)缓冲液出料管路从罐底灭菌到缓冲液分配阀组。 Sterilization transfer line from holding tank bottom to main pipe(TA2O/TA26/TA32)缓冲液分配阀组。 Sterilization transfer line from holding tank bottom to main pipe(TA2O/TA26/TA32)缓冲液分配阀组。 Sterilization transfer line from purification to buffer holding main pipe. 缓冲液出料管路从继化系统反灭到缓冲液分配阀组。 Sterilization transfer line from purification to buffer holding main pipe. 缓冲液出料管路从绝化系统反灭到缓冲液分配阀组。                         | x x      |          |          | x        | ( x      | x        | x        | ,        | ×       | x        | x        | ×        | x        |          | x :      | ( x      | x        | x        |          | x        | ×        |          |          |          | ×        | xx       | x        | x        | x        |          |       |          | x        | x         | x         | x         | ×        |          |          |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11 1-12 1-13 1-13 | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_UF  PH_S_BP_BH  PH_S_BH_POU_DS1_3  PH_S_BH_POU_DS2_4  PH_S_ALW_DIS1_3  PH_S_ALW_DIS1_3  PH_S_PUR_UF  PH_S_POU_DIS2_4  PH_S_POU_DIS2_4  PH_S_POU_DIS2_4  PH_S_POU_DIS2_4  PH_S_POU_DIS2_4 | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到超滤的管道灭菌。1种选项 Sterilization transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路SIP分别有15个选项 TA14的出料管路SIP有18个选项 TA15的出料管路SIP有18个选项 TA15的出料管路SIP有18个选项 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) Sterilization transfer line from holding tank bottom to main pipe(TA20/TA26/TA32)缓冲液出料管路从罐底灭菌到缓冲液分配阀组。 Sterilization transfer line from holding tank bottom to main pipe(TA20/TA26/TA32)缓冲液分配阀组。 Sterilization transfer line from holding tank bottom to main pipe(TA20/TA26/TA32)缓冲液分配阀组。 Sterilization transfer line from purification to buffer holding main pipe.   | x x      |          |          | x        | ( x      | x        | x        | ,        | ×       | x        | x        | ×        | x        |          | x :      | ( x      | x        | x        |          | x        | ×        |          | xx       |          | ×        | xx       | x        | x        | x        |          |       |          | x        | <u> </u>  | x         | x         | _        |          |          |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11 1-12 1-13      | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_UF  PH_S_BP_BH  PH_S_BH_POU_DS1_3  PH_S_BH_POU_DS2_4  PH_S_ALW_DIS1_3  PH_S_ALW_DIS1_3  PH_S_POU_DIS1_3  PH_S_POU_DIS1_3   | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 缓冲液罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到深层过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 纯化罐子及出料到超滤的管道灭菌。1种选项 Sterilization transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路SIP分别有15个选项 TA14的出料管路SIP有18个选项 TA14的出料管路SIP有18个选项 TA14的出料管路SIP有9个选项 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路从罐底灭菌到缓冲液分配阀组。 Sterilization transfer line from holding tank bottom to main pipe (TA20/TA26/TA32) 缓冲液出料管路从罐底灭菌到缓冲液分配阀组。 Sterilization transfer line from purification to buffer holding main pipe. 缓冲液出料管路从纯化系统反灭到缓冲液分配阀组。 Sterilization transfer line from purification to buffer holding main pipe. 缓冲波出料管路从纯化系统反灭到缓冲液分配阀组。 Sterilization transfer line from chromatography to tank. 层析出料到罐体进口管路 Sterilization of transfer line from chromatography to tank. 层析出料到罐体进口管路 Sterilization of process air filter of harvest tank. | x x      | x        |          | x        | ( x      | x        | x        | ,        | ×       | x        | x        | ×        | x        |          | x :      | ( x      | x        | x        |          | x        | ×        |          | xx       |          | ×        | xx       | x        | x        | x        |          |       |          | x        | x         | x         | x         | _        |          |          |          |           |           |           |     |
| 1 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11 1-12 1-13 1-13 | SIP Phases  PH_S_BUF  PH_S_PUR_CHT  PH_S_PUR_DF  PH_S_PUR_UF  PH_S_BH_POU_DS1_3  PH_S_BH_POU_DS2_4  PH_S_ALW_DIS1_3  PH_S_ALW_DIS1_3  PH_S_POU_DIS1_3  PH_S_POU_DIS2_4  PH_S_POU_DIS1_3  | Sterilization of buffer tank with cooling by chilled water or glycol; tank heated by plant steam. 经产效罐子灭菌 Sterilization of buffer tank and transfer pipe to chromatography with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层析的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to DF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到层板的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to VF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到除病毒过滤的管道灭菌。3种选项 Sterilization of buffer tank and transfer pipe to UF with cooling by chilled water or glycol; tank heated by plant steam. 绝化罐子及出料到超滤的管道灭菌。1种选项 Sterilization transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路SIP分别有15个选项 TA14的出料管路SIP有18个选项 TA14的出料管路SIP有18个选项 Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) Sterilization transfer line from holding tank to purification. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) Sterilization transfer line from holding tank bottom to main pipe (TA20/TA26/TA32) 缓冲液出料管路从罐底灭菌到缓冲液分配阀组。 Sterilization transfer line from purification to buffer holding main pipe. 缓冲液出料管路从绝化系统反灭到缓冲液分配阀组。 Sterilization transfer line from purification to buffer holding main pipe. 缓冲液出料管路从绝化系统反灭到缓冲液分配阀组。 Sterilization transfer line from chromatography to tank. 层析出料到罐体进口管路 Sterilization of transfer line from chromatography to tank. 层析出料到罐体进口管路  | x x      | x        | x 3      | x        | ( x      | x        | x        | ,        | x       | ×        | x        | x        | x        | x        | x :      |          | x        | ×        | x        | x        | xxx      |          | ××       |          | ×        | xx       | x        | x        | x        |          |       |          | x        | x         | x         | x         | _        |          |          |          |           |           |           |     |

|  | SECTION 1   | PHYSICAL MODEL ( UNIT CLASSES AND EQUIPMENT MODULE CLASSES )   |          | <u></u>               |              |          |          |               |          |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          | Un        | it       |          |          |          |          |          |          |          |                   |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
|--|---|--|----------|-----------------------|--------------|----------|----------|---------------|----------|----------|---------------------|----------|-----------|----------|----------|---|----------|-----------|----------|----------|----------|----------|----------|---------------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------------|----------|----------|----------|-----------|-----------|-----------|----------|----------|----------|----------|-----------|-----------|-----------|---------------|-----|
| Unit   | Unit<br>Classs  | Unit<br>Description  | DSX-TA12 | DSX-TA13              | DSX-TA14     | DSX-TA15 | DSX-TA16 | DSX-1A1/      | DSX-IA18 | DSX-TA19 | DSX-TA20<br>(工艺用水罐) | DSX-TA21 | DSX-TAZ1  | DSX-TA23 | DSX-TA23 | DSX-TA24                                | DSX-TA26 | DSX-TA27  | DSX-TA28 | DSX-TA29 | DSX-TA30 | DSX-TA31 | DSX-TA32 | DSX-TA32      | DSX-1A33 | DSX-TA34  | DSX-TA35 | DSX-TA02 | DSX-TA03 | DSX-TA04 | DSX-TA05 | CONTINUE | DSX-TAGS | DSA-TAGO | DSX-1A0/<br>(仏粉讎) | DSX-DE03 | DSX-VE01 | D3A-VF01 | DSX-CHI01 | DSX-CHT02 | DSX-CHT03 | DSY-UF01 | DSY-UF02 | DSZ-UF01 | DSX-PT07 | UCX-CIP02 | DSA-CIPUZ | DSX-CIP03 | DSX-CIP05     | ALK |
| DSX-TA12   | -   | 3000L BUFFER PREPARATION TANK UNIT TA12 3000L BUFFER PREPARATION TANK UNIT TA13  | х        | х                     |              |          |          | +             |          |          |                     |          | Ŧ         |          |          | +                                       |          |           |          |          |          |          | H        |               | 1        |           |          |          |          |          |          |          |          |          |                   |          |          |          |           | 1         |           |          |          |          | F        | Ŧ         | +         |           | _             | F   |
| DSX-TA14   | - BP Tank<br>-  | 6000L BUFFER PREPARATION TANK UNIT TA14  |          | + +                   | х            | #        |          | ‡             |          |          |                     |          | ļ         | 1        | 1        | #                                       | 1        |           |          |          |          |          | ļ        | 1             | 1        |           |          |          |          |          |          | 1        | 1        |          |                   |          | 1        |          | 1         |           |           |          |          |          | ‡        | ŧ         | 1         |           | —<br>⊢        | L   |
| DSX-TA15<br>DSX-TA16   |   | 9000L BUFFER PREPARATION TANK UNIT TA15 3000L BUFFER HOLDING TANK UNIT TA16  |          |                       | 1            | x >      | х        | +             |          |          |                     |          | +         |          |          | $\dagger$                               |          |           |          |          |          |          |          | $\frac{1}{1}$ |          |           |          |          |          |          |          |          |          |          |                   | +        |          |          |           | ł         |           |          |          |          | t        | ±         |           |           | _             | L   |
| DSX-TA17<br>DSX-TA18   |   | 3000L BUFFER HOLDING TANK UNIT TA17 3000L BUFFER HOLDING TANK UNIT TA18  |          | $\blacksquare$        | _            |          | >        | -             | x        | -        |                     |          | $\perp$   | -        |          | -                                       |          | _         |          |          |          |          |          | -             |          |           |          |          |          |          |          |          |          | -        |                   |          |          | -        | -         | -         |           |          |          |          | F        | F         | -         |           | $\overline{}$ | F   |
| DSX-TA19   |   | 3000L BUFFER HOLDING TANK UNIT TA19  |          |                       |              |          |          | ľ             | ,        | х        |                     |          | t         |          | 1        | 1                                       | 1        |           |          |          |          |          | t        | 1             | 1        |           |          |          |          |          |          | 1        | 1        | 1        |                   | t        | 1        | 1        | 1         | 1         | 1         |          |          |          | ‡        | İ         | 1         | 1         | —<br>⊢        | L   |
| DSX-TA20<br>DSX-TA21   | -   | 3000L PROCESS WATER TANK UNIT TA20 3000L BUFFER HOLDING TANK UNIT TA21   |          | $\frac{1}{1}$         |              |          |          | +             | +        | +        | Х                   | х        | (         | +        |          | +                                       | +        |           |          |          |          |          |          | +             |          |           |          |          |          |          |          |          |          |          |                   |          |          |          | +         |           |           |          |          |          | ╀        | +         | +         |           |               | H   |
| DSX-TA22   |   | 3000L BUFFER HOLDING TANK UNIT TA22  |          |                       | 1            |          |          | 1             |          |          |                     |          | Х         | +-       |          | 1                                       | 1        |           |          |          |          |          | L        | 1             |          |           |          |          |          |          |          |          |          |          |                   |          |          | 1        |           | 1         |           |          |          |          | ‡        | Į         | 1         |           | —<br>—        | L   |
| DSX-TA23<br>DSX-TA24   |   | 3000L BUFFER HOLDING TANK UNIT TA23 3000L BUFFER HOLDING TANK UNIT TA24  |          | H                     |              |          |          | $\dagger$     |          |          |                     |          | $\dagger$ | X        | · >      | х                                       |          |           |          |          |          |          |          | +             |          |           |          |          |          |          |          |          |          |          |                   | t        |          |          | +         |           |           |          |          | _        | t        | +         | +         |           | <br>          | H   |
| DSX-TA26<br>DSX-TA27   | BH Tank   | 6000L BUFFER HOLDING TANK UNIT TA26 6000L BUFFER HOLDING TANK UNIT TA27  | -        | H                     | _            | -        | -        | Ŧ             | -        | -        |                     | -        | $\perp$   | -        | -        |   | х        | x         |          |          |          |          | L        | 1             | -        |           |          |          |          |          |          | -        | -        | -        |                   | -        | -        | -        | -         | 4         |           |          |          |          | F        | F         | 4         |           | $\overline{}$ | F   |
| DSX-TA28   |   | 6000L BUFFER HOLDING TANK UNIT TA28  |          |                       |              |          |          | 1             |          |          |                     |          | t         | t        | 1        | 1                                       | 1        | ^         | х        |          |          |          | t        | 1             | 1        |           |          |          |          |          |          |          | 1        | t        |                   | t        | 1        | t        | 1         | 1         |           |          |          |          | t        | İ         | 1         |           | _<br> -       | L   |
| DSX-TA29<br>DSX-TA30   | -   | 6000L BUFFER HOLDING TANK UNIT TA29 3000L BUFFER HOLDING TANK UNIT TA30  | -        | $\frac{1}{1}$         | -            | +        | +        | +             |          |          |                     | +        | +         | +        | +        | +                                       | +        | +         |          | X        | х        |          | +        | +             |          |           |          |          |          |          |          | +        | +        | +        |                   | +        | +        | +        | +         | -         |           |          |          |          | ╀        | +         | +         |           | _             | H   |
| DSX-TA31   |   | 6000L BUFFER HOLDING TANK UNIT TA31  |          | Ħ                     | 1            |          |          | #             | #        | #        |                     |          | Į         |          | 1        | #                                       | #        |           |          |          | Ë        | х        | +        | ļ             | 1        |           |          |          |          |          |          | 1        | 1        | İ        |                   | Į        | 1        | #        | #         | 1         |           |          |          |          | #        | ļ         | #         |           | —<br>—        | L   |
| DSX-TA32<br>DSX-TA33   |   | 9000L 0.5M NaOH TANK UNIT TA32<br>9000L BUFFER HOLDING TANK UNIT TA33  |          | H                     |              |          |          | $\frac{1}{1}$ | +        | +        |                     |          | +         | 1        |          | +                                       | +        | _         |          |          |          |          | ×        | ,             | x        |           |          |          |          |          |          |          |          | +        |                   |          |          | +        | +         | +         |           |          |          | _        | ╁        | +         | +         |           | !             | H   |
| DSX-TA34   |   | 9000L BUFFER HOLDING TANK UNIT TA34  |          | Ш                     | 1            | 1        | 1        | 1             | 1        | 1        |                     | ļ        | ļ         | H        | 1        | 1                                       | 7        |           |          |          |          |          |          | Ŧ             | 1        | Х         | х        |          |          |          |          | 1        | 1        | Ŧ        |                   | ļ        | 1        | 1        | #         | 4         | 4         |          |          |          | F        | Ŧ         | 7         | 4         | -             | F   |
| DSX-TA35<br>DSX-TA02   |   | 9000L BUFFER HOLDING TANK UNIT TA35<br>4000L HARVEST TANK UNIT TA02  |          |                       |              |          |          | t             |          |          |                     |          | t         |          |          | 1                                       | 1        |           |          |          |          |          |          | 1             | 1        |           | _        | х        |          |          |          |          |          | t        |                   | t        |          | t        | 1         | 1         |           |          |          |          | t        | İ         | 1         |           | _             | L   |
| DSX-TA03<br>DSX-TA04   | -   | 4000L PURIFICATION TANK UNIT TA03 4000L PURIFICATION TANK UNIT TA04  | +        | ${\mathbb H}$         | +            | Ŧ        | Ŧ        | Ŧ             | Ŧ        | Ŧ        |                     | +        | Ŧ         | +        | +        | Ŧ                                       | Ŧ        | $\dashv$  | _        | _        |          | F        | F        | Ŧ             | $\dashv$ | $\exists$ |          | F        | х        | х        | F        | Ŧ        | +        | Ŧ        |                   | +        | +        | Ŧ        | +         | Ŧ         | 4         | _        | Ĺ        |          | F        | +         | Ŧ         | 4         |               | F   |
| DSX-TA05   | Process Tank(DPS)   | 4000L PURIFICATION TANK UNIT TA05  |          | $\parallel \parallel$ | $\downarrow$ | #        | #        | #             | #        | #        |                     | 1        | #         | 1        | ‡        | #                                       | 1        |           |          |          |          |          | t        | ‡             | 1        |           |          |          |          | ^        | х        | _        | ‡        | ‡        |                   | ‡        | ‡        | t        | #         | 1         | 1         |          |          |          | #        | 丰         | #         | 1         | _             | L   |
| DSX-TA06<br>DSX-TA08   | -   | 3000L PURIFICATION TANK UNIT TA06 3000L PURIFICATION TANK UNIT TA08  | +        | ${\mathbb H}$         | +            | Ŧ        | Ŧ        | Ŧ             | f        | f        |                     | +        | Ŧ         | Ŧ        | Ŧ        | Ŧ                                       | Ŧ        | $\dashv$  |          | _        |          | F        | F        | Ŧ             | $\dashv$ | $\exists$ |          | F        | F        | F        | F        | ,        | ( )      | Ţ        |                   | +        | Ŧ        | Ŧ        | +         | Ŧ         | 4         | _        | Ĺ        |          | F        | +         | Ŧ         | 4         |               | F   |
| DSX-TA07   | Slurry Tank匀浆罐  | 1500L Slurry TANK UNIT TA07  | ‡        | $  \downarrow  $      | #            | #        | #        | #             | #        | #        |                     | ‡        | ‡         | ‡        | ‡        | #                                       | ‡        | $\exists$ |          |          |          |          | t        | ‡             | 1        |           |          |          |          |          |          | #        | ľ        | +        | Х                 | ‡        | ‡        | ‡        | #         | 1         |           |          |          |          | #        | #         | #         |           | —<br>—        | F   |
| DSX-DF03<br>DSX-VF01   | Process Equipment<br>无需信号交互   | DEPTH FILTRATION UNIT DF03 NF WORK UNIT NF01   | +        | $\dashv$              | +            | +        | +        | +             | +        | +        |                     | +        | +         | +        | +        | +                                       | +        | $\dashv$  |          |          |          | _        | +        | +             | +        | +         |          |          | _        |          |          | +        | +        | +        |                   | >        | · >      | (        | +         | +         | -         |          |          |          | +        | +         | +         | -         |               | H   |
| DSX-CHT01<br>DSX-CHT02   | Process Equipment   | HPLC #1 WORK UNIT CHT01 HPLC #2 WORK UNIT CHT02  | Ŧ        | H                     | 7            | Ŧ        | Ŧ        | 7             | #        | #        |                     | Ŧ        | #         | Ŧ        | 1        | 7                                       | 7        | 4         |          |          |          |          | Ŧ        | Ŧ             | 7        | $\exists$ |          |          |          |          |          | Ŧ        | 1        | Ŧ        |                   | 1        | 1        | 3        | x .       | x         | 1         |          |          |          | F        | Ŧ         | 7         | 1         | $\overline{}$ | F   |
| DSX-CHT02<br>DSX-CHT03   | 都是DCS系统,内部交互  | HPLC #3 WORK UNIT CHT03  |          |                       |              |          |          | t             |          |          |                     |          | t         |          |          | 1                                       | 1        |           |          |          |          |          | t        | 1             | 1        |           |          |          |          |          |          |          |          | t        |                   |          |          | t        | Ť         | -         | х         |          |          |          | t        | t         | #         |           | _             | L   |
| DS1_3-UF01 DS1_3-UF02  | 超滤<br>都是DCS系统,内部交互  | UF/DF WORK UNIT UF01 for Line 1 and Line 3 UF/DF WORK UNIT UF02 for Line 1 and Line 3  |          |                       |              |          |          | 1             |          |          |                     | İ        |           | ŀ        |          | +                                       |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          |          |          | +        |                   |          |          | +        |           |           |           | х        | х        |          | H        | t         |           |           |               | _   |
| DSZ_4-UF01   |   | UF/DF WORK UNIT UF01 for Line 2 and Line 4   |          |                       |              |          |          |               |          |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          |          |          |          |                   |          |          |          |           |           |           |          |          | X        | F        | F         |           |           |               |     |
| 原液分装系统<br>DSX-CIP02  | 都是DCS系统,内部交互  | PALLET TANK DS1-PT07 CIPO2 UNIT TA-CIPO201   |          | H                     | +            | +        | +        | +             | _        | _        |                     | +        | +         | +        | +        | +                                       | +        | +         |          |          |          |          | +        | +             | +        |           |          |          |          |          |          | +        | +        | +        |                   | +        | +        | +        | +         | +         |           |          |          |          | х        | x         | ,         |           | _             | H   |
| DSX-CIP03  | CIP Station   | CIP03 UNIT TA-CIP0301  |          |                       |              |          |          | #             | #        | #        |                     | Ţ        | ļ         | ļ        | ļ        | #                                       | #        |           |          |          |          |          | İ        | ļ             | 1        |           |          |          |          |          |          | ļ        | ļ        | İ        |                   | ļ        | ļ        | #        | #         | 1         |           |          |          |          | t        | #         | Ī         | х         | —<br>—        | L   |
| DSX-CIP05<br>ALK   | 都是DCS系统,内部交互  | CIPOS UNIT TA-CIPOSO1 2500L CONCENTRATED ALKALI TANK UNIT XXX  |          | H                     |              |          |          | $\dagger$     | +        | +        |                     |          | +         |          |          | +                                       | +        |           |          |          |          |          |          | +             | +        |           |          |          |          |          |          | +        |          |          |                   | +        |          |          | +         |           |           |          |          |          | t        | +         | +         |           | х             | х   |
|  | SECTION 2   | PROCEDURAL MODEL ( PHASES )  |          |                       |              |          |          |               |          |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          |          |          |          |                   |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
| IndeX  | Phase Class   |  |          |                       |              |          |          |               |          |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          |          |          |          |                   |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
|  |   | Phase Description  |          |                       |              |          |          |               |          |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          |          |          |          |                   |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
| 1  | SIP Phases  |  |          |                       |              |          |          |               |          |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          |          |          |          |                   |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
| 2-4  |   | CIP GEL tank, include agitation if have<br>匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹돧  |          |                       |              |          |          | Ī             | Ī        |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          |          |          |          | x                 |          |          | I        |           |           |           |          |          |          |          |           |           |           |               |     |
|  | SIP Phases  | CIP GEL tank, include agitation if have<br>匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹左排尽包含上以上步骤中,搅拌也包含在phase中。<br>CIP transfer line of buffer preparation tank with filters.  | 1        |                       | Ī            |          |          | I             |          |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          | I        |          |          | x                 |          |          | I        |           |           |           |          |          |          |          |           |           |           |               |     |
| 2-4  | SIP Phases  | CIP GEL tank, include agitation if have<br>匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹돧排尽包含上以上步骤中,搅拌也包含在phase中。  |          | x                     | x            | ×        |          |               |          |          |                     |          |           |          |          |   |          |           |          |          |          |          |          |               |          |           |          |          |          |          |          |          |          |          | x                 |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
| 2-4  | SIP Phases PH_C_GEL   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹打排尽包含上以上步骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项   |          | x                     | x            |          | xx >     | x >           | x )      | x        |                     | x        | ( X       | ×        | ( )      | x                                       |          | x         | x        | x        | x        | x        |          | )             | ×        | x         | x        |          |          |          |          |          |          |          | x                 |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
| 2-4  | PH_C_GEL PH_C_BP_BH   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹左排尽包含上以上步骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 TA15的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到纯化系统。   |          | x                     | x            | ,        | x >      | +             |          |          |                     | x        | ł         | ×        |          | x                                       |          | ×         | x        | _        | ×        | x        | L        | •             |          | x         |          |          |          |          |          |          |          |          | x                 |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
| 2-4<br>2-5<br>2-6  | PH_C_BP_BH PH_C_BH_POU1_3   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹扫抹尽包含上以上步骤中,搅拌电包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到纯化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA2O/TA26/TA32) 缓冲液出料管路从罐底清洗到缓冲液分配阀组。  |          | x                     | x            | ,        |          | +             |          |          | x                   |          | ł         | ×        | ( )      | x                                       | ×        | ×         | _        | _        |          |          | L        |               |          |           |          |          |          |          |          |          |          |          | x                 |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
| 2-4<br>2-5<br>2-6  | PH_C_BH_POU2_4  | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹车 排尽包含上以上步骤中,搅拌电包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 TA15的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路从罐底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路从罐底清洗到缓冲液分配阀组。  | x        | ×                     | x            | ,        |          | +             |          |          | x                   |          | ł         | ×        |          | x                                       | x        | ×         | _        | _        |          |          |          |               |          |           |          |          |          |          |          |          |          |          | x                 |          |          |          |           |           |           |          |          |          |          |           |           |           |               |     |
| 2-4<br>2-5<br>2-6<br>2-7<br>2-8  | PH_C_BH_POU1_3 PH_C_BH_POU2_4 PH_C_ALW_DIS1_3   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹左排尽包含上以上骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 TA15的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line for buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路从罐底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路从罐底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。   | x        | x                     | x            | ,        |          | +             |          |          | x                   |          | ł         | ×        |          | x                                       | x        | ×         | _        | _        |          |          |          |               |          |           |          |          | ×        | ×        |          |          |          |          | x                 |          |          | ( )      | ×         | ×         | ×         | ×        | x        | ×        |          |           |           |           |               |     |
| 2-4<br>2-5<br>2-6<br>2-7<br>2-8  | PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹扫抹尽包含上以上步骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 TA15的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank buffer | x        | x                     | x            | ,        |          | +             |          |          | x                   |          | ł         | ×        |          | ×                                       | x        | ×         | _        | _        |          |          |          |               |          |           |          |          | x        | ×        |          |          |          |          | x                 | +        |          | ł        | +         |           |           |          | ×        | ×        |          |           |           |           |               |     |
| 2-4 2-5 2-6 2-7 2-8 2-9 2-10 2-11  | PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹车排尽包含上以上骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line for buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从端底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从端底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification to use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP of transfer line from purification tank to chromatography. TA02及出料到CHTO1管道:TA04及出料到CHTO1管道:  | x        | ×                     | x            | ,        |          | +             |          |          | x                   |          | ł         | ×        |          | x                                       | ×        | ×         | _        | _        |          |          |          |               |          |           |          | x        |          | x        | x        |          |          |          | ×                 | +        | +        | ł        | +         |           |           |          | ×        | ×        |          |           |           |           |               |     |
| 2-4 2-5 2-6 2-7 2-8 2-9 2-10 2-11  | PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹左排尽包含上以上骤中,搅拌电包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 TA15的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从端底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从端底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification tank to chromatography. TA02及出料到CHTO1管道: TA04及出料到CHTO1管道: TA04及出料到CHTO1管道: TA05及出料到CHTO3管道: CIP of depth filter and liquid filter.   | x        | ×                     | x            | ,        |          | +             |          |          | ×                   |          | ł         | ×        |          | ×                                       | ×        | ×         | _        | _        |          |          |          |               |          |           |          | ×        |          | x        | ×        |          |          |          | x                 | +        | +        | ł        | +         |           |           |          | ×        | ×        |          |           |           |           |               |     |
| 2-4 2-5 2-6 2-7 2-8 2-9 2-10 2-11 2-12 2-13  | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  PH_C_POU_DIS2_4   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹左 排尽包含上以上骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 TA15的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从端底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从端底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification to use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification tank to chromatography. TA02及出料到CHTO1管道: TA04及出料到CHTO1管道: TA04及出料到CHTO1管道: TA05及出料到CHTO1管道: TA05及出料到CHTO1管道: TA05及出料到CHTO1管道: TA05及出料到CHTO1管道: TA05及出料到CHTO1管道: TA05及出料到CHTO1管道: TA05及出料到CHTO1管道: TA05及出料到CHTO1管道: TA05及出料到CHTO3管道: CIP of depth filter and liquid filter. 深层过滤及液体过滤器灭菌(TA03出料管道) CIP of diagramp pump before virus filter  | x        | ×                     | x            | ,        |          | +             |          |          | x                   |          | ł         | ×        |          | ×                                       | ×        | xx        | _        | _        |          |          |          |               |          |           |          | ×        |          | x        | ×        |          |          |          | ×                 | +        | +        | ł        | +         |           |           |          | x        | x        |          |           |           |           |               |     |
| 2-4 2-5 2-6 2-7 2-8 2-9 2-10 2-11 2-12 2-13  | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  PH_C_POU_DIS2_4  | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹左排尽包含上以上骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 TA15的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line for buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从罐底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从罐底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification to use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification tank to chromatography. TA02及出料到CHT01管道: TA04及出料到CHT01管道: TA05及出料到CHT02管道:TA05及出料到CHT02管道:TA05及出料到CHT02管道:TA05及出料到CHT02管道:CIP of depth filter and liquid filter. 深层过滤及液体过滤器灭菌(TA03出料管道)   | x        | x                     | x            | ,        |          | +             |          |          | x                   |          | ł         | ×        |          | ×                                       | ×        | x         | _        | _        |          |          |          |               |          |           |          | ×        |          | x        | ×        |          |          |          | ×                 | +        | +        | ł        | +         |           |           |          | ×        | x        |          |           |           |           |               |     |
| 2-4  2-5  2-6  2-7  2-8  2-9  2-10  2-11  2-12  2-13  2-14  2-15                                 | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  PH_C_POU_DIS2_4  PH_C_PUR_CHT  PH_C_DF  PH_C_DF   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹돧排尽包含上以上骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line for buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路外罐底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. 《TA20/TA26/TA32)缓冲液出料管路从罐底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification tank to chromatography. TA02及出料到CHT01管道: TA04及出料到CHT01管道: TA04及出料到CHT01管道: TA04及出料到CHT01管道: TA05及出料到CHT01管道: TA05以未被引送器形成,TA03出料管道) CIP of diagramp pump before virus filter 清洗除病毒过滤器形成,TA03出料管道   | x        | ×                     | x            | ,        |          | +             |          |          | x                   |          | ł         | x        |          | x                                       | XXX      | xx        | _        | _        |          |          |          |               |          |           |          | x        |          | x        | ×        |          |          |          | ×                 | +        | +        | ł        | +         |           | ×         | x        | x x x x  | x        |          |           |           |           |               |     |
| 2-4  2-5  2-6  2-7  2-8  2-9  2-10  2-11  2-12  2-13  2-14  2-15                                 | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  PH_C_PUR_CHT  PH_C_DF  PH_C_VF_PU  PH_C_VF   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹挂 抹尽包含上以上骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA128.TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line for buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification to fuse to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification tank to chromatography. TA02及出料到CHT01管道; TA04及出料到CHT01管道; TA05及出料到CHT01管道; TA05及出料管路从滤滤滤滤滤滤滤温性性性性性性性性性性性性性性性性性性性性性性性性性性性性性性   | x        | x                     | x            | ,        |          | +             |          |          | x                   |          | ł         | x        |          | *************************************** | xx       | x         | _        | _        |          |          |          |               |          |           |          | x        |          | x        | ×        |          |          |          | ×                 | +        | +        | ł        | +         |           | ×         | x        | ×        | x        |          |           |           |           |               |     |
| 2-4  2-5  2-6  2-7  2-8  2-9  2-10  2-11  2-12  2-13  2-14  2-15  2-16  2-17                     | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  PH_C_POU_DIS2_4  PH_C_PUR_CHT  PH_C_DF  PH_C_VF  PH_C_VF  PH_C_UF_DS1_3   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯木冲洗和注射用水润洗,吹挂 抹尽包含上以上步骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA128TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到纯化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line for buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从罐底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification tank to chromatography. TA02及出料到CHTO1管道:TA04及出料到CHTO2管道:TA04及出料到CHTO2管道:TA05及出料到CHTO3管道:CIP of depth filter and liquid filter. 深层过滤及液体过滤器灭菌(TA03出料管道) CIP of diagramp pump before virus filter 清洗除病毒过滤器前的隔膜泵 CIP of virus filter (反向清洗)除病毒过滤模块清洗 CIP of UF (反向清洗) 超滤管道清洗  | x        | x                     | x            | ,        |          | +             |          |          | ×                   |          | ł         | x        |          | x x x                                   | x        | xx        | _        | _        |          |          |          |               |          |           |          | x        |          | x        | x        |          |          |          | x                 | +        | +        | ł        | ×         |           | ×         | x        | ×        | x        |          |           |           |           |               |     |
| 2-4  2-5  2-6  2-7  2-8  2-9  2-10  2-11  2-12  2-13  2-14  2-15  2-16  2-17  2-18  2-19         | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  PH_C_POU_DIS2_4  PH_C_UF_DS1_3  PH_C_VF  PH_C_UF_DS1_3  PH_C_UF_DS1_3  PH_C_UF_DS1_3  PH_C_UF_DS1_3  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_C_CHT_PUR  PH_C_TA08_TA06   | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹돧  非尽包含上以上步骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互)  CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互)  CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路外域底清洗到缓冲液分配阀组。  CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路从罐底清洗到缓冲液分配阀组。  CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。  CIP transfer line from purification tank to chromatography. TA02及出料到CHT01管道: TA05及出料到CHT01管道: TA05及出料到CHT02管道: TA05及出料到CHT01管道: TA05及出料的CHT01管道: TA05及出料到CHT01管道: TA05及出料到CHT01管道: TA05及出料到CHT01管道: TA05及出料到CHT01管道: TA05及出料到CHT01管道: TA05及出料的CHT01管道: TA05及出料的CHT01管道: TA05及出料的CHT01管道: TA05及出科管路从统统统统统统统统统统统统统统统统统统统统统统统统统统统统统统统统统统统统  | x        | x                     | x            | ,        |          | +             |          |          | x                   |          | ł         | x        |          | X                                       | X        | x         | _        | _        |          |          |          |               |          |           |          | x        |          | x        | ×        |          |          |          | ×                 | +        | +        | ł        | ×         | ×         | ×         | x        | ×        | x        |          |           |           |           |               |     |
| 2-4  2-5  2-6  2-7  2-8  2-9  2-10  2-11  2-12  2-13  2-14  2-15  2-16  2-17  2-18  2-19  3      | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  PH_C_PUR_CHT  PH_C_UF_DS1_3  PH_C_UF_DS1_3  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_TA08_TA06  Product Phases | CIP GEL tank, include agitation if have 匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹돧  IP Cansfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 TA15的出料管路CIP有9个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路外缝底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路从罐底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification tank to chromatography. TA02及出料到CHT01管道: TA04及出料到CHT01管道: TA05及出料到CHT02管道: TA05及出料到CHT01管道: TA05及出料到CHT02管道: TA05及出料到CHT02管道: TA05及出料到CHT03管道: CIP of depth filter and liquid filter. 深层过滤及液体过滤器灭菌(TA03出料管道) CIP of prius filter (反向清洗) 除病毒过滤模块清洗 CIP of Virus filter (反向清洗) 解谐管道清洗 CIP of UF (反向清洗) 超滤管道清洗 CIP of UF (反向清洗) 超滤管道清洗 CIP of UF (反向清洗)   | x        |                       |              |          |          | +             |          |          | x                   |          | ł         | x        |          | x x x                                   | x        | xx        | _        | _        |          |          |          |               |          |           |          | x        |          | x        | ×        |          |          |          | x                 | +        | +        | ł        | ×         | ×         | ×         | x        | ×        | x        |          |           |           |           |               |     |
| 2-4  2-5  2-6  2-7  2-8  2-9  2-10  2-11  2-12  2-13  2-14  2-15  2-16  2-17  2-18  2-19  3  3-1 | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS2_4  PH_C_POU_DIS2_4  PH_C_PUR_CHT  PH_C_DF  PH_C_VF  PH_C_VF  PH_C_UF_DS1_3  PH_C_UF_DS1_3  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_OHT_PUR  PH_C_TA08_TA06  Product Phases  PH_P_BP   | CIP GEL tank, include agitation if have  匀浆譜清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹挂  根尽包含上以上步骤中,搅拌也包含在phase中。  CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA128TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互)  CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互)  CIP transfer line fom holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路到缓冲液分配阀组。  CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32)缓冲液出料管路从罐底清洗到缓冲液分配阀组。  CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从纯化系统反洗到缓冲液分配阀组。  CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。  CIP of transfer line from purification tank to chromatography. TA02及出料到CHT01管道: TA04及出料到CHT01管道: TA04及出料到CHT03管道: TA04及出料到CHT03管道: CIP of depth filter and liquid filter. 深层过滤及液体过滤器灭菌(TA03出料管道)  CIP of virus filter (反向清洗)除病毒过滤器前的隔膜泵  CIP of virus filter (反向清洗)除病毒过滤模块清洗  CIP of UF (反向清洗)超滤管道清洗  CIP of UF (反向清洗)超滤管道清洗  CIP of transfer line from chromatography to tank. 清洗医析出口产品管路  CIP of transfer line from chromatography to tank. 清洗医析出口产品管路  CIP of transfer line from chromatography to tank. 清洗医析出口产品管路  CIP of transfer line from chromatography to tank. 清洗医析出口产品管路  CIP of transfer line from chromatography to tank. 清洗医析出口产品管路  CIP of transfer line from chromatography to tank. 清洗医析出口产品管路  CIP of transfer line from chromatography to tank. 清洗医析出口产品管路  CIP of transfer line from chromatography to tank. 清洗医析出口产品管路  | x        |                       | x            |          |          | +             |          |          | x                   |          | ł         | x        |          | x x x x x x x x x x x x x x x x x x x   | xx       | x         | _        | _        |          |          |          |               |          |           |          | x        |          | x        | x        |          |          |          | x                 | +        | +        | ł        | ×         | ×         | ×         | x        | ×        | x        |          |           |           |           |               |     |
| 2-4  2-5  2-6  2-7  2-8  2-9  2-10  2-11  2-12  2-13  2-14  2-15  2-16  2-17  2-18  2-19  3      | SIP Phases  PH_C_GEL  PH_C_BP_BH  PH_C_BH_POU1_3  PH_C_BH_POU2_4  PH_C_ALW_DIS1_3  PH_C_ALW_DIS2_4  PH_C_POU_DIS1_3  PH_C_POU_DIS2_4  PH_C_PUR_CHT  PH_C_UF_DS1_3  PH_C_UF_DS1_3  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_UF_DS2_4  PH_C_TA08_TA06  Product Phases | CIP GEL tank, include agitation if have  匀浆罐清洗分为碱循环洗,纯水冲洗和注射用水润洗,吹挂 排尽包含上以上步骤中,搅拌也包含在phase中。 CIP transfer line of buffer preparation tank with filters. 根据出料对象做不同选项 TA12&TA13,出料管路CIP分别有15个选项 TA14的出料管路CIP有18个选项 CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line of buffer holding tank. 从缓冲液储存罐出料管路到绝化系统。包括到上游缓冲液(通过PCS7信号交互) CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路从端底清洗到缓冲液分配阀组。 CIP transfer line from holding tank bottom to main pipe. (TA20/TA26/TA32) 缓冲液出料管路从端底清洗到缓冲液分配阀组。 CIP transfer line from purification point of use to buffer holding main pipe. 缓冲液出料管路从绝化系统反洗到缓冲液分配阀组。 CIP transfer line from purification tank to chromatography. TA02及出料到CHT01管道; TA05及出料到CHT01管道; TA05及出料到CHT02管道; TA05及出料到CHT02管道; TA05及出料到CHT03管道; CIP of depth filter and liquid filter. 深层过滤及液体过滤器灭菌(TA03出料管道) CIP of primasfer line from chromatography to tank. 清洗除病毒过滤器前的隔膜泵 CIP of virus filter (反向清洗) 路滤管道清洗 CIP of UF (反向清洗) 超滤管道清洗 CIP of UF (反向清洗) 超滤管道清洗 CIP of UF (反向清洗) 超滤管道清洗 CIP of UF (反向清洗) 超滤管道清洗 CIP of transfer line from chromatography to tank. 清洗压备出料到TA06的管道 Preparation of buffer prep tank 配制罐配料  | x        | x                     |              | x        |          | +             |          |          | x                   |          | ł         | x        |          | x x x x x x x x x x x x x x x x x x x   | X        | xx        | _        | _        |          |          |          |               |          |           |          | x        |          | x        | ×        |          |          |          | x                 | +        | +        | ł        | ×         | ×         | ×         | x        | ×        | x        |          |           |           |           |               |     |

|  | SECTION 1  | PHYSICAL MODEL ( UNIT CLASSES AND EQUIPMENT MODULE CLASSES )  |  |          |          |          |          |          |           |                     |          |              |          |          |          |          |          |          |              |           | ,        | Unit      |          |   |          |          |              |          |          |                 |          |          |           |           |           |          |          |          |            |               |           |           |              |
|--|--|---|--|----------|----------|----------|----------|----------|-----------|---------------------|----------|--------------|----------|----------|----------|----------|----------|----------|--------------|-----------|----------|-----------|----------|---|----------|----------|--------------|----------|----------|-----------------|----------|----------|-----------|-----------|-----------|----------|----------|----------|------------|---------------|-----------|-----------|--------------|
| Unit   | Unit<br>Classs   | Unit<br>Description   | DSX-TA12   | DSX-TA13 | DSX-TA14 | DSX-IA15 | DSX-TA17 | DSX-TA18 | DSX-TA19  | DSX-TA20<br>(工艺用水罐) | DSX-TA21 | DSX-TA22     | DSX-TA23 | DSX-TA26 | DSX-TA27 | DSX-TA28 | DSX-TA29 | DSX-TA30 | DSX-TA31     | DSX-TA32  | DSX-IA33 | DSX-IA34  | DSX-TA02 | DSX-1A02                                | DSX-IA03 | DSX-TAG4 | DSA-TAUS     | DSX-TA06 | DSX-TA08 | DSX-TA07<br>( 公 | DSX-DF03 | DSX-VF01 | DSX-CHT01 | DSX-CHT02 | DSX-CHT03 | DSY-UF01 | DSY-UF02 | DSZ-UF01 | DSX-PT07   | DSX-CIP02     | DSX-CIP03 | DSX-CIP05 | ALK          |
| DSX-TA12   |  | 3000L BUFFER PREPARATION TANK UNIT TA12   | х  | _        |          |          |          |          |           |                     |          |              |          |          | F        |          |          |          |              |           |          |           |          | 1                                       | #        |          |              |          |          |                 |          |          |           |           |           |          |          |          | F          |               |           |           | F            |
| DSX-TA13<br>DSX-TA14   | BP Tank  | 3000L BUFFER PREPARATION TANK UNIT TA13 6000L BUFFER PREPARATION TANK UNIT TA14   |  | х        | х        |          |          |          |           |                     |          |              |          |          |          |          |          |          |              |           |          |           |          |   |          |          |              |          |          |                 |          |          |           |           |           |          |          |          |            |               |           |           | T            |
| DSX-TA15<br>DSX-TA16   |  | 9000L BUFFER PREPARATION TANK UNIT TA15 3000L BUFFER HOLDING TANK UNIT TA16   |  |          | )        | x x      |          |          |           |                     |          |              |          |          | -        |          |          |          |              | -         |          | -         |          | -                                       |          |          |              |          |          |                 |          |          |           |           |           |          |          | F        | _          | -             |           | -         | Ł            |
| DSX-TA17   |  | 3000L BUFFER HOLDING TANK UNIT TA17   |  |          |          | Ĺ        | х        |          |           |                     |          |              |          |          |          |          |          |          |              |           |          | 1         |          | 1                                       |          |          |              |          |          |                 | t        |          |           |           |           |          |          |          |            |               |           |           | İ            |
| DSX-TA18<br>DSX-TA19   |  | 3000L BUFFER HOLDING TANK UNIT TA18 3000L BUFFER HOLDING TANK UNIT TA19   |  |          | -        |          |          | х        | х         |                     |          |              |          |          |          |          |          |          |              | +         |          | +         |          |   |          |          |              |          |          |                 |          |          |           |           |           |          |          | H        | -          |               |           |           | ╁            |
| DSX-TA20   |  | 3000L PROCESS WATER TANK UNIT TA20  |  |          |          | -        |          |          |           | Х                   | v        |              |          |          |          |          |          |          |              |           |          |           |          | ļ                                       |          |          |              |          |          |                 | Ļ        |          |           |           |           |          |          |          | L          |               |           |           | F            |
| DSX-TA21<br>DSX-TA22   |  | 3000L BUFFER HOLDING TANK UNIT TA21 3000L BUFFER HOLDING TANK UNIT TA22   |  |          |          |          |          |          |           |                     | Х        | х            |          |          |          |          |          |          |              |           |          |           |          | t                                       |          |          |              |          |          |                 |          |          |           |           |           |          |          |          |            |               |           |           | L            |
| DSX-TA23<br>DSX-TA24   |  | 3000L BUFFER HOLDING TANK UNIT TA23 3000L BUFFER HOLDING TANK UNIT TA24   | -  | H        | -        | +        | -        |          |           |                     | Н        | _            | x x      |          | -        |          |          |          |              | +         |          | -         |          | -                                       |          | -        |              |          | -        |                 | -        |          |           |           |           |          |          | F        | -          | -             |           | -         | Ł            |
| DSX-TA26   | BH Tank  | 6000L BUFFER HOLDING TANK UNIT TA26   |  |          |          | #        |          |          |           |                     |          | 1            |          | x        |          |          |          |          | 1            | #         | #        | #         |          | 1                                       |          |          | 1            | 1        | #        |                 | t        |          |           |           |           |          |          |          |            | L             |           | Ļ         | İ            |
| DSX-TA27<br>DSX-TA28   |  | 6000L BUFFER HOLDING TANK UNIT TA27 6000L BUFFER HOLDING TANK UNIT TA28   |  |          |          |          |          |          |           |                     |          |              |          |          | Х        | х        |          |          |              |           |          |           |          | ł                                       |          |          |              |          |          |                 | t        |          |           |           |           |          |          |          |            |               |           |           | L            |
| DSX-TA29<br>DSX-TA30   |  | 6000L BUFFER HOLDING TANK UNIT TA29 3000L BUFFER HOLDING TANK UNIT TA30   |  |          | -        | +        | -        |          | $\vdash$  |                     |          |              |          |          | -        |          | х        | х        |              | -         |          | -         | -        | -                                       |          | -        |              |          | -        |                 |          |          |           |           |           |          |          | H        | _          | -             |           | -         | Ļ            |
| DSX-TA31   |  | 6000L BUFFER HOLDING TANK UNIT TA31   |  |          |          |          |          |          |           |                     |          |              |          |          |          |          |          |          | х            |           |          | #         |          | 1                                       |          |          |              |          |          |                 | t        |          |           |           |           |          |          |          |            |               |           |           | ⇇            |
| DSX-TA32<br>DSX-TA33   |  | 9000L 0.5M NaOH TANK UNIT TA32<br>9000L BUFFER HOLDING TANK UNIT TA33   | -  | H        | +        | +        | $\vdash$ |          | $\vdash$  |                     | H        | +            |          | +        | +        |          |          |          |              | x >       | x        | $^{+}$    |          | +                                       | +        |          |              | +        | +        |                 | t        |          |           |           |           |          |          | _        | +          |               |           | +         | $\vdash$     |
| DSX-TA34   |  | 9000L BUFFER HOLDING TANK UNIT TA34   |  |          | 4        | 1        |          |          |           |                     | П        |              |          | 1        |          |          |          |          | 4            | 1         | )        | x         | _        | 1                                       | 1        |          | 4            | 1        |          |                 | Ŧ        |          |           |           |           |          |          |          |            |               |           | F         | F            |
| DSX-TA35<br>DSX-TA02   |  | 9000L BUFFER HOLDING TANK UNIT TA35<br>4000L HARVEST TANK UNIT TA02   |  |          |          | t        |          |          |           |                     |          |              |          |          |          |          |          |          |              | 1         |          |           | ^        | (                                       |          |          |              |          | 1        |                 | t        |          |           |           |           |          |          |          |            |               |           |           | İ            |
| DSX-TA03<br>DSX-TA04   |  | 4000L PURIFICATION TANK UNIT TA03 4000L PURIFICATION TANK UNIT TA04   |  |          | -        | +        | -        |          |           |                     | H        |              |          | +        | -        | _        |          |          |              |           |          | +         |          | )                                       | x ,      | (        |              | +        |          |                 | +        |          |           | _         |           |          |          | H        | _          | -             |           |           | $\vdash$     |
| DSX-TA05   | Process Tank(DPS)  | 4000L PURIFICATION TANK UNIT TA05   |  |          | 1        | t        |          |          |           |                     |          |              |          |          |          |          |          |          |              | 1         |          | #         |          | #                                       | Ţ        | ,        | _            | 1        | 1        |                 | İ        |          |           |           |           |          |          |          |            |               |           | İ         | ļ            |
| DSX-TA06<br>DSX-TA08   |  | 3000L PURIFICATION TANK UNIT TA06 3000L PURIFICATION TANK UNIT TA08   | $\pm$  | H        | +        | $\pm$    | $\pm$    | Н        | ${f f +}$ |                     | igwdaph  | $\dashv$     | $\pm$    | $\pm$    | $\pm$    | $\vdash$ | H        | _        | $\dashv$     | $\pm$     | +        | +         | +        | $\pm$                                   | $\pm$    | $\pm$    | $\dashv$     | Х        | х        |                 | $\pm$    | +        | $\vdash$  | $\vdash$  | $\vdash$  |          | $\vdash$ |          | 1          | $\pm$         | $\pm$     | +         | +            |
| DSX-TA07   | Slurry Tank匀浆罐   | 1500L Slurry TANK UNIT TA07   |  |          | -        | 1        |          |          |           |                     | П        |              |          |          | -        |          |          |          |              | 1         |          | 7         | -        | Ŧ                                       |          |          |              |          |          | х               | ļ        |          |           |           |           |          |          | F        |            |               |           |           | F            |
| DSX-DF03<br>DSX-VF01   | Process Equipment<br>无需信号交互  | DEPTH FILTRATION UNIT DF03  NF WORK UNIT NF01   |  |          | #        | #        |          | Ħ        | Ħ         |                     | Ħ        | $\downarrow$ | #        | 1        | t        |          |          | 1        | $\downarrow$ | $\dagger$ | #        | #         | #        | #                                       | †        | ‡        | $\downarrow$ | 1        | #        |                 | Х        | х        |           |           |           |          |          |          |            | $\downarrow$  |           | t         | mid          |
| DSX-CHT01<br>DSX-CHT02   | Process Equipment  | HPLC #1 WORK UNIT CHT01 HPLC #2 WORK UNIT CHT02   |  |          | -        | +        | +        |          |           |                     | H        |              |          | +        | -        | _        |          |          |              |           |          | +         |          | +                                       |          |          |              |          |          |                 | +        |          | Х         | х         |           |          | _        | H        |            | $\frac{1}{1}$ |           |           | $\vdash$     |
| DSX-CHT03  | 都是DCS系统,内部交互   | HPLC #3 WORK UNIT CHT03   |  |          | 4        | 1        |          |          |           |                     | П        | 4            |          |          |          |          |          |          |              | _         |          | 1         | $\perp$  |   |          |          |              |          | _        |                 | ļ        |          |           |           | х         | _        |          |          | L          | L             |           |           | ļ            |
| DS1_3-UF01 DS1_3-UF02  | 超滤   | UF/DF WORK UNIT UF01 for Line 1 and Line 3 UF/DF WORK UNIT UF02 for Line 1 and Line 3   | _  | H        |          | +        | $\vdash$ |          |           |                     | H        | +            |          |          |          |          |          |          |              | +         |          | $\dagger$ |          | +                                       |          |          |              |          | +        |                 | $^{+}$   |          |           |           |           | х        | ×        | F        |            |               |           |           | +            |
| DSZ_4-UF01   | 都是DCS系统,内部交互   | UF/DF WORK UNIT UF01 for Line 2 and Line 4  |  |          |          |          |          |          |           |                     |          |              |          |          |          |          |          |          | +            | +         |          | +         |          |   |          |          | +            |          | +        |                 | H        |          |           |           |           |          | ^        | Х        |            |               |           | H         | H            |
| 原液分装系统   | 都是DCS系统,内部交互   | PALLET TANK DS1-PT07  |  |          |          |          |          |          |           |                     |          |              |          |          |          |          |          |          |              |           |          |           |          | I                                       |          |          |              |          |          |                 |          |          |           |           |           |          |          |          | х          | -             |           |           | I            |
| DSX-CIP02<br>DSX-CIP03   | CIP Station  | CIPO2 UNIT TA-CIPO201<br>CIPO3 UNIT TA-CIPO301  | -  | H        | +        | +        | -        |          | $\vdash$  |                     | H        | +            |          | +        | +        |          |          |          | 1            | +         | +        | +         |          | +                                       |          |          | 1            | +        | +        |                 | +        |          |           |           |           |          |          | -        | -          | Х             | х         | +         | ╁            |
| DSX-CIP05  | 都是DCS系统,内部交互   | CIP05 UNIT TA-CIP0501   |  |          | 1        | ļ        |          |          |           |                     | П        |              |          |          | 1        |          |          |          | 1            | 1         |          | ļ         |          | ļ                                       |          |          | 1            | 1        |          |                 | Ţ        |          |           |           |           |          |          |          |            |               |           | х         | x            |
| ALK  | SECTION 2  | 2500L CONCENTRATED ALKALI TANK UNIT XXX PROCEDURAL MODEL ( PHASES )   |  |          |          |          |          |          |           |                     |          |              |          |          |          |          |          |          | _            |           | t        | t         | t        |   |          |          | _            |          |          |                 | t        |          |           |           |           |          |          | _        |            |               |           |           | _ ×          |
| IndeX  | Phase Class  | Phase Description   |  |          |          |          |          |          |           |                     |          |              |          |          |          |          |          |          |              |           |          |           |          |   |          |          |              |          |          |                 |          |          |           |           |           |          |          |          |            |               |           |           |              |
| 1  |  |   |  |          |          |          |          |          |           |                     |          |              |          |          |          |          |          |          |              |           |          |           |          |   |          |          |              |          |          |                 |          |          |           |           |           |          |          |          |            |               |           |           |              |
| 1  | SIP Phases   |   |  |          |          |          |          |          |           |                     |          | _            |          | _        |          | _        | _        | _        |              |           |          | _         |          |   |          |          |              |          |          |                 |          | _        |           |           |           |          | _        |          |            |               |           |           |              |
| 3-4  | SIP Phases PH_X_BH_DIS   | Buffer transfer from Buffer holding to main distribution piping.<br>缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐<br>排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)   |  |          | T        | x        | x        | x        | x         | x                   | x        | x            | x x      | x x      | x        | x        | x        | x        | x            | x >       | x >      | x :       | x        | Ī                                       | Ī        | Ī        |              | Ī        |          |                 | I        |          |           | Ī         |           |          |          |          |            |               |           | Ī         |              |
|  |  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.   | inc.   |          |          | x        | х        | x        | x         | х                   | x        | x            | x x      | x x      | x        | x        | x        | x        | x            | x >       | x >      | × :       | ×        | Ī                                       |          |          |              |          |          |                 |          |          | x         | x         | x         |          |          |          |            |               |           |           |              |
| 3-4  | PH_X_BH_DIS  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter .   | Table 1  |          |          | x        | х        | x        | x         | x                   | x        | x            | x x      | x x      | x        | ×        | x        | x        | x            | x >       | x ,      | x :       | x        |   |          |          |              |          |          |                 | x        |          | x         | x         | x         |          |          |          |            |               |           |           |              |
| 3-4<br>3-5<br>3-6  | PH_X_BH_DIS PH_X_BH_CHT PH_X_BH_DF   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.   |  |          |          | x        | x        | x        | x         | x                   | x        | x            | x x      | x x      | ×        | x        | x        | x        | x            | x >       | x )      | x :       | ×        |   |          |          |              |          |          |                 | x        | x        | x         | x         | x         |          |          |          |            |               |           |           | <br> -<br> - |
| 3-4<br>3-5<br>3-6<br>3-7   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统   | inate of the second sec |          |          | x        | x        | x        | x         | x                   | x        | x            | x x      | x x      | x        | x        | x        | x        | x            | x )       | x >      | × :       | x        |   | X 1      |          |              | Y        |          |                 | x        | x        | x         | x         | x         |          |          |          |            |               |           |           | -            |
| 3-4<br>3-5<br>3-6<br>3-7<br>3-8  | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_PUR  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到深层过滤系统  | and the second s |          |          | x        | x        | x        | x         | x                   | x        | x            | x x      | × ×      | x        | x        | x        | x        | x            | x         | x )      | x :       | x        | ,                                       | x >      | ( )      | <b>C</b>     | x        |          |                 | x        | x        | x         | x         | x         |          |          |          |            |               |           |           |              |
| 3-4<br>3-5<br>3-6<br>3-7<br>3-8<br>3-9   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_PUR  PH_X_BH_UF_DS1_3  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter .<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter .<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank .<br>缓冲液从出料分支到纯化罐   | Tank I   |          |          | x        | x        | x        | x         | x                   | x        | x            | x x      | x x      | x        | x        | x        | x        | x            | x )       | x >      | x :       | x        | ,                                       | x >      | ( )      | <b>(</b>     | x        |          |                 | x        | x        | x         | x         | x         | x        | x        |          |            |               |           |           |              |
| 3-4 3-5 3-6 3-7 3-8 3-9  | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_PUR  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter .<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter .<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank .<br>缓冲液从出料分支到纯化罐<br>Buffer from buffer distribution to UF .<br>缓冲液从出料分支到绝化罐  | 200  |          |          | x        | x        | x        | x         | x                   | x        | x            | x x      | × x      | x        | x        | x        | x        | x            |           |          | × :       | x        | ,                                       | x >      | ( )      | <b>C</b>     | x        |          |                 | ×        | x        | x         | x         | x         | x        | x        | x        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到纯化罐<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤  | Table 1  |          |          | x        | x        | x        | x         | x                   | x        | x            | x        | × ×      | ×        | x        | x        | x        | ×            | x ,       |          | x ::      | x        | ,                                       | x >      | ( )      | <b>C</b>     | x        |          |                 | x        | x        |           |           |           | x        | x        | x        |            |               |           |           |              |
| 3-4 3-5 3-6 3-7 3-8 3-9  | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_PUR  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到绝化罐<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到III。<br>UFP of chromatography inlet valve.<br>层析系统前分配阀组清洗   | nu.  |          |          | x        | x        | ×        | x         | ×                   | x        | x            | x x x    | x x      | x        | x        | x        | x        | ×            |           |          | × :       | x        | ,                                       | x >      | ( )      | <            | x        |          |                 | x        | x        | x         |           | x         | x        | x        | x        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到纯化罐<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到TA01<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组消洗<br>Product from upstream to harvest tank.<br>接收上游的产品(通过与PCS7信号交互)  | 100  |          |          | x        | x        | x        | x         | х                   | x        | x            | xxx      | × ×      | ×        | ×        | x        | ×        | ×            |           |          | x :       | x x      | ,                                       | x >      | ( )      | <            | ×        |          |                 | x        | x        |           |           |           | x        | x        | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_PUR  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到纯化罐<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到和记<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组消洗<br>Product from upstream to harvest tank.   | 200  |          |          | x        | x        | x        | x         | x                   | x        | x            | x        | x x      | x        | x        | x        | x        | ×            |           |          | x :       | xx       | ,                                       | x >      | ( )      | <            | ×        |          |                 | x        | x        | x         |           | x         | x        | x        | x        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_PUR  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_HV   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到绝内能<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到超滤<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组清洗<br>Product from upstream to harvest tank.<br>接收上游的产品(通过与PCS7信号交互)<br>product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to depth filter.<br>产品出料从纯化罐到深层寸  |  |          |          | x        | x        | ×        | x         | x                   | x        | x            | xxx      | x x      | x        | x        | x        | x        | ×            |           |          | × :       | x        | , , , , , , , , , , , , , , , , , , ,   | x >      | ( )      | <            | ×        |          |                 | x        | x        | x         | x         | x         | x        | x        | x        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_HV  PH_X_PUR_CHT  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到能对比键。<br>多时间,有效,也是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是   | Draft Control of the  |          |          | x        | x        | x        | x         | x                   | ×        | x            | xxx      | × ×      | ×        | x        | x        | ×        | ×            |           |          | x :       | x        | ,                                       | x >      |          | <            | ×        |          |                 | x        | x        | x         | x         | x         | x        | x        | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12  3-13  3-14   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_PUR  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_HV  PH_X_PUR_CHT  PH_X_PUR_DF  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到熔病毒过滤系统<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到TAO1<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组清洗<br>Product from upstream to harvest tank.<br>接收上游的产品(通过与PCS7信号交互)<br>product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to depth filter.<br>产品出料从纯化罐到除房过滤<br>product from purification tank to virus filter.<br>产品出料从纯化罐到除病毒过滤<br>product from purification tank to virus filter.<br>产品出料从纯化罐到除病毒过滤<br>product from purification tank TAO8 to purification tank TAO6.   |  |          |          | x        | x        | x        | x         | x                   | x        | x            | x        | < x      | ×        | x        | x        | x        | ×            |           |          | × :       | x        | ,                                       | x >      |          | · ·          | x        | x        |                 | x        | x        | x         | x         | x         | x        | x        | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12  3-13  3-14  3-15   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_PUR  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_HV  PH_X_PUR_CHT  PH_X_PUR_CF  PH_X_PUR_VF   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.缓冲液从出料分支到深层过滤系统<br>Buffer from buffer distribution to virus filter.缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.缓冲液从出料分支到绝凡罐<br>Buffer from buffer distribution to UF.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.缓冲液从出料分支到TA01<br>CIP of chromatography inlet valve.层析系统前分配阀组清洗<br>Product from purification tank to chromatography.产品出料从纯化罐到层析<br>product from purification tank to chromatography.产品出料从纯化罐到层析<br>product from purification tank to virus filter.产品出料从纯化罐到除病毒过滤<br>product from purification tank to virus filter.产品出料从纯化罐到除病毒过滤<br>product from purification tank to virus filter.产品出料从纯化罐和08.<br>产品出料从纯化罐和08到纯化罐TA08 to purification tank TA06.产品出料从纯化罐TA08.   |  |          |          | ×        | x        | x        | x         | x                   | x        | ×            | x x x    | x x      | x x      | x        | x        | ×        | ×            |           |          | × :       | x        | ,                                       | x >      |          | <            | ×        | ×        |                 | ×        | x        | x         | x         | x         | x        | ×        | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12  3-13  3-14  3-15  3-16   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_HV  PH_X_PUR_CHT  PH_X_PUR_DF  PH_X_PUR_VF  PH_X_PUR_VF  PH_X_TA08_TA06   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到除房毒过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除房毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到纯化罐<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到和201<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组清洗<br>Product from upstream to harvest tank.<br>接收上游的产品(通过与PCS7信号交互)<br>product from purification tank to chromatography.<br>产品出料从纯化罐到深层过滤<br>product from purification tank to virus filter.<br>产品出料从纯化罐到除病毒过滤<br>product from purification tank TA08 to purification tank TA06.<br>产品出料从纯化罐和3超滤<br>product from purification tank to ultra filter.  |  |          |          | ×        | x        | ×        | x         | x                   | x        | x            | x x      | × ×      | x x      | x        | ×        | ×        | ×            |           |          | x :       | ,        | , , , , , , , , , , , , , , , , , , ,   | x >      | ( )      | <            | x        | ×        |                 | x        | x        | x         | x         | x         | x        |          | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12  3-13  3-14  3-15  3-16  3-17   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_PUR  PH_X_BH_UF_DS1_3  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_HV  PH_X_PUR_CHT  PH_X_PUR_CF  PH_X_PUR_UF_DS1_3   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到统化罐<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到相滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到TA01<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组清洗<br>Product from upstream to harvest tank.<br>接收上游的产品(通过与PCS7信号交互)<br>product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to depth filter.<br>产品出料从纯化罐到溶液 可能,<br>product from purification tank TA08 to purification tank TA06.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>Transfer product chromatography to tank.   |  |          |          | ×        | x        | ×        | x         | x                   | x        | x            | x x      | × ×      | ×        | x        | x        | ×        | ×            |           |          | × :       | × ,      | )                                       | × >      |          | <            | ×        | ×        |                 | ×        | x        | x         | ×         | x         | x        |          | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_PUR_CHT  PH_X_PUR_DF  PH_X_PUR_DF  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS2_4   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到纯化罐<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from puffer distribution to TA01.<br>缓冲液从出解分定到TA01<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组造清洗<br>Product from purification tank to chromatography.<br>产品出料从纯化罐到深层过滤<br>product from purification tank to virus filter.<br>产品出料从纯化罐到降病毒过滤<br>product from purification tank TA08 to purification tank TA06.<br>产品出料从纯化罐和超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤   |  |          |          | ×        | x        | ×        | x         | x                   | x        | x            | x x      | × ×      | x x      | x        | x        | ×        | ×            |           |          | × :       | >        | )<br>(                                  | x >      |          | <            | x        | ×        |                 | ×        | x        | x         | ×         | x         | x        |          | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12  3-13  3-14  3-15  3-16  3-17  3-18   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_DIS_CHT  PH_X_PUR_CHT  PH_X_PUR_DF  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS2_4  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到统化罐<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from puffer distribution to TA01.<br>缓冲液从出料分支到超速清洗<br>Product from upstream to harvest tank.<br>接收上游的产品(通过与PCS7信号交互)<br>product from purification tank to depth filter.<br>产品出料从纯化罐到层析<br>product from purification tank to virus filter.<br>产品出料从纯化罐到路滤<br>product from purification tank TA08 to purification tank TA06.<br>产品出料人纯化罐到超速<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超速<br>Transfer product chromatography to tank.<br>从层析出料到纯化罐。<br>Chromatography vent<br>层析排气   |  |          |          | ×        |          |          |           | x                   | x        | x            | x x      | × × ×    | ×        | x        | x        | x        | ×            |           |          | X         | ×        | ,                                       | × >      |          |              | ×        | ×        |                 | ×        | x        | ×         | ×         | x         | x        |          | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19  3-20  3-21                         | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_PUR_CHT  PH_X_PUR_DF  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到统闭。<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from puffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分定到在10年间的上,<br>运行的一个型的上,<br>运行的是一个型的上,<br>运出料从绝化罐到层析。<br>Product from purification tank to depth filter.<br>产品出料从绝化罐到深层过滤<br>Product from purification tank to virus filter.<br>产品出料从绝化罐到路滤<br>Product from purification tank TA08 to purification tank TA06.<br>产品出料从绝化罐到超滤<br>Product from purification tank to ultra filter.<br>产品出料从绝化罐到超滤<br>Product from purification tank to ultra filter.<br>产品出料从绝化罐到超滤<br>Transfer product chromatography to tank.<br>从层析出料到纯化罐。<br>Chromatography vent<br>层析排气<br>Sample of WFI<br>WFI取样   |  | x        |          | ×        |          |          |           | xx                  | x        | x            | x x      | < x      | x x      | x        | x        | X        | ×            |           |          | X X 3     | x        | ,,,                                     | x >      |          | <            | x        | x        |                 | x        | x        | x         | ×         | x         | x        |          | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19  3-20                               | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_DIS_CHT  PH_X_PUR_CHT  PH_X_PUR_DF  PH_X_PUR_DF  PH_X_TA08_TA06  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS2_4  PH_X_CHT_PUR  PH_X_CHT_PUR   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.缓冲液从出料分支到层层过滤系统<br>Buffer from buffer distribution to virus filter.缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.缓冲液从出料分支到除机造器。<br>是对产业人出料分支到超滤<br>Buffer from buffer distribution to UF.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.缓冲液从出料分支到和01<br>CIP of chromatography inlet valve.层析系统前分配阀组清洗<br>Product from purification tank to chromatography.产品出料从纯化罐到层析<br>product from purification tank to chromatography.产品出料从纯化罐到层析<br>product from purification tank to virus filter.产品出料从纯化罐到除病毒过滤<br>product from purification tank TA08 to purification tank TA06.产品出料从纯化罐到路滤<br>product from purification tank to ultra filter.产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.产品出料人纯化罐到超滤<br>product from purification tank to ultra filter.产品出料人纯化罐到超滤<br>Transfer product chromatography to tank.从层析出料到纯化罐。<br>Chromatography vent<br>层析排气<br>Sample of WFI<br>WFI取样<br>Install column of gel tank<br>匀浆罐配液   |  | x        |          | ×        |          |          |           |                     | x        | x            | x x      | x x      | x x      | x        | x        | x        | ×            |           |          |           | x        | , , ,                                   | x >      |          | •            | ×        | ×        | ×               | x        | x        | x         | ×         | x         | x        |          | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19  3-20  3-21                         | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_PUR_CHT  PH_X_PUR_DF  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  | 緩冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter.<br>缓冲液从出料分支到除房毒过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到能对。<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到TA01<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组清洗<br>Product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to depth filter.<br>产品出料从纯化罐到深层过滤<br>product from purification tank to virus filter.<br>产品出料从纯化罐到除病毒过滤<br>product from purification tank to virus filter.<br>产品出料从纯化罐到超滤<br>Transfer product chromatography to tank.<br>从层析出料到纯化罐。<br>Chromatography vent<br>层析排气<br>Sample of WFI<br>WFI取样<br>Install column of gel tank<br>匀浆罐配液<br>Storage column of gel tank  |  | x        |          | ×        |          |          |           |                     | x        | x            | x x      | x x      | x x      | x        | x        | x        | ×            |           |          |           | x        | , , ,                                   | x >      |          |              | x        | ×        | ×               | x        | x        | x         | ×         | x         | x        |          | ×        |            |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19  3-20  3-21  3-22                         | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_DIS_CHT  PH_X_HV  PH_X_PUR_CHT  PH_X_PUR_DF  PH_X_TA08_TA06  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS2_4  PH_X_CHT_PUR  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS2_4  PH_X_CHT_PUR  PH_X_CHT_PUR  PH_X_CHT_PUR   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter .<br>缓冲液从出料分支到除房毒过滤系统<br>Buffer from buffer distribution to virus filter .<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank .<br>缓冲液从出料分支到绝化罐<br>Buffer from buffer distribution to UF .<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF .<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF .<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01 .<br>缓冲液从出料分支到TA01<br>CIP of chromatography inlet valve .<br>层析系统前分配阀组清洗<br>Product from purification tank to chromatography .<br>产品出料从纯化罐到层析<br>product from purification tank to depth filter .<br>产品出料从纯化罐到层析<br>product from purification tank to virus filter .<br>产品出料从纯化罐到溶层过滤<br>product from purification tank to virus filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到层面 .   |  | x        |          | ×        |          |          |           |                     | x        | x            | x x      | x x      | x x      | x        | x        | x        | *            |           |          |           | , x      | ,,,                                     | x >      |          | <            |          | x        |                 | x        | x        | x         | ×         | x         | x        |          | ×        | x          |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19  3-20  3-21  3-22  3-23                   | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_OF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_DIS_CHT  PH_X_HV  PH_X_PUR_CHT  PH_X_PUR_UF  PH_X_TA08_TA06  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS2_4  PH_X_CHT_PUR  PH_X_PUR_UF_DS1_3  PH_Y_PUR_UF_DS1_3  PH_Y_PUR_UF_DS1_3  PH_X_PUR_UF_DS2_4  PH_X_CHT_PUR  PH_X_CHT_PUR  PH_X_CHT_PUR   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to depth filter .<br>缓冲液从出料分支到除房毒过滤系统<br>Buffer from buffer distribution to virus filter .<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank .<br>缓冲液从出料分支到绝化罐<br>Buffer from buffer distribution to UF .<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF .<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01 .<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01 .<br>缓冲液从出料分支到后因<br>CIP of chromatography inlet valve .<br>层析系统前分配阀组清洗<br>Product from purification tank to chromatography .<br>产品出料从纯化罐到层析<br>product from purification tank to chromatography .<br>产品出料从纯化罐到层析<br>product from purification tank to virus filter .<br>产品出料从纯化罐到层形<br>product from purification tank to virus filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to vitra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter .<br>产品出料从纯化罐到层面积  |  | x        |          | ×        |          |          |           |                     | x        | x            | x x      | x x      |          | x        | x        | x        | *            |           |          |           | x        | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | x >      |          |              | x        | ×        |                 | x        | x        | x         | ×         | x         | x        |          | ×        | xxx        |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19  3-20  3-21  3-22  3-23  3-24             | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_PUR_CHT  PH_X_PUR_CHT  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS2_4  PH_X_CHT_PUR  PH_X_CHT_VT  PH_WFI_SAMPLE  PH_P_GEL_INST  PH_DSF_WE_VERIFY   | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到fAO1<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组清洗<br>Product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to virus filter.<br>产品出料从纯化罐到层的的精毒过滤<br>product from purification tank to virus filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to vitra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从或化器可以能够加速的数量数量数量数量数量数量数量数量数量数量数量数量数量数量数量数量数量数量数量  |  | x        |          | ×        |          |          |           |                     | x        | x            | x x      | x x      |          | x        | x        | x        | *            |           |          | X X 3     | x        | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | x >      |          |              | x        | ×        |                 | x        | x        | x         | ×         | x         | x        |          | ×        | <u> </u> ^ |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19  3-20  3-21  3-22  3-23  3-24  3-25       | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_DF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_PUR_CHT  PH_X_PUR_CHT  PH_X_PUR_UF  PH_X_TA08_TA06  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_5  PH_X_PUR_UF_DS1_5  PH_X_PUR_UF_DS1_5  PH_X_CHT_PUR  PH_X_CHT_PUR  PH_X_CHT_PUR  PH_X_CHT_VT  PH_WFI_SAMPLE  PH_P_GEL_INST  PH_DSF_WE_VERIFY  PH_DSF_GENERAL | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到后2。<br>Buffer from buffer distribution to TAO1.<br>缓冲液从出料分支到后2。<br>是扩充的产品(通过与PCS7信号交互)<br>product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to depth filter.<br>产品出料从纯化罐到层析<br>product from purification tank to virus filter.<br>产品出料从纯化罐到路滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到加料。<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到成量:<br>product from purification tank to ultra filter.<br>产品出料从纯化罐可以加料。<br>product from purification tank to ultra filter.<br>产品出料从纯化罐可以加料。<br>product from purification tank to ultra filter.<br>产品出料,如果有量量量量量量量量量量量量量量量量量量量量量量量量量量量量量量量量量量量量         |  | x        |          | ×        |          |          |           |                     | x        | x            | x x      | x x      |          | x        | x        | x        | *            |           |          |           | x        | 3                                       | x >      |          |              | x        | ×        |                 | x        | x        | x         | ×         | x         | x        |          | ×        | х          |               |           |           |              |
| 3-4  3-5  3-6  3-7  3-8  3-9  3-10  3-11  3-12  3-13  3-14  3-15  3-16  3-17  3-18  3-19  3-20  3-21  3-22  3-23  3-24  3-25  3-26 | PH_X_BH_DIS  PH_X_BH_CHT  PH_X_BH_VF  PH_X_BH_VF  PH_X_BH_UF_DS1_3  PH_X_BH_UF_DS2_4  PH_X_BH_TA01  PH_X_DIS_CHT  PH_X_PUR_CHT  PH_X_PUR_CHT  PH_X_PUR_VF  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_3  PH_X_PUR_UF_DS1_6  PH_X_PUR_UF_DS1_7  PH_X_PUR_UF_DS1_7  PH_X_PUR_UF_DS1_8  PH_X_CHT_VT  PH_X_CHT_VT  PH_WFI_SAMPLE  PH_P_GEL_INST  PH_DSF_WE_VERIFY  PH_DSF_GENERAL  PH_DSF_PRE               | 缓冲液储存出料主管,可以被不同分支调用(包括缓冲液罐排放)。<br>包括到上游缓冲液(通过与PCS7信号交互)<br>Buffer from buffer distribution to chromatography.<br>缓冲液从出料分支到层析系统<br>Buffer from buffer distribution to virus filter.<br>缓冲液从出料分支到除病毒过滤系统<br>Buffer from buffer distribution to purification tank.<br>缓冲液从出料分支到险机毒<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to UF.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到超滤<br>Buffer from buffer distribution to TA01.<br>缓冲液从出料分支到和01<br>CIP of chromatography inlet valve.<br>层析系统前分配阀组清洗<br>Product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to chromatography.<br>产品出料从纯化罐到层析<br>product from purification tank to virus filter.<br>产品出料从纯化罐到除病毒过滤<br>product from purification tank to virus filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料从纯化罐到超滤<br>product from purification tank to ultra filter.<br>产品出料人纯化罐到超滤<br>product filter.<br>产品出料人纯化罐到量滤<br>product from purification tank to ultra filter.<br>产品出料人纯化罐到面积 product filter.<br>产品出料人或化罐到面积 product filter.<br>产品出料人或化罐到面积 product filter.<br>产品出料人或和 product filter.<br>产品出料人或和 product filter.<br>产品 product from purification tank to ultra filter.<br>产品 product from purification tank to ultra filter. |  | x        |          | ×        |          |          |           |                     |          | x            | x x      | x x      |          | x        | x        | x        | *            |           |          |           | x        | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | x >      |          |              | x        | x        |                 | x        | x        | x         | ×         | x         | x        |          | ×        | x          |               |           |           |              |

|  | SECTION 1  | PHYSICAL MODEL ( UNIT CLASSES AND EQUIPMENT MODULE CLASSES )   |          |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | l            | Uni      | t        |               |             |             |             |           |          |                                       |                   |           |           |          |           |           |           |          |          |           |          |          |                                       |                                       |                                      |     |
|--|--|--|----------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|----------|----------|---------------|-------------|-------------|-------------|-----------|----------|---------------------------------------|-------------------|-----------|-----------|----------|-----------|-----------|-----------|----------|----------|-----------|----------|----------|---------------------------------------|---------------------------------------|--------------------------------------|-----|
| Unit   | Unit<br>Classs   | Unit<br>Description  | DSX-TA12 | DSX-TA13    | DSX-TA14 | DSX-TA15 | DSX-TA17 | DSX-TA18 | DSX-TA19 | DSX-TA20 | (工艺用水罐)  | DSX-TA21 | DSX-IA22 | DSX-IA23 | DSX-TA24 | DSX-TA27 | DSX-TA28 | DSX-TA29 | DSX-TA30 | DSX-TA31 | DSX-TA32 | DSX-TA33 | NCAT VOO     | USX-1A34 | DSX-TA35 | DSX-TA02      | DSX-TA03    | DSX-TA04    | DSX-TA05    | 70 4H 200 | DSX-TAGE | D3A-1A08                              | DSX-IAU/<br>(包粉髒) | (田田公ので)   | DSX-DF03  | DSX-VF01 | DSX-CHT01 | DSX-CHT02 | DSX-CHT03 | DSY-UF01 | DSY-UF02 | DC7_LIE01 | D3Z-OFOI | DSX-P107 | USA-CIPUZ                             | DSX-CIP03                             | DSX-CIP05                            | ALK |
| DSX-TA12<br>DSX-TA13   |  | 3000L BUFFER PREPARATION TANK UNIT TA12 3000L BUFFER PREPARATION TANK UNIT TA13  | х        | х           | +        |          |          |          |          |          |          |          |          | +        |          |          |          |          |          |          |          |          |              |          |          |               |             |             |             |           |          |                                       |                   |           |           |          | 1         |           |           |          |          | ļ         | ļ        |          |                                       |                                       |                                      | Ē   |
| DSX-TA14   | BP Tank  | 6000L BUFFER PREPARATION TANK UNIT TA14  | L        | -           | х        |          |          | L        | t        |          |          |          |          | 1        |          | t        |          |          |          |          |          |          |              |          |          |               |             |             |             |           | 1        |                                       |                   | 1         | 1         | 1        | 1         |           |           |          |          |           | İ        | 1        |                                       |                                       |                                      |     |
| DSX-TA15<br>DSX-TA16   |  | 9000L BUFFER PREPARATION TANK UNIT TA15 3000L BUFFER HOLDING TANK UNIT TA16  | -        |             | - 1      | x x      | +        | +        | ł        |          |          |          |          | +        |          | ł        |          |          | -        |          | -        |          |              |          |          |               |             |             |             |           | +        |                                       |                   |           | +         | 1        | 1         |           |           |          |          | _         | +        | +        |                                       |                                       |                                      | H   |
| DSX-TA17   |  | 3000L BUFFER HOLDING TANK UNIT TA12  | 1        |             | 1        | -        | х        | х        | 1        |          |          |          |          | 1        |          | 1        |          |          |          |          |          |          |              | 1        |          |               |             |             |             |           |          |                                       |                   | -         | 1         |          |           |           |           |          |          | F         | Ŧ        |          |                                       |                                       |                                      | F   |
| DSX-TA18<br>DSX-TA19   |  | 3000L BUFFER HOLDING TANK UNIT TA18 3000L BUFFER HOLDING TANK UNIT TA19  |          |             |          |          |          | _^       | X        |          | _        | 1        | 1        | t        |          | t        | t        | t        | L        | L        | L        | L        | t            | 1        |          |               |             |             |             | 1         | t        | 1                                     |                   | t         | 1         | 1        | 1         |           |           |          |          |           | 1        |          | t                                     |                                       |                                      | L   |
| DSX-TA20<br>DSX-TA21   |  | 3000L PROCESS WATER TANK UNIT TA20 3000L BUFFER HOLDING TANK UNIT TA21   |          |             | -        | -        | -        | -        | +        | х        | _        | х        | +        | +        | +        | +        | -        |          | -        | -        | -        |          | +            | -        | -        |               |             |             |             | -         | +        | -                                     |                   | +         | +         | +        | +         |           |           |          |          |           | +        | +        | +                                     | -                                     |                                      | L   |
| DSX-TA22   |  | 3000L BUFFER HOLDING TANK UNIT TA22  |          |             | 1        |          |          | L        | ļ        |          |          |          | x .      | ,        |          | ļ        | ļ        | ļ        |          | L        |          | L        | ļ            | 1        |          |               |             |             |             | 1         | 1        | 1                                     |                   | 1         | 1         | 1        | 1         |           |           |          |          |           | ļ        | 1        |                                       |                                       |                                      | F   |
| DSX-TA23<br>DSX-TA24   |  | 3000L BUFFER HOLDING TANK UNIT TA23 3000L BUFFER HOLDING TANK UNIT TA24  |          |             | 1        |          |          | L        | t        |          |          |          | Τ,       | ( )      | (        | t        | L        |          |          | L        |          |          |              | t        |          |               |             |             |             | t         | t        | t                                     |                   | t         |           |          | 1         |           |           |          |          |           |          |          | t                                     |                                       |                                      | L   |
| DSX-TA26<br>DSX-TA27   | BH Tank  | 6000L BUFFER HOLDING TANK UNIT TA26 6000L BUFFER HOLDING TANK UNIT TA27  | $\vdash$ |             | +        | +        | -        | -        | -        |          |          |          | +        | +        | х        | x        | +        |          | -        |          | -        |          | +            | 4        |          |               |             |             |             | -         | +        | -                                     |                   | +         | +         | +        | -         |           |           |          |          |           | +        | -        | -                                     | -                                     |                                      | L   |
| DSX-TA28   |  | 6000L BUFFER HOLDING TANK UNIT TA28  |          |             | 1        |          | Ţ        | İ        | İ        |          |          |          | 1        | #        |          | Ť        | х        | -        | L        |          | L        |          | ļ            | 1        |          |               |             |             |             | 1         | Ţ        | 1                                     |                   | ļ         | #         | 1        | 1         |           |           |          |          |           | 1        | 1        |                                       |                                       |                                      | L   |
| DSX-TA29<br>DSX-TA30   |  | 6000L BUFFER HOLDING TANK UNIT TA29 3000L BUFFER HOLDING TANK UNIT TA30  |          |             | +        | +        | +        | +        | +        |          |          |          | +        | +        | +        | +        | +        | Х        | х        |          | +        |          | +            |          | _        |               |             |             |             | +         |          | +                                     |                   | +         | +         | +        | +         |           |           |          |          |           | +        | $^{+}$   | +                                     |                                       |                                      | H   |
| DSX-TA31   |  | 6000L BUFFER HOLDING TANK UNIT TA31  |          |             | 1        |          |          | F        | Ŧ        |          |          | 1        | 1        | 1        |          | Ŧ        | ļ        |          | L        | х        | x        |          | 1            | 1        | =        |               |             |             |             | 1         | Ŧ        | 1                                     |                   | 1         | #         | 1        | 4         | _         |           |          |          |           | 1        | 4        | 1                                     | _                                     |                                      | F   |
| DSX-TA32<br>DSX-TA33   |  | 9000L 0.5M NaOH TANK UNIT TA32<br>9000L BUFFER HOLDING TANK UNIT TA33  |          |             | ⇟        |          |          | t        | t        |          |          |          |          | t        |          | t        |          |          |          |          | ŕ        | х        | t            | 1        |          |               |             |             |             | 1         | I        | 1                                     |                   | 1         | #         |          | 1         |           |           |          |          |           |          | #        | 1                                     |                                       |                                      | L   |
| DSX-TA34<br>DSX-TA35   |  | 9000L BUFFER HOLDING TANK UNIT TA34 9000L BUFFER HOLDING TANK UNIT TA35  | -        |             | +        | +        | +        | $\perp$  | +        |          |          |          | +        | +        |          | +        | +        |          | +        |          | +        | -        | ,            | X        | х        |               |             |             |             | +         | +        | +                                     |                   | +         | +         | +        | +         |           |           |          |          | _         | +        | +        | +                                     | -                                     |                                      | H   |
| DSX-TA02   |  | 4000L HARVEST TANK UNIT TA02   |          |             | 1        |          | ļ        | L        | İ        |          |          |          | 1        | ļ        | ļ        | İ        | İ        | L        | L        |          | L        | L        | İ            | 1        | _        | х             |             |             |             | ļ         | ļ        | ļ                                     |                   | #         | 1         | 1        | 1         |           |           |          |          |           |          | 1        | 1                                     |                                       |                                      | Ľ   |
| DSX-TA03<br>DSX-TA04   | Dun Toul (DDS)   | 4000L PURIFICATION TANK UNIT TA03<br>4000L PURIFICATION TANK UNIT TA04   |          |             | +        | +        | +        | -        | +        | -        |          |          | +        | +        | +        | +        | -        |          |          |          |          |          | +            | +        |          |               | х           | х           |             | +         | +        | +                                     |                   | +         | +         | +        | +         |           |           |          |          | -         | +        | +        | ł                                     |                                       |                                      | H   |
| DSX-TA05<br>DSX-TA06   | Process Tank(DPS)  | 4000L PURIFICATION TANK UNIT TA05 3000L PURIFICATION TANK UNIT TA06  | -        |             | #        | +        | ļ        | F        | Ŧ        |          | $\dashv$ | #        | 7        | #        | Ŧ        | Ŧ        | Ŧ        | Ŧ        | F        | L        | F        |          | ļ            | 1        |          |               |             |             | х           | ,         |          | +                                     |                   | +         | ‡         | 7        | 7         | 1         |           |          |          |           | 1        | 1        | +                                     | 1                                     |                                      | F   |
| DSX-TA06<br>DSX-TA08   |  | 3000L PURIFICATION TANK UNIT TA08  |          |             | $\pm$    |          |          | L        | t        |          |          |          |          | t        |          | t        | t        |          |          | L        |          |          | t            | 1        |          |               |             |             |             | Ť         | ,        | (                                     |                   | t         | 1         | 1        | 1         |           |           |          |          |           |          | 1        | t                                     |                                       |                                      | L   |
| DSX-TA07<br>DSX-DF03   | Slurry Tank匀浆罐<br>Process Equipment  | 1500L Slurry TANK UNIT TA07 DEPTH FILTRATION UNIT DF03   | F        | H           | +        | Ŧ        | F        | F        | Ŧ        | $\vdash$ | $\dashv$ | Ŧ        | Ŧ        | Ŧ        | Ŧ        | Ŧ        | Ŧ        | F        | F        | F        | F        | F        | F            | otag     | $\dashv$ | $\dashv$      |             |             |             | Ŧ         | Ŧ        | Ŧ                                     | Х                 | ,         | ĸ         | +        | +         | -[        | $\dashv$  |          | F        | F         | f        | +        | Ŧ                                     | -[                                    |                                      | F   |
| DSX-VF01   | 无需信号交互   | NF WORK UNIT NF01  |          |             | #        |          | t        | L        | İ        |          |          | 1        | 1        | 1        |          | İ        | L        |          |          |          |          |          | t            | 1        |          |               |             |             |             | l         | 1        | l                                     |                   | Í         | _         | х        | 1         |           |           |          |          |           |          | 1        | 1                                     | 1                                     |                                      | L   |
| DSX-CHT01<br>DSX-CHT02   | Process Equipment<br>  数是DCS 系统 内部态页   | HPLC #1 WORK UNIT CHT01<br>HPLC #2 WORK UNIT CHT02   | +        | H           | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | -        | +        |          | +            | +        | $\dashv$ |               |             |             |             | +         | +        | +                                     |                   | +         | +         | +        | х         | х         | -         |          |          | F         | +        | +        | +                                     | 1                                     |                                      | H   |
| DSX-CHT03  | 都是DCS系统,内部交互   | HPLC #3 WORK UNIT CHT03  |          |             | 1        | 1        | ļ        | ļ        | Ţ        |          |          |          | 1        | ļ        |          | Ţ        | ļ        |          | L        | L        | L        |          | ļ            | 1        |          |               |             |             |             | #         | ļ        | #                                     |                   | 1         | ļ         | 1        | 1         |           | х         |          |          | L         | I        | #        | 1                                     | 1                                     |                                      | Г   |
| DS1_3-UF01<br>DS1_3-UF02   | 超滤   | UF/DF WORK UNIT UF01 for Line 1 and Line 3 UF/DF WORK UNIT UF02 for Line 1 and Line 3  | +        |             | +        | +        | +        | t        | t        |          |          |          | +        | +        |          | t        | +        |          | $\vdash$ |          | $\vdash$ |          | $^{+}$       | +        |          |               |             |             |             | t         | +        | t                                     |                   | $\dagger$ | $\dagger$ | +        | 1         |           |           | Х        | x        | _         | +        | +        | t                                     |                                       |                                      | H   |
| DSZ 4-UF01   | 都是DCS系统,内部交互   | UF/DF WORK UNIT UF01 for Line 2 and Line 4   | +        |             | +        |          |          | H        | H        |          | _        | _        | +        | +        |          | H        |          |          | H        | H        | H        | H        | H            |          |          |               |             |             |             | +         |          | +                                     |                   | +         | +         | +        | +         |           |           |          | ^        | )         | (        | +        | +                                     |                                       |                                      | H   |
| _  | 都是DCS系统,内部交互   | PALLET TANK DS1-PT07   |          |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | T            |          |          |               |             |             |             |           |          |                                       |                   |           |           |          |           |           |           |          |          |           | 7        | x        |                                       |                                       |                                      |     |
| DSX-CIP02<br>DSX-CIP03   | CIP Station  | CIPO2 UNIT TA-CIPO201<br>CIPO3 UNIT TA-CIPO301   | -        |             |          | _        | $\perp$  | F        | Ŧ        |          | _        |          | +        | +        |          | Ŧ        | $\perp$  | -        | L        | -        | L        |          | $\downarrow$ | 4        | _        |               |             |             |             | -         | +        | -                                     |                   | +         | +         | +        | 4         | _         |           |          |          | F         | -        | $\dashv$ | ĸ                                     | x                                     |                                      | F   |
| DSX-CIP05  | 都是DCS系统,内部交互   | CIPOS UNIT TA-CIPO501  |          |             | 1        |          |          | L        | t        |          |          | 1        | 1        | 1        | t        | t        | İ        |          | L        |          | L        |          | t            | 1        |          |               |             |             |             | 1         | 1        | 1                                     |                   | 1         | 1         | 1        | 1         |           |           |          |          |           |          | 1        | 1                                     | $\rightarrow$                         | х                                    | -   |
| ALK  | SECTION 2  | 2500L CONCENTRATED ALKALI TANK UNIT XXX  PROCEDURAL MODEL ( PHASES )   |          | Ш           | _        | _        | _        | _        | +        |          | _        | _        | _        | ÷        | ۰        | +        | _        | _        |          |          |          |          | Ļ            | _        |          |               |             |             |             | _         | ÷        | _                                     |                   | _         | +         | _        | 4         | _         |           |          |          |           |          | _        | _                                     |                                       |                                      | х   |
|  |  | Phase Description  |          |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |              |          |          |               |             |             |             |           |          |                                       |                   |           |           |          |           |           |           |          |          |           |          |          |                                       |                                       |                                      |     |
| 1  | SIP Phases   | - mac Description  | Н        | _           | _        | _        | -        | _        | _        | _        |          |          | _        | _        | _        | _        | _        |          | -        | -        | -        | -        | _            | _        | -        |               | _           | _           | -           | -         | _        | _                                     | _                 | _         | _         | _        | _         | _         | -         | _        |          | _         | _        | _        | _                                     | _                                     | -                                    |     |
| 3-29   |  |  |          |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |              |          |          |               |             |             |             |           |          |                                       |                   |           |           |          |           |           |           |          |          |           |          |          |                                       |                                       |                                      |     |
| Ì  | PH_X_PT_VF   | Transfer product from pallet tank to nano filter<br>产品出料从托盘到除病毒过滤  |          |             |          |          |          |          | Ī        |          |          | I        |          | T        |          | Ī        | T        | Ī        |          |          |          |          | Ī            | I        |          |               |             |             |             | Ī         |          | Ī                                     |                   | 2         | k 2       | х        |           |           |           |          |          |           |          |          | Ī                                     |                                       |                                      |     |
| 4  | PH_X_PT_VF  Other Phases   |  |          |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | I            |          |          |               |             |             |             | I         | I        | I                                     |                   | ,         | K 2       | x        |           |           |           |          |          |           |          | Ι        |                                       |                                       |                                      |     |
| 4  |  |  | x        | x           | x 2      | x        | I        |          |          |          |          |          |          | I<br>T   |          |          |          | I<br>T   |          |          |          |          | I            |          |          | x             | x           | x           | х           | ,         | k 3      | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | x                 | ];        | x 2       | x        |           |           |           |          |          |           |          | I        |                                       |                                       |                                      |     |
| 4-1  | Other Phases   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer.  | +        | x           | +        | x x      | ×        | x        | x x      | x        | <b>C</b> | x        | x ,      | k >      | k x      | ( x      | x x      | x        | x        | x        | x        | ×        | ,            | x        | x        | x             | x           |             | x           | +         | +        | < < < < < < < < < < < < < < < < < < < | x                 | ,         | K 2       | x        |           |           |           |          |          |           |          | I        |                                       |                                       |                                      |     |
| 4<br>4-1<br>4-2  | Other Phases PH_MSG  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control.  | х        |             | x 2      | +        | ×        | x        | : x      | ×        | ζ        | x        | × )      | × >      | x x      | x ×      | x ×      | x        | x        | ×        | x        | ×        | ,            | x        | _        | x<br>x        |             |             |             | ,         | +        | < < < < < < < < < < < < < < < < < < < |                   | ,         | K 3       | ×        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | x   |
| 4<br>4-1<br>4-2<br>4-3   | Other Phases PH_MSG PH_TIMER PH_AG   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during  | х        | х           | x 2      | +        | ×        | x        | x        | ×        | (        | X        | x )      | K )      | c x      | x x      | x x      | ×        | x        | x        | x        | x        | ,            | x        |          | х             | x           | x           | x           | ,         | K 2      | (                                     | х                 | ,         | K 3       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | x   |
| 4<br>4-1<br>4-2<br>4-3<br>4-4  | Other Phases PH_MSG PH_TIMER PH_AG PH_TC_TK  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product.   | x        | x           | x 2      | ×        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |              |          |          | х             | x           | х           | х           | ,         | K 2      | < < < < < < < < < < < < < < < < < < < | х                 | ,         | K 3       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | x   |
| 4<br>4-1<br>4-2<br>4-3<br>4-4<br>4-5   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter.  | x        | х           | x 2      | ×        |          |          | x x      |          |          |          |          |          | ( x      |          |          |          |          |          |          |          |              |          |          | x             | x           | x<br>x      | x           | 3         | K 2      | (                                     | х                 | ,         | к :       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | x   |
| 4<br>4-1<br>4-2<br>4-3<br>4-4<br>4-5   | Other Phases PH_MSG PH_TIMER PH_AG PH_TC_TK  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product.   | x        | x           | x 2      | x<br>x x | ×        | x        | ×        | x        | ζ        | x        | x >      | x >      |          | x x      | ×        | x        | x        | ×        | x        | ×        | ,            | x        | x        | x             | x           | x<br>x      | x           | 3         | K 2      | (                                     | х                 | ,         | K 3       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | x   |
| 4-1<br>4-2<br>4-3<br>4-4<br>4-5<br>4-6   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe.   | x        | x           | x 2      | x<br>x x | ×        | x        | ×        | x        | ζ        | x        | x >      | x >      | c x      | x x      | ×        | x        | x        | ×        | x        | ×        | ,            | x        | x        | x             | x           | x<br>x<br>x | x           | )         | K 2      | < ·                                   | х                 | ,         | × 3       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | ×   |
| 4<br>4-1<br>4-2<br>4-3<br>4-4<br>4-5<br>4-6<br>4-7<br>4-8  | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe.   | x        | x           | x 2      | x x      | x x      | x        | ×        | x        | (        | x        | x )      | K )      | c x      | x x      | : x      | x x      | x        | x        | x        | x        | ,            | x        | x        | x             | x           | x<br>x<br>x | x<br>x      | )         | K 3      | < ·                                   | х                 | ,         | к з       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | x   |
| 4<br>4-1<br>4-2<br>4-3<br>4-4<br>4-5<br>4-6<br>4-7<br>4-8<br>4-9   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe.   | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | (        | x        | x )      | K )      | < x      | x x      | : x      | x x      | x        | x        | x        | x        | ,            | x        | x<br>x   | x             | x<br>x<br>x | x<br>x<br>x | x<br>x      | 3         | K 3      | (                                     | х                 | 7         | x :       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | x   |
| 4<br>4-1<br>4-2<br>4-3<br>4-4<br>4-5<br>4-6<br>4-7<br>4-8<br>4-9<br>4-10   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Validate by CWFI  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | (        | x        | x )      | K )      | < x      | x x      | : x      | x x      | x        | x        | x        | x        | ,            | x        | x<br>x   | x<br>x<br>x   | x<br>x<br>x | x<br>x<br>x | x<br>x<br>x | 3         | K 3      | (                                     | х                 | ,         | × 3       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | ×   |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11  | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | (        | x        | x )      | K )      | < x      | x x      | : x      | x x      | x        | x        | x        | x        | ,            | x        | x<br>x   | x x x x x x   | x x x x     | x<br>x<br>x | x<br>x<br>x | )         | K 3      | <                                     | х                 |           | × 3       | ×        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | ×   |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13  | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm   | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x   | x x x x x   | x x x x x   | x x x x x   | 3         | K 3      | <                                     | х                 |           | K 3       | x        |           |           |           |          |          |           |          |          |                                       |                                       |                                      | ×   |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          |           |           |           |          |          |           |          |          |                                       |                                       |                                      | ×   |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15  | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management   | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x   | x x x x x x | 3         | K 2      | <                                     | х                 |           |           | x        | ×         | ×         | ×         | ×        | x        |           |          |          |                                       |                                       |                                      | x   |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 4-14   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_PUR_VD_TM  PH_PUR_VD_TM  PH_SET_STATE   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | x         | ×         | ×         | ×        | ×        |           |          |          |                                       |                                       |                                      | ×   |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 4-14 5   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set-state   | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | ×         | ×         | ×         | ×        | ×        |           |          |          |                                       | X                                     |                                      |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 5 5 5-1   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set state Supply pw and drain at POU  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | ×         | ×         | ×         |          | x        |           |          | +        | × × ×                                 | -                                     | ×                                    |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2  | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW_DRN   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set-state Supply pw and drain at POU Supply pw and drain at cip skid  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | ×         | ×         | x x x     |          |          |           |          | 1        | ĸ                                     | х                                     | х                                    |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 5 5 5-1 5-2 5-3   | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set state Supply pw and drain at POU  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XXXXX     |           |           | x        | x        |           |          |          | K<br>K                                | х                                     | x<br>x                               |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2 5-3 5-4                                    | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  SUPPLY_ALK  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set state Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at POU   | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XXXXX     | XXXXXX    |           | x        | x        |           |          |          | K<br>K                                | x<br>x                                | x<br>x                               |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2 5-3 5-4 5-5                                | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  SUPPLY_PW_DRN  SUPPLY_ALK  SUPPLY_ALK  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set-state Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at cip skid  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XXX       | XXXXX     |           |          | x        |           |          |          | к<br>к<br>к                           | x<br>x<br>x                           | x<br>x<br>x                          |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2 5-3 5-4 5-5 5-6                            | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  SUPPLY_ALK  SUPPLY_ALK_DRN  SUPPLY_ALK_RTN  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer plpe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set-state Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at cip skid Supply alkali and drain at cip skid Supply alkali and return to washtank   | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XXX       | XXXXX     |           | x        | x        |           |          |          | к<br>к<br>к                           | x x x x x x x                         | x<br>x<br>x<br>x                     |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2 5-3 5-4 5-5 5-6 5-7                        | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_PUR_VD_TM  PH_PUR_VD_TM  SUPPLY_PW_DRN  SUPPLY_PW_DRN  SUPPLY_ALK_RTN  SUPPLY_WFI  | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set-state Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at cip skid Supply alkali and drain at POU Supply wfi and drain at POU   | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XX        | XXXXXX    |           | x        | x        |           |          |          | к<br>к<br>к                           | x<br>x<br>x<br>x                      | x<br>x<br>x<br>x                     |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5-1 5-2 5-3 5-4 5-5 5-6 5-7 5-8                      | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  SUPPLY_ALK  SUPPLY_ALK_DRN  SUPPLY_ALK_RTN  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI   | 产品出料从托盘到除病毒过滤 Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe.  Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set state  Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at cip skid Supply alkali and drain at POU Supply wfi and drain at POU Supply wfi and drain at cip skid  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XX        | XXXXX     | x x x     | x        | x        |           |          |          | x                                     | x x x x x x x x                       | x<br>x<br>x<br>x<br>x                |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2 5-3 5-4 5-5 5-6 5-7 5-8 5-9                | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  SUPPLY_PW_DRN  SUPPLY_ALK_RTN  SUPPLY_ALK_RTN  SUPPLY_WFI  | Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set state Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at cip skid Supply alkali and drain at POU Supply wfi and drain at POU Supply wfi and drain at cip skid Air blow and drain at pou  | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XX        | XXXXXX    | × × × ×   | ×        | ×        |           |          |          | K K K K K K K K K K K K K K K K K K K | x x x x x x x x x x x                 | x<br>x<br>x<br>x<br>x<br>x           |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2 5-3 5-4 5-5 5-6 5-7 5-8 5-9 5-10           | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  SUPPLY_PW  SUPPLY_ALK  SUPPLY_ALK  SUPPLY_ALK  SUPPLY_WFI  SUPPLY | Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe.  Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set-state Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at cip skid Supply alkali and return to washtank Supply wfi and drain at POU Supply wfi and drain at cip skid Air blow and drain at cip skid Air blow and drain at cip skid | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XX        | XXX       | x x x     | x        | x        |           |          |          | x                                     | x x x x x x x x x x x                 | x<br>x<br>x<br>x<br>x<br>x<br>x      |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2 5-3 5-4 5-5 5-6 5-7 5-8 5-9 5-10 5-11      | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_BUF  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM_RA  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_SET_STATE  CIP Skid Phases  SUPPLY_PW  SUPPLY_PW_DRN  SUPPLY_ALK SUPPLY_ALK_RTN  SUPPLY_WFI SUPPLY_W | Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set-state Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at POU Supply alkali and return to washtank Supply wfi and drain at cip skid Air blow and drain at cip skid Preparation pw   | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XXXXX     | × × × × × | x x x     | x        | x        |           |          |          | K                                     | x x x x x x x x x x x x x x x x x x x | x<br>x<br>x<br>x<br>x<br>x<br>x      |     |
| 4 4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 5 5-1 5-2 5-3 5-4 5-5 5-6 5-7 5-8 5-9 5-10 5-11 5-12 | Other Phases  PH_MSG  PH_TIMER  PH_AG  PH_TC_TK  PH_LT_BUF  PH_LT_PUR  PH_D_BUF  PH_D_PUR  PH_VAL_CWFI_BUF  PH_VAL_CWFI_PUR  PH_ALM  PH_PRES_CONT  PH_BUF_VD_TM  PH_PUR_VD_TM  PH_PUR_VD_TM  PH_PUR_VD_TM  SUPPLY_PW  SUPPLY_PW  SUPPLY_ALK  SUPPLY_ALK  SUPPLY_ALK  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  SUPPLY_WFI  PREP_ALK  | Promot operator information 例如取样,投料,调pH等提示 Timer. 计时 Tank agitator control. 罐搅拌控制 Jacket heating by TCM or cooling by glycol/chilled water during product. Hermetic leak test of tank with breath filter. Hermetic leak test of tank with transfer pipe. Drain buffer tank with transfer pipe. Drain purification tank with transfer pipe. Validate by CWFI Validate by CWFI Ration alarm PH, CT and temperature alarm Process tank pressure control Buffer system validation time management Purification system validation time management Set-state Supply pw and drain at POU Supply pw and drain at cip skid Supply alkali and drain at cip skid Supply alkali and drain at POU Supply wfi and drain at POU Supply wfi and drain at pou Air blow and drain at cip skid Preparation pw Preparation Alkali          | x        | x<br>x<br>x | x 2      | x x      | x x      | x        | x x      | x        | <        | x        | x )      | K )      | < x      | x x      | x x x    | x x      | x        | x        | x        | x        | ,            | x        | x        | x x x x x x x | x x x x x x | x x x x x x | x<br>x<br>x | 3         | K 2      | <                                     | x                 |           |           |          | XX        | XXX       | x x x     | x        | x        |           |          |          | K                                     | x                                     | x<br>x<br>x<br>x<br>x<br>x<br>x<br>x |     |

| CEC.                    |                                |   |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          |          |   |           |               |                      |                |                  |               |              |
|-------------------------|--------------------------------|---|----------------|-----------------|---|----------|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------------|----------|----------|-----------|----------|----------|----------|----------|---|-----------|---------------|----------------------|----------------|------------------|---------------|--------------|
| SEC                     | CTION 1                        | PHYSICAL MODEL<br>( UNIT CLASSES AND EQUIPMENT MODULE CLASSES )         |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          | U        | nit      |                |          |          |           |          |          |          |          |   |           |               |                      |                |                  |               |              |
| Unit                    | Unit<br>Classs                 | Unit<br>Description   | DSX-TA12       | DSX-TA13        |   | DSX-TA16 | DSX-TA17            | DSX-TA18 | DSX-TA20 | (工艺用水罐)  | DSX-TA21 | DSX-TA22 | DSX-TA24 | DSX-TA26 | DSX-TA28 | DSX-TA29 | DSX-TA30 | DSX-TA31 | DSX-TA32 | DSX-TA34 | DSX-TA35 | DSX-TA02       | DSX-TA03 | DSX-TA05 | 90×1×30   | DSX-TA08 | DSX-TA07 | DSX-DF03 | DSX-VF01 | DSX-CHT01<br>DSX-CHT02  | DSX-CHT03 | DSY-UF01      | DSY-UF02<br>DSZ-UF01 | DSX-PT07       | DSX-CIP02        |               | DSX-CIP05    |
| DSX-TA12                |                                | 3000L BUFFER PREPARATION TANK UNIT TA12                                 | х              |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           | Ι        |          |          |          | I   | П         | 工             |                      |                | $\Box$           |               | 丁            |
| DSX-TA13                | Tank                           | 3000L BUFFER PREPARATION TANK UNIT TA13                                 |                | х               |   |          |                     |          |          | _        | _        |          | Ш        | _        |          |          |          |          |          |          | _        |                |          |          |           |          |          |          | Ш        | $\bot$  | Ш         | $\dashv$      |                      | Ш              | Н                | $\bot$        | $\bot$       |
| DSX-TA14                |                                | 6000L BUFFER PREPARATION TANK UNIT TA14                                 |                | х               | _ |          |                     |          |          | _        | _        |          | Ш        |          | _        |          |          | _        |          |          | _        | $\sqcup$       | _        |          | _         |          |          |          | $\sqcup$ | +   | Ш         | $\dashv$      |                      | 4              | $\vdash$         | +             | +            |
| DSX-TA15                |                                | 9000L BUFFER PREPARATION TANK UNIT TA15                                 | -              |                 | Х |          | _                   | _        | _        | _        | _        | -        | Н        | _        | -        | -        |          | _        | _        | -        | ₩        | $\sqcup$       | _        | _        | _         | -        |          | -        | $\vdash$ | +   | $\vdash$  | +             | _                    | 4              | $\vdash$         | +             | +            |
| DSX-TA16                |                                | 3000L BUFFER HOLDING TANK UNIT TA16                                     | +              |                 | + | Х        | <u>,</u>            | _        | +        | _        | +        | +        | Н        | +        | +        | +        |          | +        | +        | -        | +-       | $\vdash$       | _        | +        | +         | +        |          | +        | $\vdash$ | +   | $\vdash$  | +             |                      | ╃┩             | $\vdash$         | +             | +            |
| DSX-TA17<br>DSX-TA18    |                                | 3000L BUFFER HOLDING TANK UNIT TA12                                     | +              |                 | + |          | Х                   | х        | -        | +        | +        | +        | H        | +        | +        |          |          | _        | _        | +        | +        | $\vdash$       | -        | -        | +         | -        |          | +        | $\vdash$ | +   | $\vdash$  | +             |                      | ┿              | $\vdash$         | +             | +            |
| DSX-TA18                |                                | 3000L BUFFER HOLDING TANK UNIT TA18 3000L BUFFER HOLDING TANK UNIT TA19 | +              |                 | + |          | -                   | _        | x        | +        | +        | +        | Н        | +        | +        | +        |          | +        | +        | +        | +        | H              | _        | +        | +         | +        |          | +        | $\vdash$ | +   | +         | +             |                      | ╁              | $\vdash$         | +             | +            |
| DSX-TA19                |                                | 3000L PROCESS WATER TANK UNIT TA20                                      | +              |                 |   |          | $\dashv$            | +        | _        | х        | +        | +        | H        | +        | +        | +        |          | $\dashv$ | +        | +        | +        | $\vdash$       | $\dashv$ | +        | +         | +        |          | +        | $\vdash$ | +   | $\forall$ | +             |                      | +              | $\vdash$         | +             | +            |
| DSX-TA21                | •                              | 3000L BUFFER HOLDING TANK UNIT TA21                                     | +              |                 |   |          | $\dashv$            |          | +        | _        | х        | $\top$   | H        | +        | $\top$   | $\top$   |          | $\dashv$ | +        |          | +        | ${}^{\dagger}$ | $\dashv$ | +        | +         | +        |          | +        | H        | +   | Ħ         | +             |                      | +              | $\vdash$         | +             | +            |
| DSX-TA22                |                                | 3000L BUFFER HOLDING TANK UNIT TA22                                     |                |                 |   |          |                     |          |          | 1        | _        | (        | H        |          | 1        |          |          | -        |          |          | T        |                | 1        |          | +         |          |          |          | H        | $\top$  | H         | o             |                      | +              | Ħ                | $\dashv$      | +            |
| DSX-TA23                | ľ                              | 3000L BUFFER HOLDING TANK UNIT TA23                                     |                | $\top$          | T | П        | o                   | +        | $\top$   | $\dashv$ | Ť        | х        | П        | $\top$   | $\top$   |          | П        | $\dashv$ | $\top$   | 1        | T        | П              | $\top$   | T        | $\dagger$ | $\top$   |          | $\top$   | 口        | $\top$  | $\sqcap$  | $\top$        |                      | П              | $\sqcap$         | $\top$        | $\top$       |
| DSX-TA24                | ľ                              | 3000L BUFFER HOLDING TANK UNIT TA24                                     |                |                 |   | П        |                     |          |          | T        |          | T        | х        | T        |          |          | П        | 1        |          |          | T        |                | 1        |          | $\top$    |          |          | T        | 口        | $\top$  | П         | $\top$        |                      | П              | 一                | 十             | $\top$       |
|                         |                                | 6000L BUFFER HOLDING TANK UNIT TA26                                     | П              |                 |   |          | $\Box$ †            |          |          |          |          |          | П        | х        |          |          |          |          |          |          | Γ        | $\Box$         | Ţ        |          | Ţ         |          |          |          | П        | $\Box$  | П         | 丁             |                      |                | ┌┼               | 丁             | $\Box$       |
| DSX-TA27                | ļ                              | 6000L BUFFER HOLDING TANK UNIT TA27                                     |                |                 |   |          |                     |          | I        |          |          |          |          | 2        | к        |          |          |          | Ι        |          |          |                |          |          | 1         | Ι        |          | I        |          | $oldsymbol{ol}}}}}}}}}}}}}}}$ |           | I             |                      |                |                  | I             | I            |
| DSX-TA28                |                                | 6000L BUFFER HOLDING TANK UNIT TA28                                     |                |                 |   |          |                     |          |          |          |          |          |          |          | х        |          |          |          |          |          |          |                |          |          |           |          |          |          |          |   |           | $oxed{oxed}$  |                      |                | $\Box$           | $\Box$        | $oxed{oxed}$ |
| DSX-TA29                |                                | 6000L BUFFER HOLDING TANK UNIT TA29                                     |                |                 |   |          |                     |          |          |          |          |          |          |          |          | х        |          |          |          |          |          |                |          |          |           |          |          |          | Ш        |   | Ш         | $\perp$       |                      |                | $\Box$           | $\perp$       | $\perp$      |
| DSX-TA30                |                                | 3000L BUFFER HOLDING TANK UNIT TA30                                     |                |                 |   |          | $\perp$             |          |          |          | _        |          | Ш        |          |          |          | Х        |          |          |          | _        | Ш              |          |          | $\perp$   |          |          |          | Ц        | $\bot$  | Ш         | $\dashv$      |                      | 4              | $\sqcup$         | $\bot$        | $\bot$       |
| DSX-TA31                |                                | 6000L BUFFER HOLDING TANK UNIT TA31                                     |                |                 |   |          |                     | _        |          | _        | _        | $\perp$  | Ш        | _        |          |          |          | Х        |          |          | _        |                | _        |          |           |          |          |          | Ш        | $\bot$  | Ш         | _             |                      | 4              | $\sqcup$         | $\bot$        | $\bot$       |
| DSX-TA32                |                                | 9000L 0.5M NaOH TANK UNIT TA32  |                |                 | _ |          | _                   | _        |          | _        | _        | _        | Ш        | _        | 4        |          |          | _ ;      | х        | _        | 1        | Ш              |          |          | _         | _        |          |          | $\sqcup$ | +   | Ш         |               |                      | 4              | $\vdash$         | $\rightarrow$ | +            |
| DSX-TA33                |                                | 9000L BUFFER HOLDING TANK UNIT TA33                                     | $\perp$        | _               | - |          | _                   | _        | _        | _        | +        | +        | Н        | _        | 4        | -        |          | _        | Х        | _        | ₩        | $\sqcup$       | _        | -        | _         | -        |          | -        | $\vdash$ | +   | $\vdash$  | +             | _                    | 4              | $\vdash$         | +             | +            |
| DSX-TA34                |                                | 9000L BUFFER HOLDING TANK UNIT TA34                                     | +              | _               | - |          | $\dashv$            | _        |          | _        | _        | +        | Н        | _        | +        | +        |          | _        | _        | х        | -        | $\vdash$       | _        |          | _         | _        |          | _        | $\vdash$ | +   | $\vdash$  | +             |                      | 4              | $\vdash$         | +             | +            |
| DSX-TA35                |                                | 9000L BUFFER HOLDING TANK UNIT TA35                                     | $\blacksquare$ |                 | + |          | _                   | _        | -        | +        | -        | +        | Н        | +        | _        |          |          | _        |          | -        | Х        | L.             | -        |          | -         | -        |          | -        | $\vdash$ | +   | $\vdash$  | +             | _                    | ┿              | $\vdash$         | +             | +            |
| DSX-TA02                |                                | 4000L HARVEST TANK UNIT TA02  | +              |                 | + |          |                     | +        |          |          | +        | +        | Н        | +        | +        | +        |          | -        | -        | +        | +        | Х              | _        | +        | +         | +        |          | -        | $\vdash$ | +   | ++        | +             | _                    | ╃┩             | $\vdash$         | +             | +            |
| DSX-TA03                |                                | 4000L PURIFICATION TANK UNIT TA03 4000L PURIFICATION TANK UNIT TA04     | +              |                 | + |          | $\dashv$            | +        | +        | +        | +        | +        | Н        | +        | +        | +        |          | +        | +        | +        | +        | $\vdash$       | X >      | ,        | +         | +        |          | +        | $\vdash$ | +   | $\forall$ | +             |                      | ╫              | $\vdash$         | +             | +            |
| DSX-TA05                | ocess Tank(DPS)                | 4000L PURIFICATION TANK UNIT TA05                                       | +              |                 | + |          |                     | +        | -        |          | +        | +        | H        | +        | +        |          |          | _        | +        | +        | +        | H              | ť        | x        | +         | +        |          | -        | H        | +   | +         | +             |                      | +              | $\vdash$         | +             | +            |
| DSX-TA06                |                                | 3000L PURIFICATION TANK UNIT TA06                                       | $\mathbf{T}$   |                 |   |          | T                   |          |          |          | $\top$   | +        | H        |          |          | +        |          | +        |          |          | +        | H              |          | + ~      | ,         |          |          |          | $\vdash$ | $\top$  | +         | $\dashv$      |                      | +              | $\vdash$         | $\dashv$      | +            |
| DSX-TA08                |                                | 3000L PURIFICATION TANK UNIT TA08                                       |                |                 |   |          |                     |          | +        | 1        | $\top$   |          | П        |          | T        | $\top$   |          | $\dashv$ | $\top$   |          | T        | Ħ              | 1        | +        | Ť         | х        |          |          | П        | $\top$  | П         | $\top$        |                      | H              | Ħ                | $\top$        | $^{+}$       |
|                         |                                | 1500L Slurry TANK UNIT TA07   |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          | х        |          | Ħ        | $\top$  | П         | $\top$        |                      | $\Box$         | П                | $\top$        | 十            |
|                         |                                | DEPTH FILTRATION UNIT DF03  |                |                 |   |          |                     |          |          |          | T        |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          | х        | П        | $\top$  | П         | $\top$        |                      | Ħ              | П                | $\top$        | $\top$       |
|                         |                                | NF WORK UNIT NF01   |                |                 |   |          | T                   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          | T         |          |          |          | х        |   | П         | T             |                      | П              | П                | $\top$        | T            |
| DSX-CHT01               |                                | HPLC #1 WORK UNIT CHT01   |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          | П        | х   |           |               |                      | П              | П                |               | Т            |
|                         | ocess Equipment<br>是DCS系统,内部交互 | HPLC #2 WORK UNIT CHT02   |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          |          | х   |           |               |                      |                |                  |               |              |
| DSX-CHT03               | 7C0 0031(31)   11H7            | HPLC #3 WORK UNIT CHT03   |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          | Ш        |   | Х         | $\perp$       |                      |                | $\Box$           |               | $\perp$      |
| DS1_3-UF01              |                                | UF/DF WORK UNIT UF01 for Line 1 and Line 3                              |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          | Ш        | 丄   | Ш         | х             |                      |                | Ш                | $\perp$       | ᆚ            |
| DS1_3-UF02              | 超滤<br>都是DCS系统,内部交互             | UF/DF WORK UNIT UF02 for Line 1 and Line 3                              |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          |          |   |           |               | x                    | 4 ]            | 1                |               |              |
| н                       | 即定DCS系统,内部文立                   | HE/DE MORK HAIT HEAT for line 2 and line 4                              |                |                 |   |          |                     |          |          |          | +        | +        |          | _        | +        |          |          |          |          |          |          |                | _        |          | _         |          |          |          | Н        | +   | Н         | $\rightarrow$ | v                    | $\blacksquare$ |                  | _             | +            |
| DSZ_4-UF01              | BDCCE/C character              | UF/DF WORK UNIT UF01 for Line 2 and Line 4                              |                | +               |   | H        | H                   | +        |          | +        | +        | +        | H        | +        | +        |          | H        |          | -        | F        | F        |                | +        |          | +         | +        |          | +        | $\dashv$ | +   | Н         | +             | X                    | Ų,             | H                | 4             | +            |
|                         | 是DCS系统,内部交互                    | PALLET TANK DS1-PT07  | +              | $\vdash \vdash$ | + | Н        | $\vdash \downarrow$ | +        | -        | +        |          | +        | Н        | +        | +        |          | $\sqcup$ | _        | +        | -        | $\vdash$ | $\vdash$       |          | -        | +         | -        | 1        | -        | $\dashv$ | +   | $\dashv$  | +             |                      | х              | <del>     </del> | +             | +            |
| DSX-CIP02 DSX-CIP03 CIP | D Station                      | CIPO2 UNIT TA CIPO201   | +              | $\vdash \vdash$ | + | Н        | $\dashv$            | +        | +        | +        | +        | +        | Н        | +        | +        | +        | $\vdash$ | +        | +        | +        | +        | $\vdash$       | +        | +        | +         | +        | -        | +        | $\vdash$ | +   | $\vdash$  | +             |                      | ↤              | Х                | х             | +            |
|                         | E                              | CIPO3 UNIT TA-CIPO301<br>CIPO5 UNIT TA-CIPO501                          | +              |                 | + |          | $\dashv$            | +        | +        | $\dashv$ | +        | +        | Н        | +        | +        | +        | $\vdash$ | +        | +        | +        | ╁        | $\vdash$       | +        | +        | +         | +        |          | +        | $\vdash$ | +   | $\vdash$  | +             | -                    | ┦              | $\vdash$         | _             | х            |
| ALK                     |                                | 2500L CONCENTRATED ALKALI TANK UNIT XXX                                 | +              |                 | + |          | $\dashv$            | +        | +        | $\dashv$ | +        | +        | H        | +        | +        | +        |          | +        | +        | +        | +        | $\forall$      | $\dashv$ | +        | +         | +        |          | +        | H        | +   | $\forall$ | +             | _                    | +              | $\vdash$         | ť             | ^ ,          |
|                         |                                |   |                |                 |   | ш        |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          | 1        | _        |   |           | _             |                      |                |                  |               | ď            |
| SEC                     | CTION 2                        | PROCEDURAL MODEL ( PHASES )   | 4              |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          |          |   |           |               |                      |                |                  |               |              |
| IndeX Pha               | nase Class                     | Phase Description   |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          |          |   |           |               |                      |                |                  |               |              |
| 1 SIP                   | P Phases                       |   |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          |          |   |           |               |                      |                |                  |               |              |
| 5-15 PH                 | I_D_WT                         | Washtank drain  |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          |           |          |          |          |          |   |           |               |                      |                | x                | <b>x</b>      | х            |
| 5-16 PH                 | I_D_RT                         | Rinsetank drain   |                |                 |   |          |                     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |                |          |          | T         |          |          |          |          |   | П         | T             |                      | П              | х                | <b>x</b>      | х            |
| 5-17 PH                 | I_S_RT                         | Rinsetank SIP   |                |                 |   |          |                     | 1        |          | 1        |          |          | П        |          |          | Ī        | П        | $\top$   |          |          |          |                | $\top$   |          | T         | T        |          |          | П        | $\top$  | П         | $\top$        |                      | П              | х                | <b>x</b> :    | х            |
| 5-18 PH                 | I_C_AT                         | Alkalitank selfclean  | T              |                 | T |          |                     | 1        |          | T        |          |          |          |          |          | T        | П        | 1        |          | T        |          |                | $\top$   |          | T         | T        |          |          | П        | $\top$  | П         | T             |                      | П              | 丌                | T             | ,            |
|                         |                                |   | +              |                 | + | Н        | $\top$              | +        |          | -t       | $\top$   | +        | Н        | -        | +        | +        | H        | -        | +        | T        | t        | Ħ              | _        | +        | +         | +        |          | +        | $\vdash$ | +   | +         | +             | +                    | +              | $\vdash$         | +             | +            |
|                         | H_D_AT                         | Alkalitank drain  |                |                 |   |          |                     |          | ı        |          | ı        | J        |          |          |          |          |          |          |          |          |          |                | J        |          |           |          |          |          |          |   |           | ' J           |                      |                | 1                |               | )            |
| 5-19 PH                 |                                | Alkalitank drain Preparation alkali                                     |                |                 |   | Н        |                     | +        |          |          | +        |          |          | +        |          |          |          | +        | +        | +        | <u> </u> |                | -        |          | +         |          |          |          | H        | +   | $\dashv$  | +             |                      | $\dashv$       |                  | +             | )            |