



Sun Xia | Technical Director

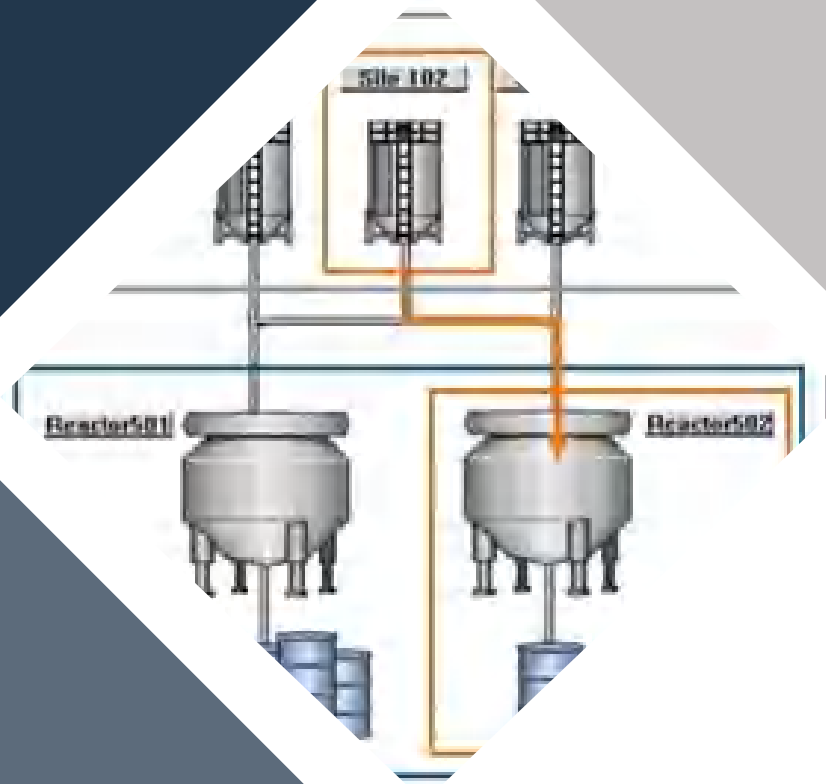
Beijing VP Co., Ltd.

# BJVP Blending Technology



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- 1 **Company Profile**
- 2 **BJVP Drum Decanting Unit**
- 3 **VP AUTOMATIC PIGGING SYSTEM**
- 4 **VP MANUAL PIGGING SYSTEM**
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**BJVP ABB Automatic Batch Blending Unit**

7

**High Viscosity Pump**

8

**High Shear Mixture**

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**BJVP Controls DCS / Batch**

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**01**

# Company Profile

# Qualification



# Company Profile

**VP**

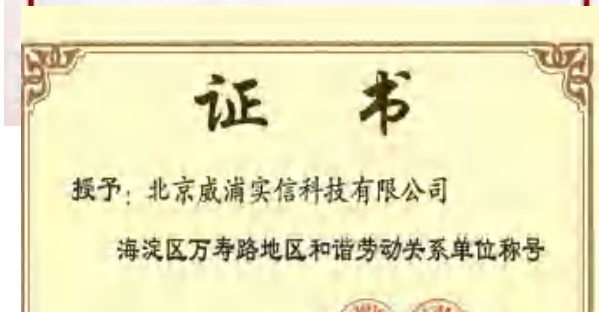
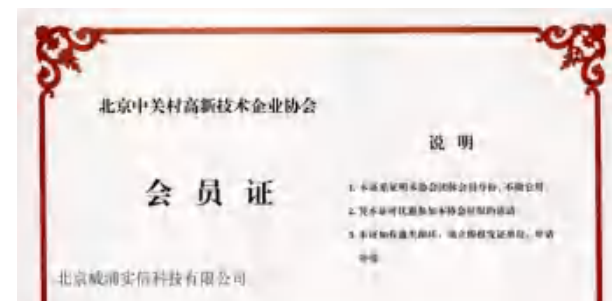
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## About us

Beijing VP Co., Ltd. was established in 1996. The factory is located in the Wenan Economic Development Zone near Xiong'an New District, with a construction area of 27000 square meters. It has a spacious and bright factory building and advanced production facilities and equipments. The factory is equipped with advanced performance testing system.



# Qualification



## SIEMENS

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### STRATEGIC PARTNERSHIP AGREEMENT

战略合作伙伴协议

---

among 由

**Beijing VP Co., Ltd.**

with its registered address at

No. 12, Yuquan Road, Haidian, Beijing ,100143

(hereinafter referred to as “VP”)

北京威浦实信科技有限公司

住所为：北京市海淀区玉泉路甲 12 号 5 层 5105, 邮政编码：100143

（以下简称“威浦实信”）



# Safety Rules



Safety Warning

HSE Warning

Safety Escape Map

Marks everywhere



文安县威浦机械设备制造有限公司  
办公楼一层消防疏散线路图

安全提示  
不可在疏散通道  
堆放杂物，堵塞  
通道，严禁存放  
易燃易爆物品  
（如：油漆、汽油、  
酒精等）

火警电话 119

★ 安全出口  
→ 疏散通道  
● 消防栓位置

# Production Facility



BJVP Production Line have all kinds of machines for the complex process of machinery.

# Testing Facility



BJVP provide all kinds of Performance testing for pumps , pigging , manifold , DDU , control system.

# Control Test Center



BJVP control center is equipped with full set of software and hardware for DCS control, where all kinds of control system will be testing before shipment. Remote Control service will be supplied to the customers.



# Pump Assembly Area



# Pigging/DDU/Manifold Test Area



# Stocking



BJVP has the stocking for all products and parts:

1-Pump

2-Pigging System

3-Blending Unit

4-Control Element



## BJVP Intelligent Lube Oil Blending Plant Solution

- 1-Drum Decanting Unit
- 2-PIGGING
- 3-MANIFOLD
- 4-ABB(Automatic Batch Blending)
- 5-SMB(Simultaneous Metering Blending),ILB(Inline Blending)
- 6-VI Dissolving Unit
- 7-High Viscosity Pumps
- 8-VP BATCH & DCS



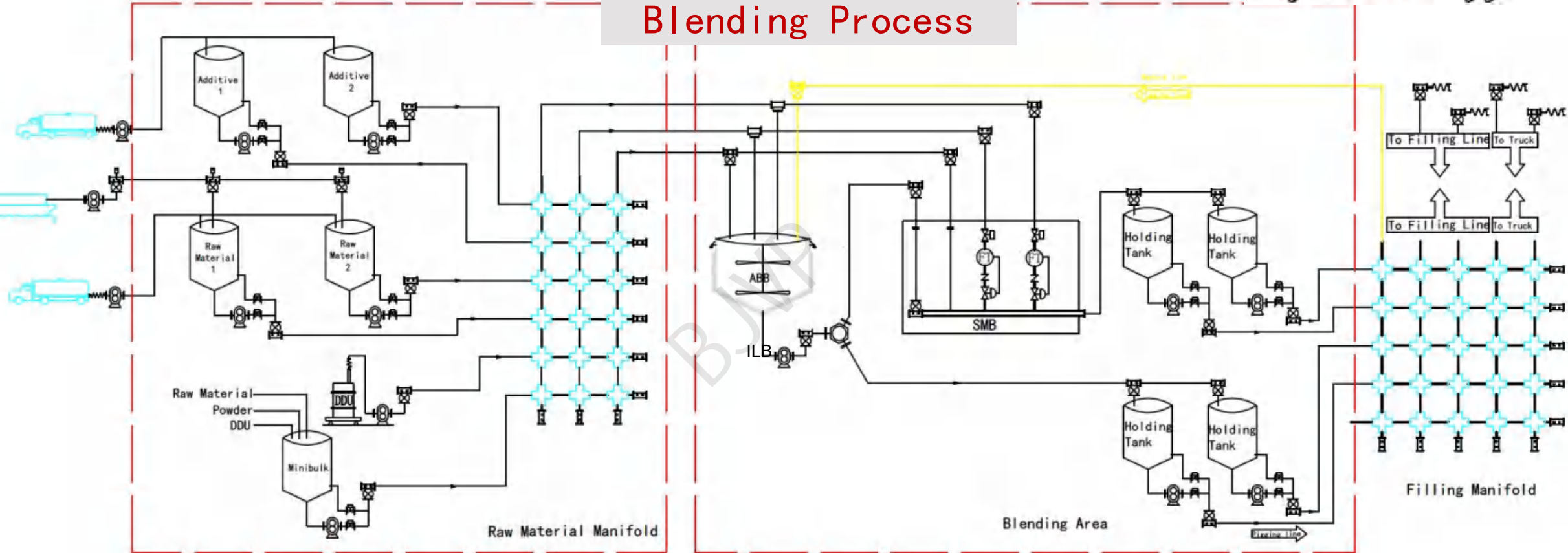


# BJVP Blending Technology



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## Blending Process



1-Drum Decanting Unit

4-Manifold

6-ABB

2-VI Dissolving

5-BATCH Control & DCS

7-SMB

3-Pigging System

8-ILB

A decorative graphic on the left side of the slide, consisting of a dark blue arrow pointing right, with a light blue arrow pointing right inside it, and a white arrow pointing right inside that. The number '02' is written in white inside the dark blue arrow.

**02**

# **BJVP Drum Decanting Unit**

# VP DDU Principle



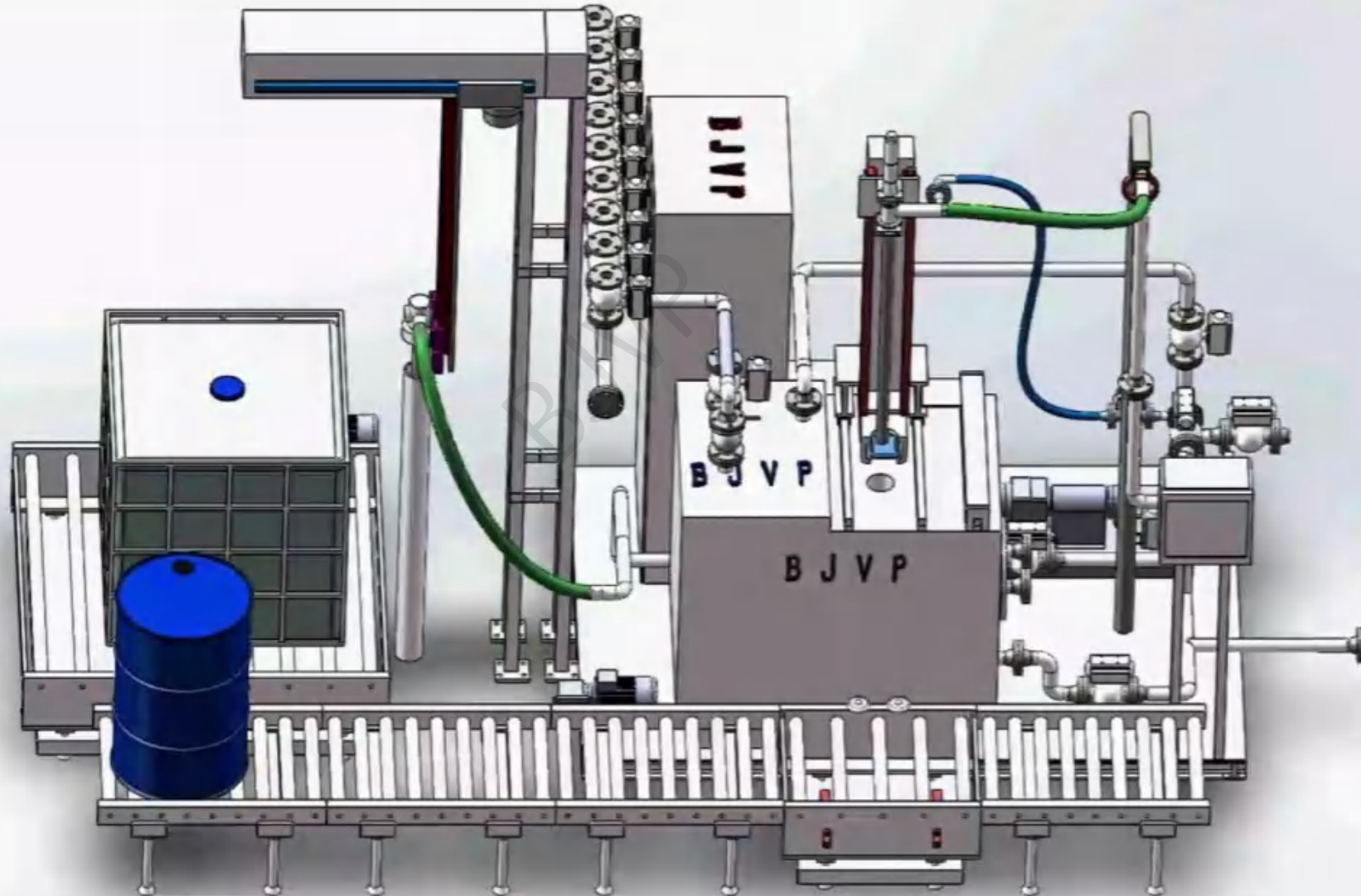
A Drum Decanting Unit (DDU) will allow semi-automatic transfer of drummed additives directly to both Automated Batch Blending (ABB) and Dosing kettles. It includes a drum weighing platform scale, a concentric lance to both withdraw additive and rinse empty drums and a weighed, heated, rinse tank to provide rinsing stock for the drums to the blending kettles. The rinse tank is also used to supply rinse stock to the rinsing heads of the ABB kettles.



# VP DDU Demo



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# BJVP Drum Decanting Unit



200L Drum



4 Drums



IBC

# BJVP Drum Decanting Unit



4 Drums Vision System



Resin IBC

# OS For DDU



High Technology

**VP** High Technology User name: **DDU-- Auto** **AUTO** 9/26/2022 2:36:51 PM

Step NO. **1000** Tips

**Decant**

Dosing set

Rinsing oil **IBC**

Actual COMPL

Drum initial

Drum COMPL

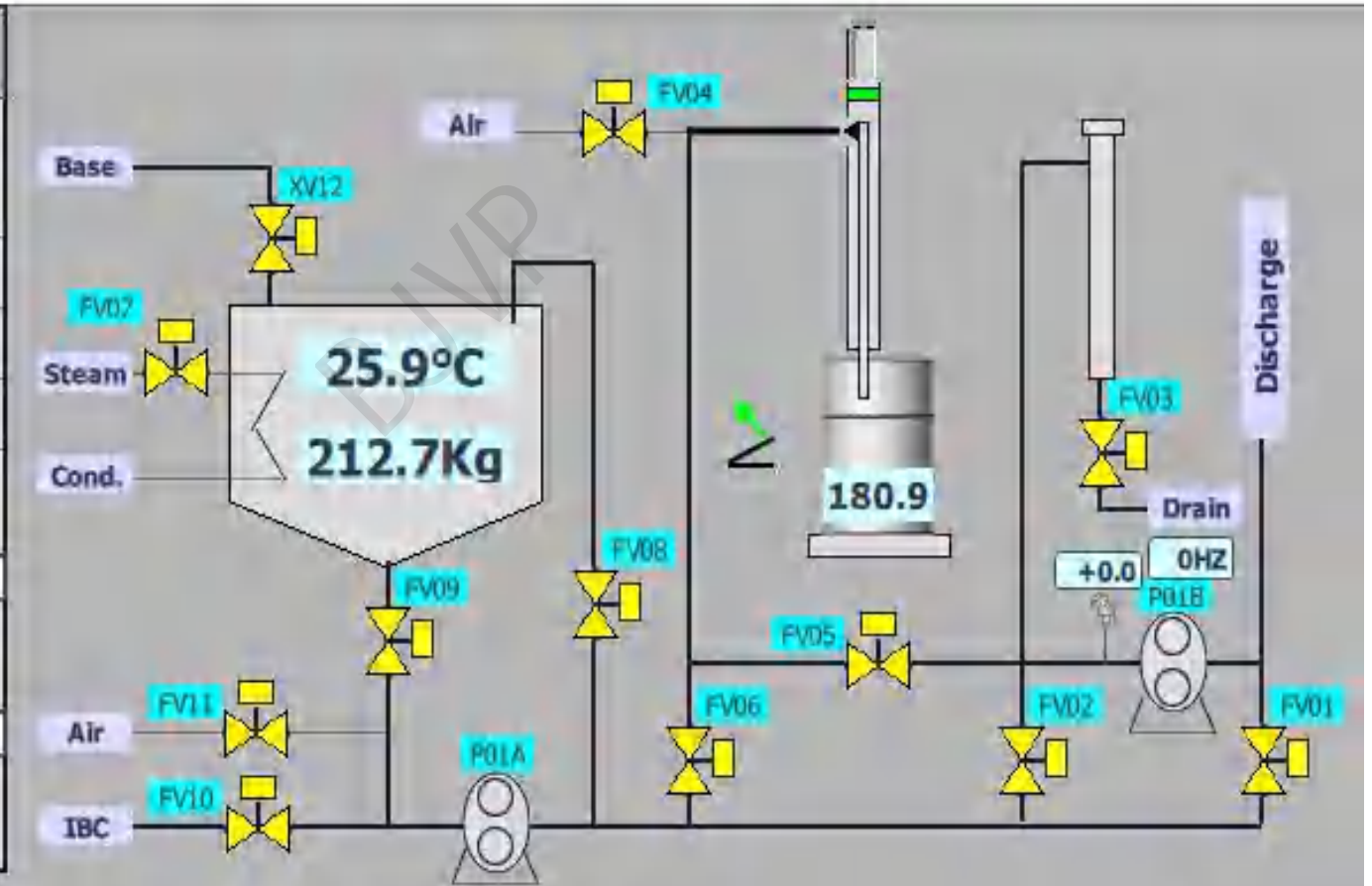
**START** **STOP**

Satus and Control

**YES** **NO**

Others

**RESET**



**FV15** Scale Tilt

**P01B** SPEED MANUAL

**P01B** Speed Up+

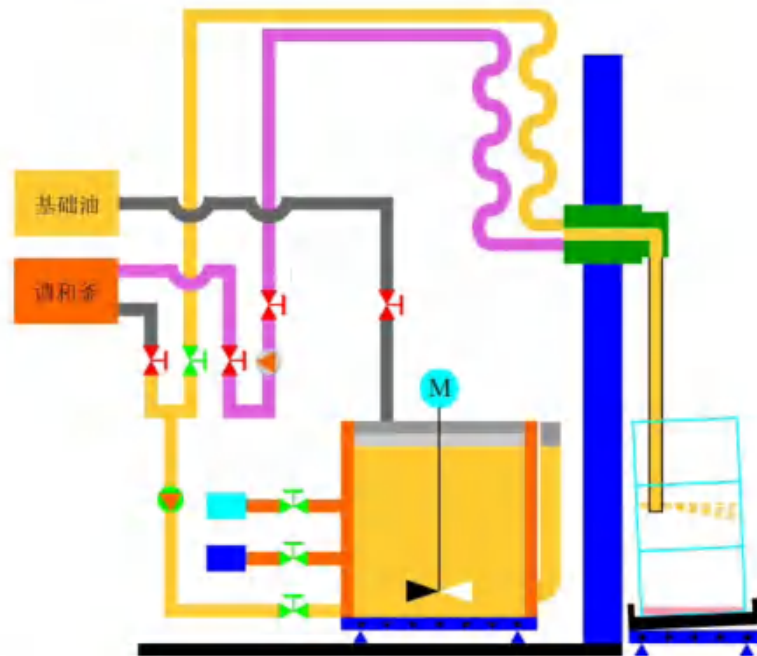
**P01B** Speed Down-

**FV16** Scale Clamp

# OS For DDU



## 北京威浦DDU系统



2008-1-25 15:00:42

BASE TEMP: 56.9 °C

LOCAL AUT

### RUNTIME

ADDITIVE		BASE OIL	
ID:	31040	ID:	31031
SET VALUE:	200.0	SET VALUE:	450.0
DECANT VALUE:	15.8	BO VALUE:	450.0
DRUM VALUE:	195.8	DRUM FLUSHING:	0.0
INSTANTANEOUS:	180.0	LANCE FLUSHING:	0.0

F9 Slope weighing platform      F13 Parameter setting  
F10 Forcibly terminate the current batch      F14 Main menu

DECANTING

F1 F2 F3 F4 F5 F6 F7 F8

K1 F9 F10 F11 F12 F13 F14 K2

K3 K4 K5 K6 K7 K8 K9 K10



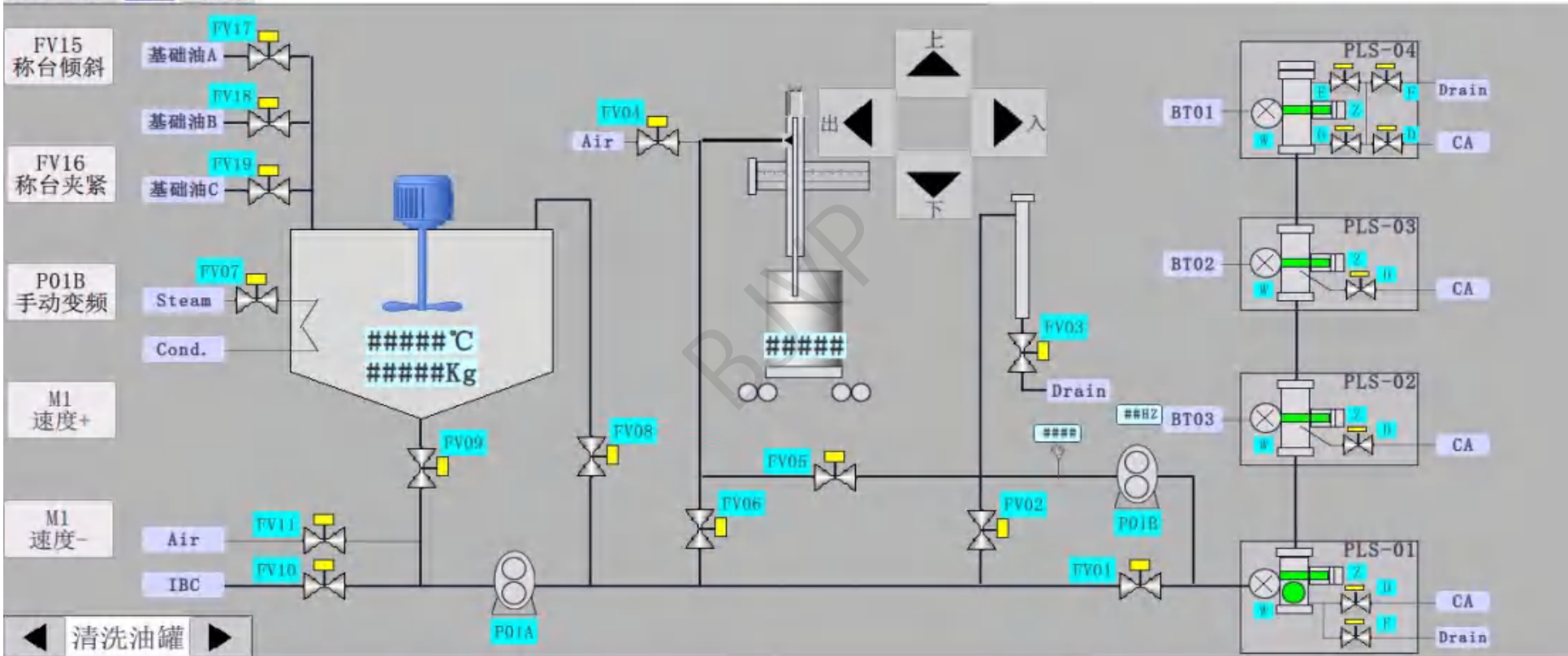
# OS For DDU



High Technology

用户名: 桶抽提系统—自动洗桶
急停
手动
2022/10/12  
02:36:0...

STEP NO. :    TIPS:



清洗罐参数	其他参数	功能选择及控制	状态及提示	输送功能
清洗油入口 <input type="text"/> 抽提目的罐 <input type="text"/> 清洗油设定值 <input type="text"/>	加热温度 <input type="text"/> 搅拌时间 <input type="text"/> 循环时间 <input type="text"/> 吹扫时间 <input type="text"/>	<input type="text"/> <input type="button" value="启动"/> <input type="button" value="停止"/>	状态:	<input type="button" value="开启"/> <input type="button" value="关闭"/> 扫线功能 <input type="button" value="启动"/> <input type="button" value="停止"/>

# OS For DDU



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VP High Technology User name: DDU-- Auto AUTO 9/26/2022 2:36:51 PM

Step NO. 1000 Tips

Decant

Dosing set 0.0Kg

Rinsing oil IBC

Actual COMPL 0.0Kg

Drum initial 0.0Kg

Drum COMPL 0.0Kg

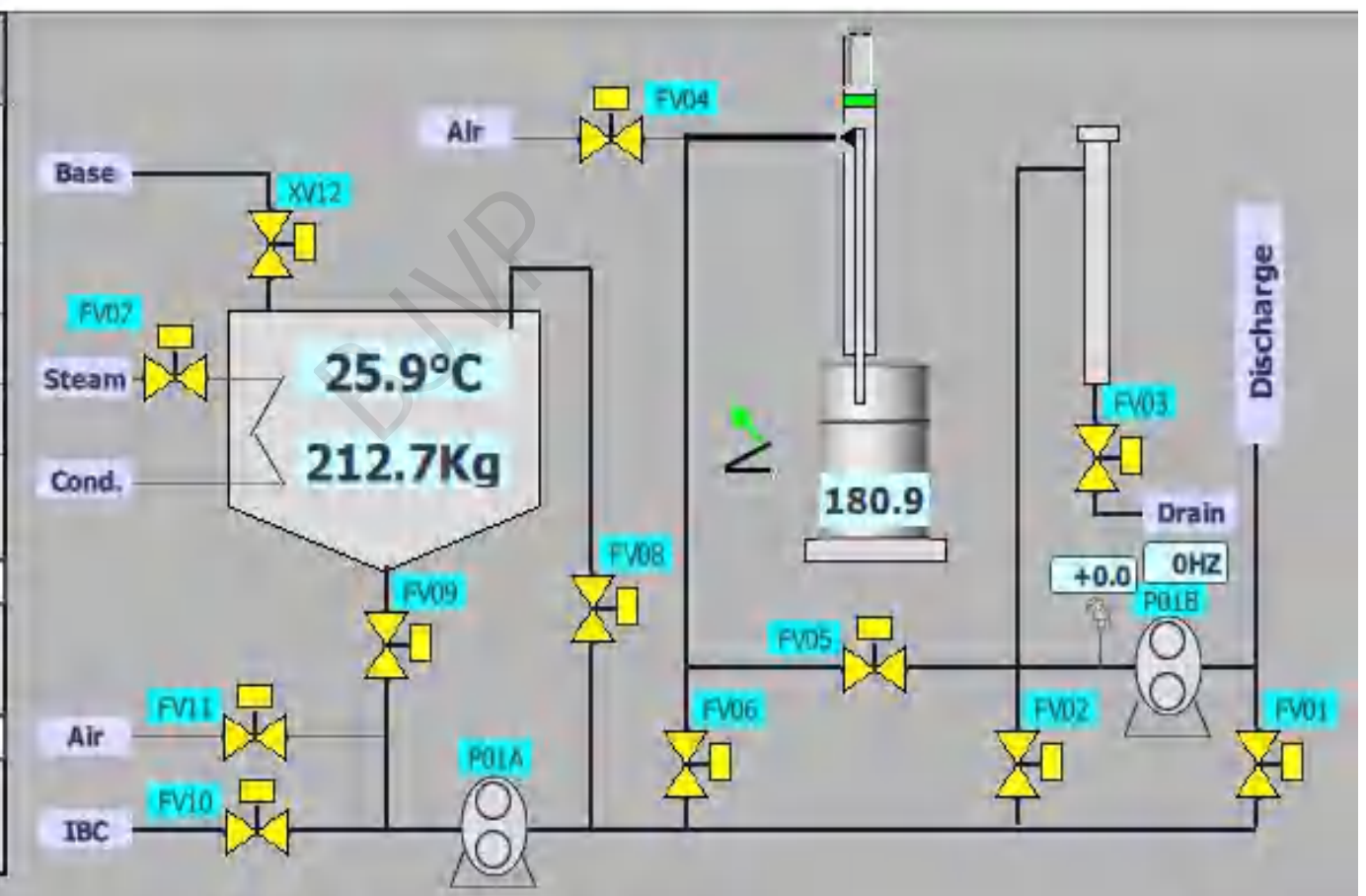
START STOP

Status and Control

YES NO

Others

RESET



FV15 Scale Tilt

P01B SPEED MANUAL

P01B Speed Up+

P01B Speed Down-

FV16 Scale Clamp

A decorative graphic consisting of a dark blue arrow pointing right, with a light blue arrow pointing right inside it, and a white arrow pointing right inside that. The text 'B3' is centered within the dark blue arrow.

**B3**

**VPDDU at Site**

# Visual positioning DDU site -14rd Edition

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# Visual positioning DDU site -14rd Edition

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# BJVP DDU at site-13rd Edition

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# BJVP DDU at site-12rd Edition



# BJVP DDU-at site-11rd Edition

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# BJVP DDU-at site-10rd Edition



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# BJVP DDU-at site-10rd Edition

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# BJVP DDU at site-9rd Edtion



# BJVP DDU at site-8rd Edition



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# BJVP DDU at site-5rd Edition



**03**

**VP AUTOMATIC  
PIGGING SYSTEM**

## **Customized Product**

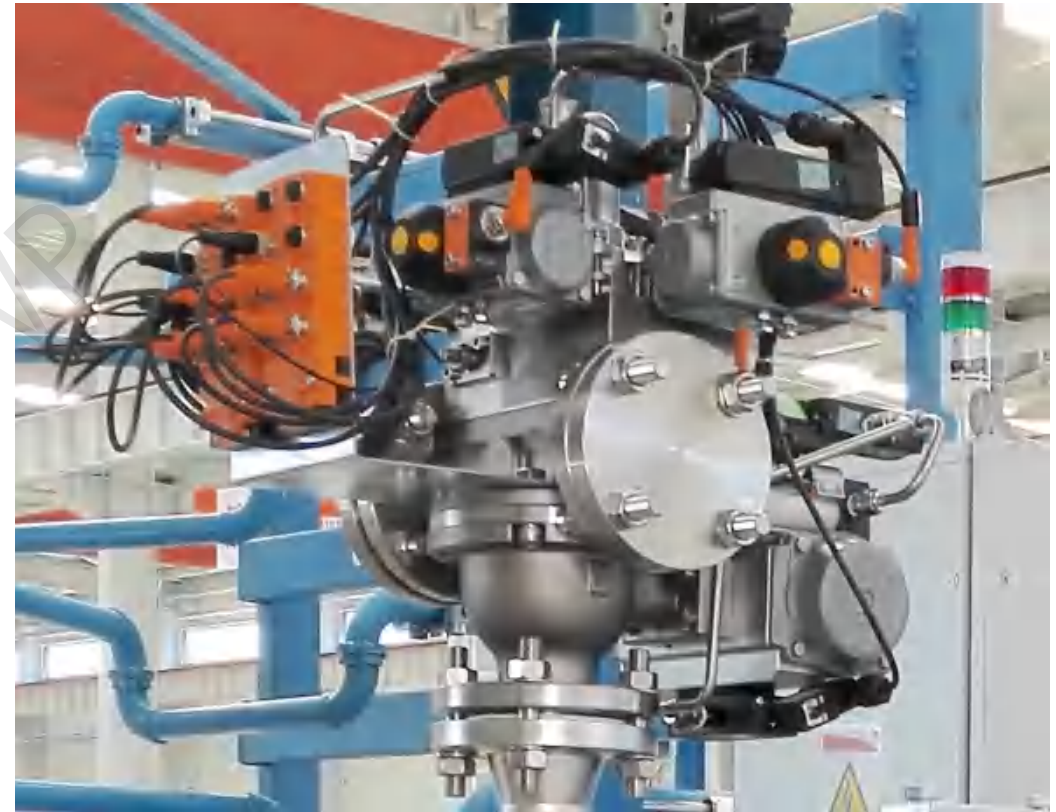
- 1- Chemical Process Pigging System**
- 2- Sanitary Process Pigging System**
- 3- Automatic Pigging**
- 4- Manual Pigging**

# VP PIGGING SYSTEM



VP PIGGING SYSTEM is designed to clean up the remaining liquids in pipeline. The equipment can be classified into pigging launching/receiving station, pigging receiving station and intermediate station. All these three stations can be installed with single ball valve or double ball valve.

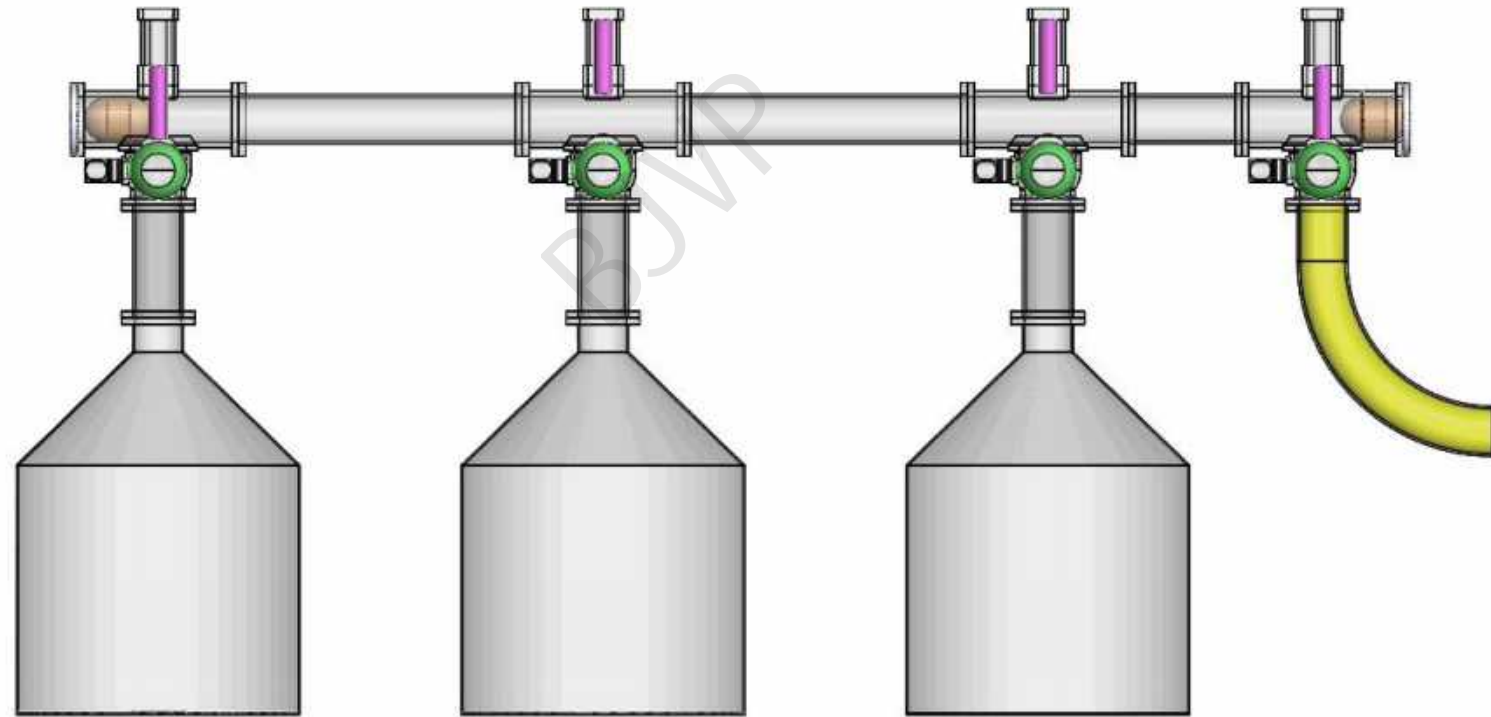
**The technology has been audited , examined and granted by STATE INTELLECTUAL PROPERTY OFFICE OF THE P.R.C. The products has passed the ISO9001-2000 International Quality Control System Certification and CE certificate. The technology is up to the world advanced level.**





# VP Pigging Demo

## 2 Pigs System

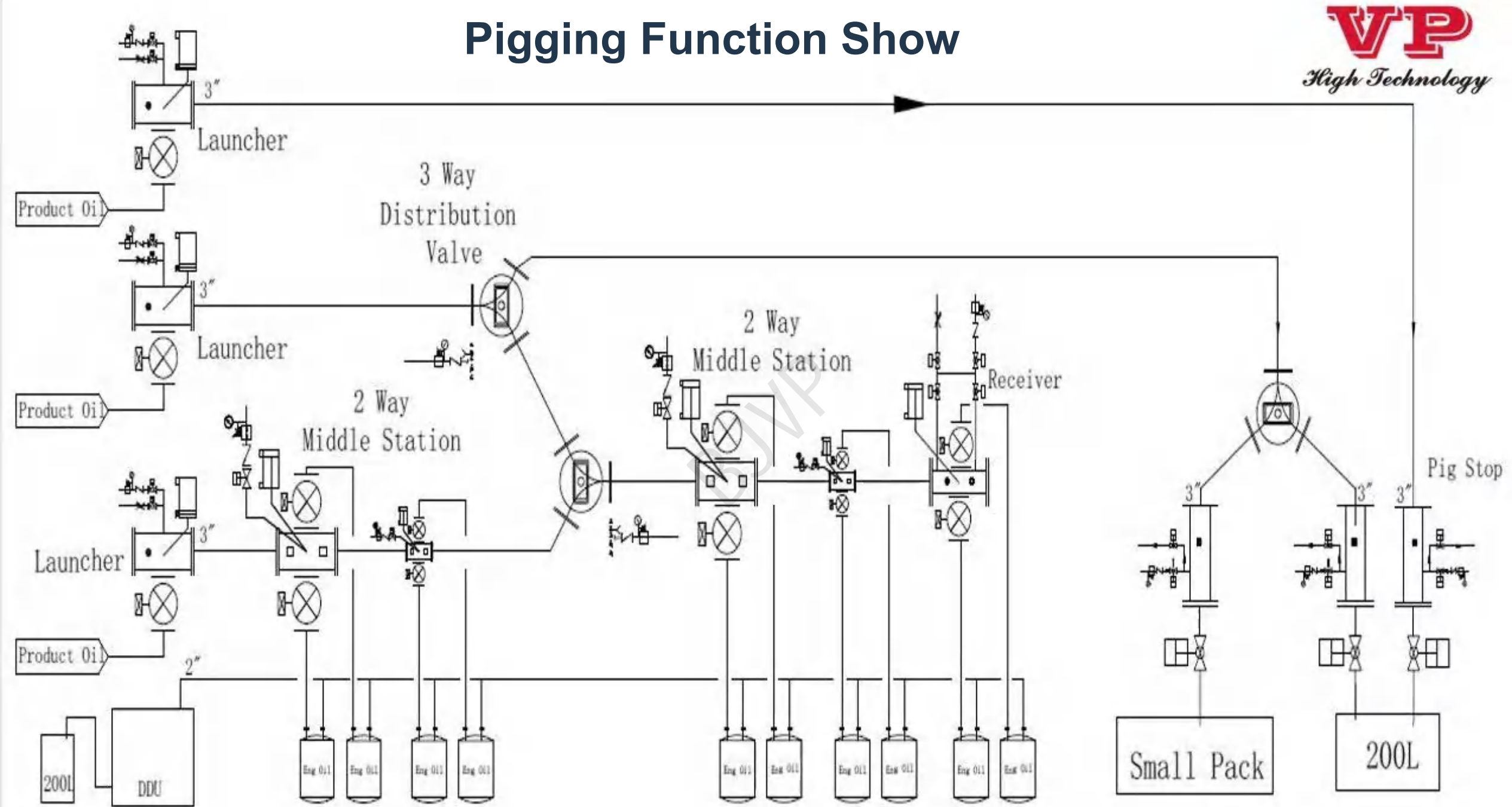


# VP Pigging Demo

## Pigging Site Show

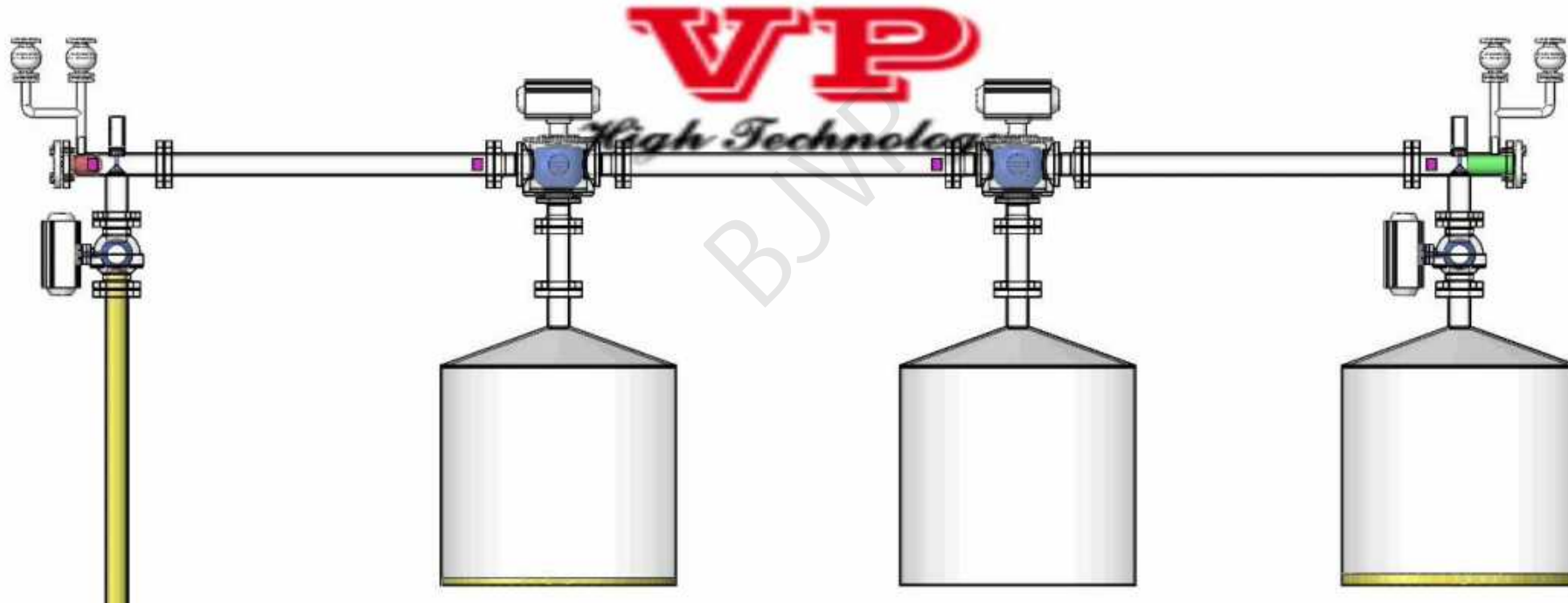


# Pigging Function Show



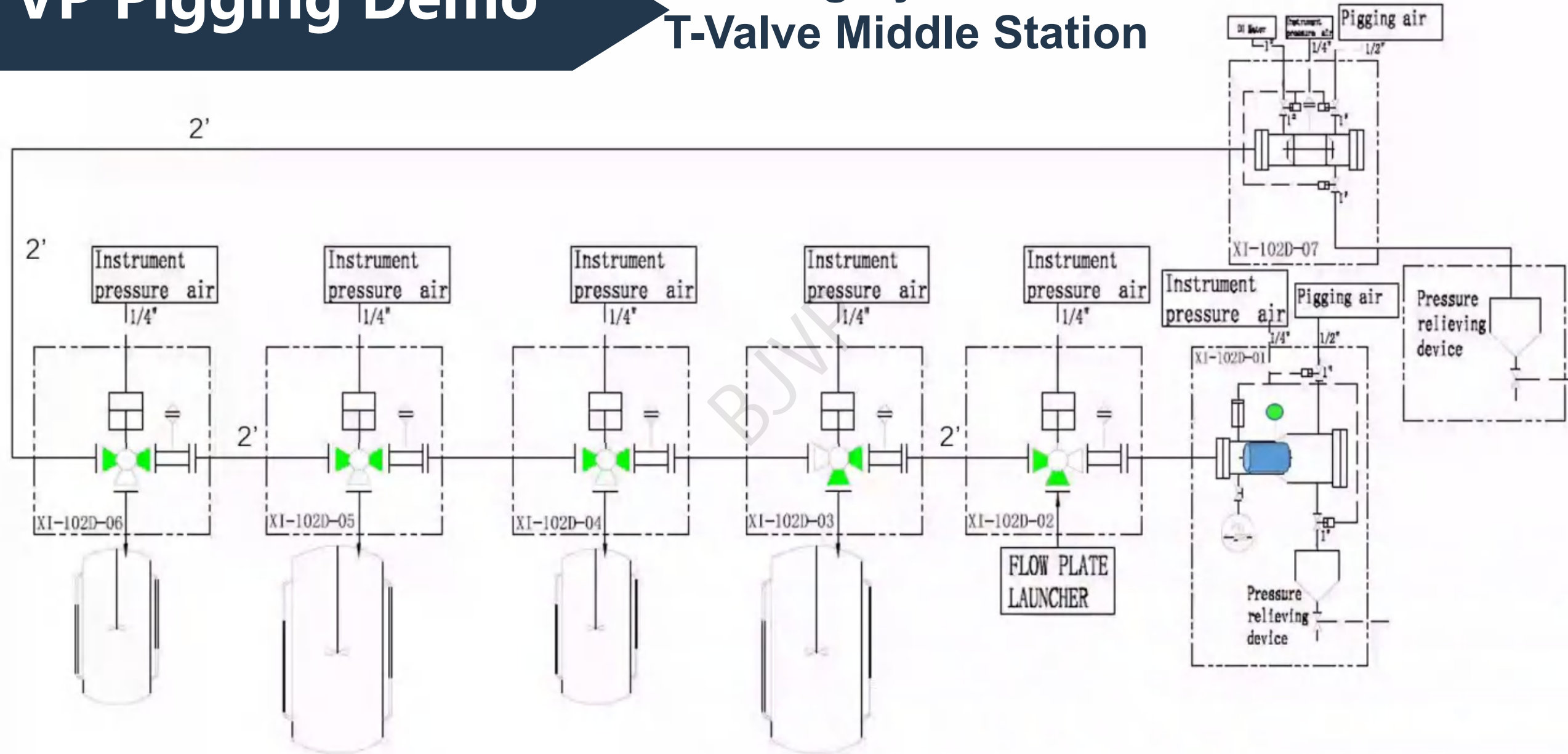
# VP Pigging Demo

## 1 Pig System & T-Valve Middle Station

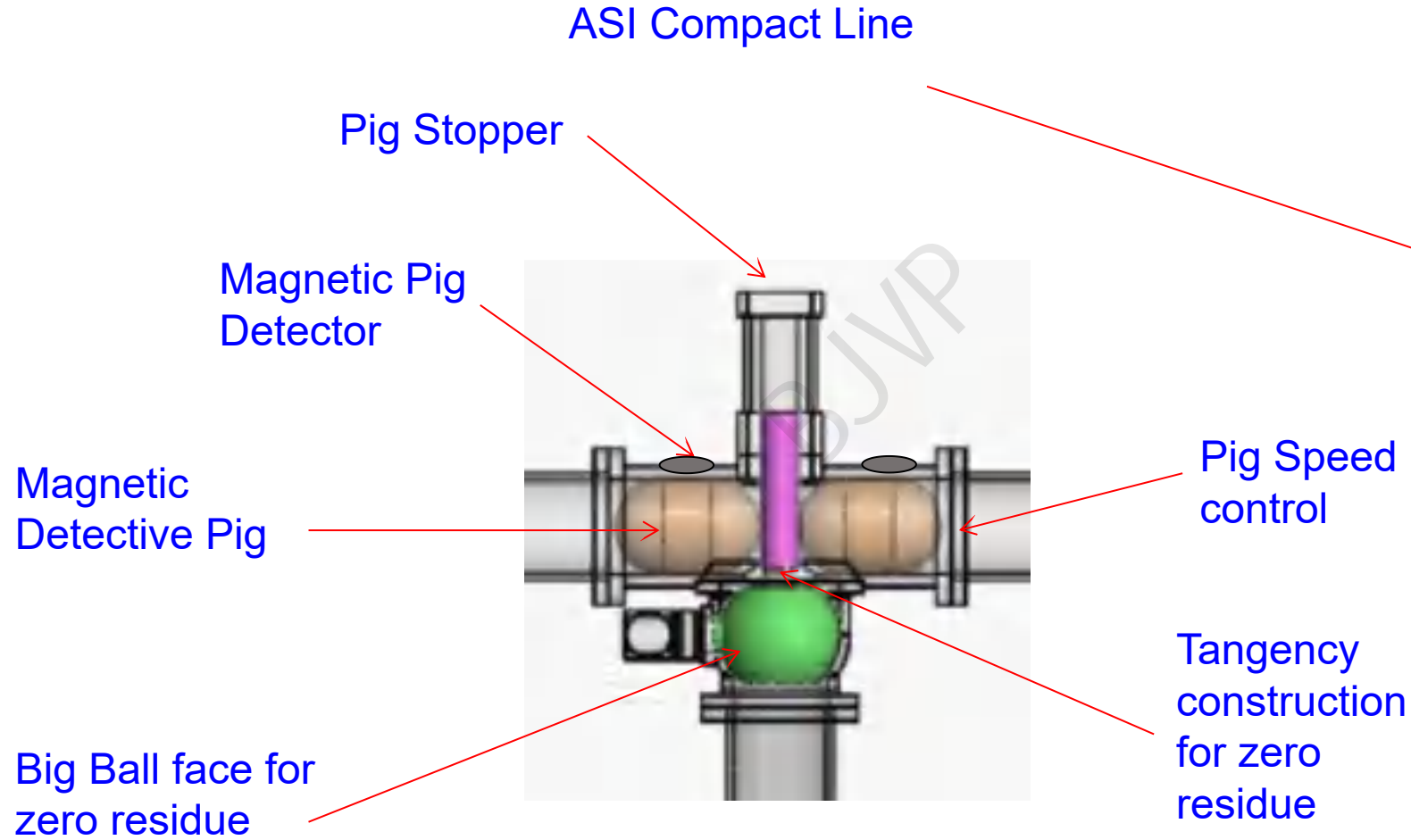


# VP Pigging Demo

## 1 Pig System & T-Valve Middle Station



# VP Pigging Features



- **General data of the pigging system:**
  1. Ball Valve and Pigging line is integrated, Material: 304SS
  2. Electric supply: 24VDC
  3. Protection: IP65
  4. Design Pre.: 20bar
  5. Design Temp.: -30°C ~ 120°C
  6. Pig Speed: 1.0-1.5m/s (Average )
  7. Air supply Pre.:5-8bar
  8. Accessories in actuator: Air control valve, Pre.reducer, Pre.Guage, Check valve

# Main Features



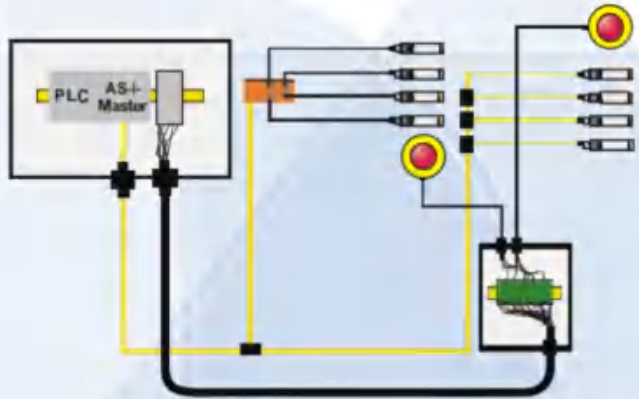
- The following functions of Pigging system are realized through pigable:
- Cleaning up the inner pipeline completely
- Sweeping the pipeline
- No cross contamination when transferring different liquids
- The pigging system is controlled automatically.
- When the liquid is transferred through the main pipe, the remaining liquids can be swept to any named branch pipe so that the cross contamination will be avoided.
- This system is equipped with zone-residue and solid metal construction.
- Easy to operate, capable of adaption.
- Widely used in the field of lube oil, additives, edible oil, painting and coating.



# Main Features



AS-I Field wiring mode 现场接线方式



ASI Module

IFM  
ASI Compact  
Line



ASCO /FESTO  
Solenoid Valve

# Main Features

Commen Electric Box



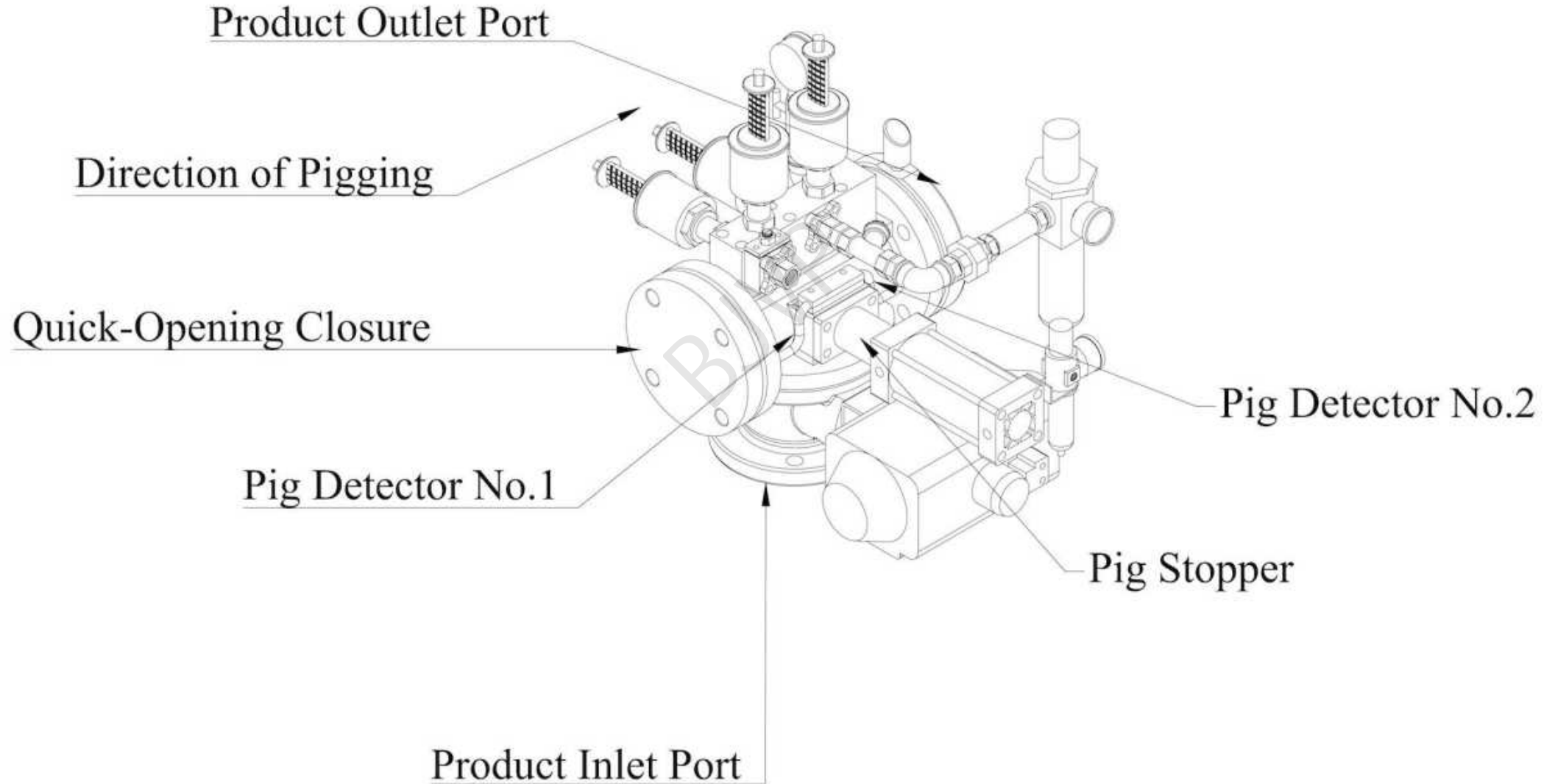
ASI Electric Panel



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# Main Features



# Main Features



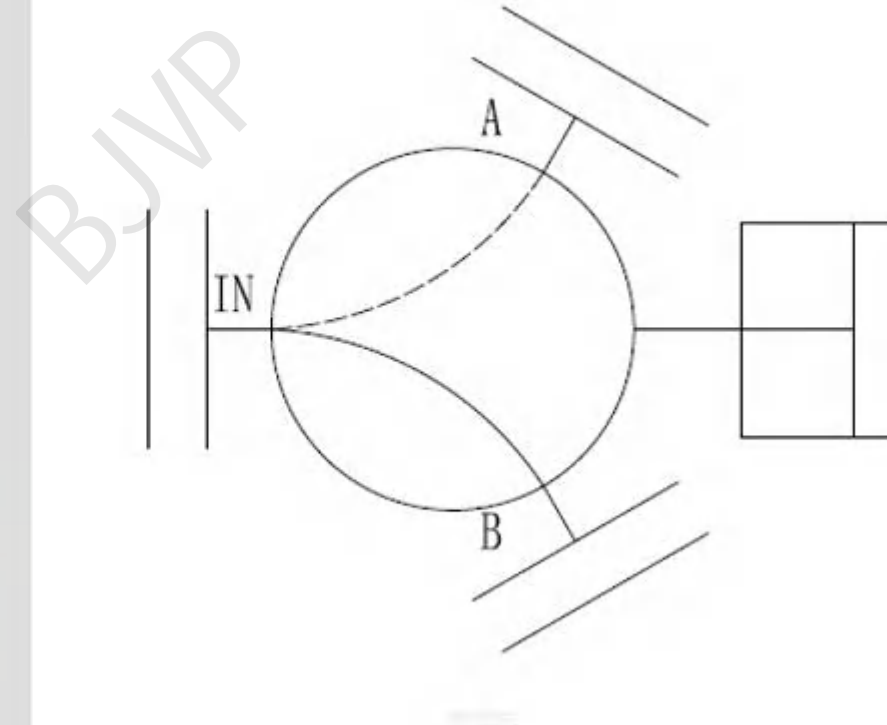
- VP Pigging system has the automatic/Manual function.
- The pigging station status is monitored by PLC.
- Product valve on/off
- Air line valves status.
- Pig location monitor



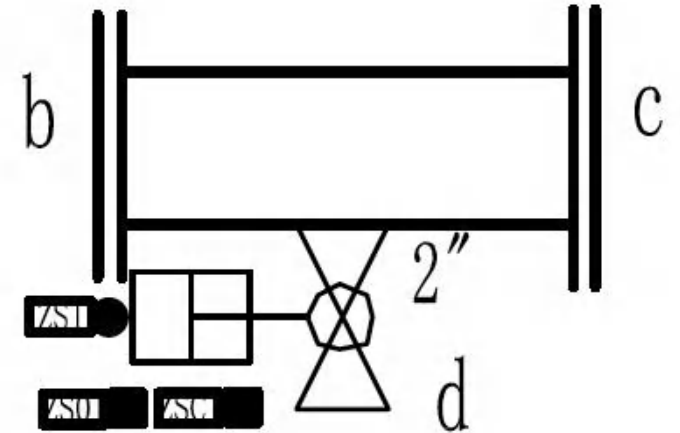
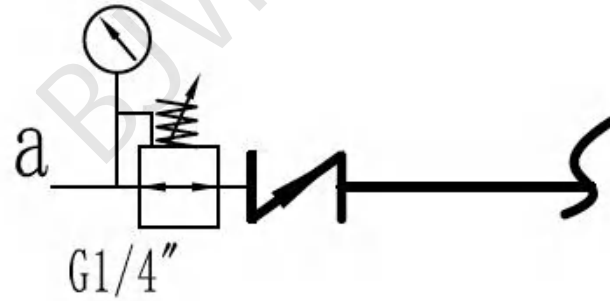
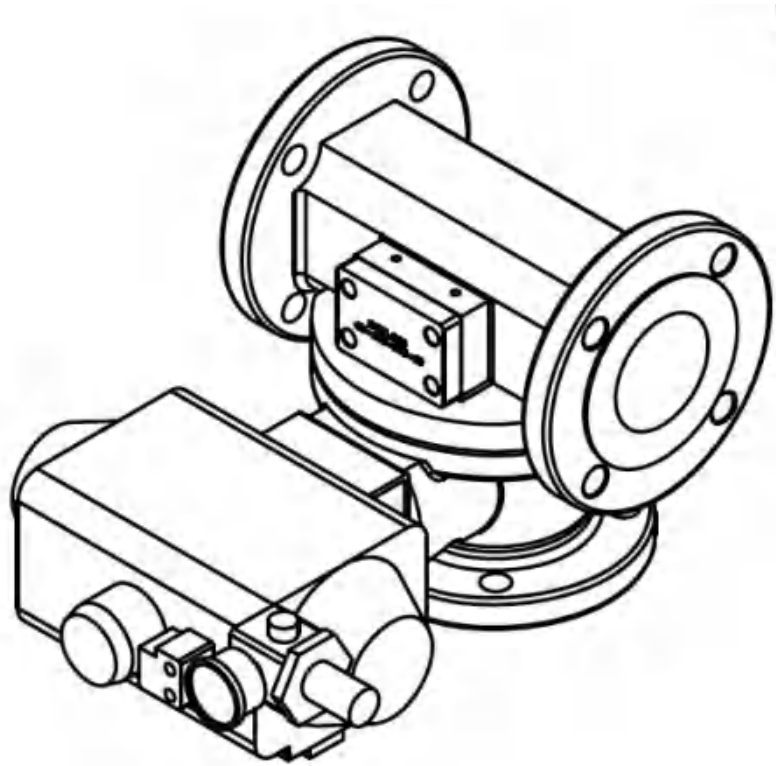
# VP PIGGING SYSTEM Product Series



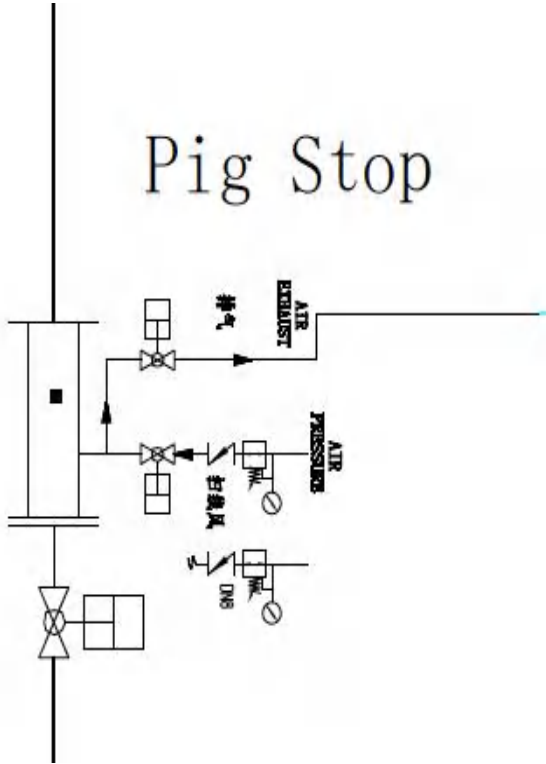
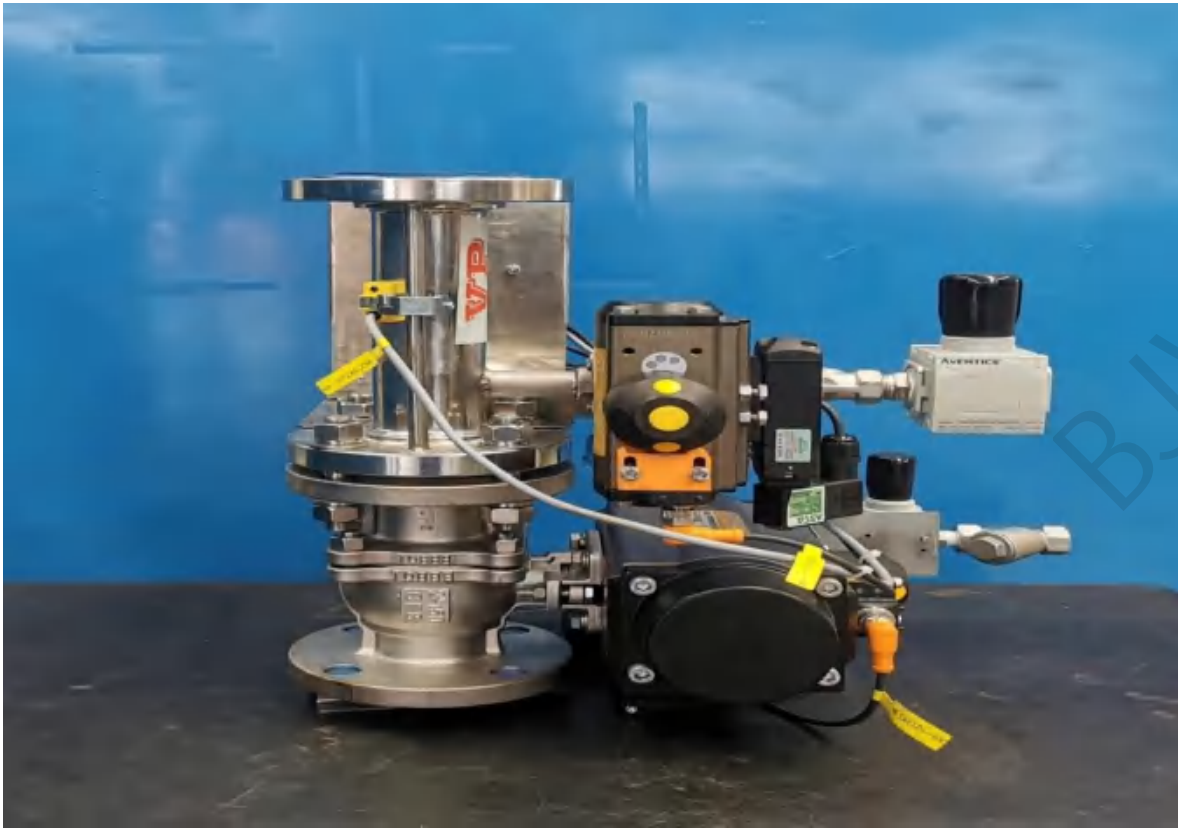
## 3 way distribution Pigging Valve



# 3-Bypass Middle Station



# 4-PIG STOP

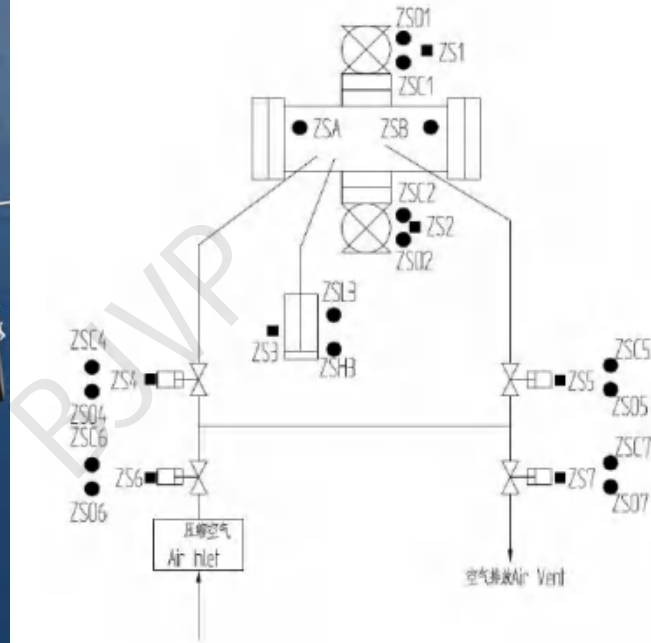


# Pig Stop

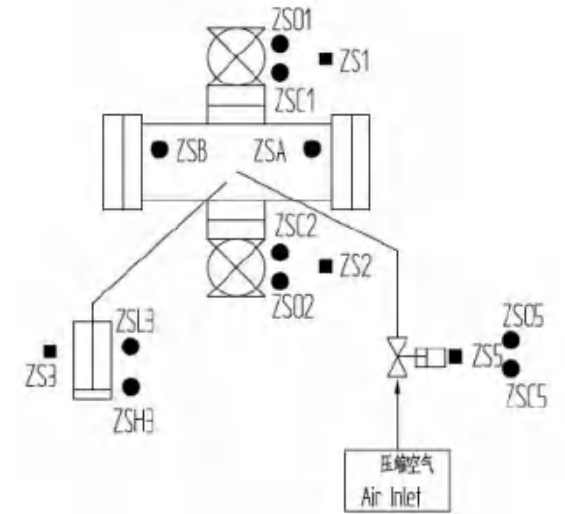




# 5-Twin product Pigging Valve



Twin product  
valve Launcher/Receiver

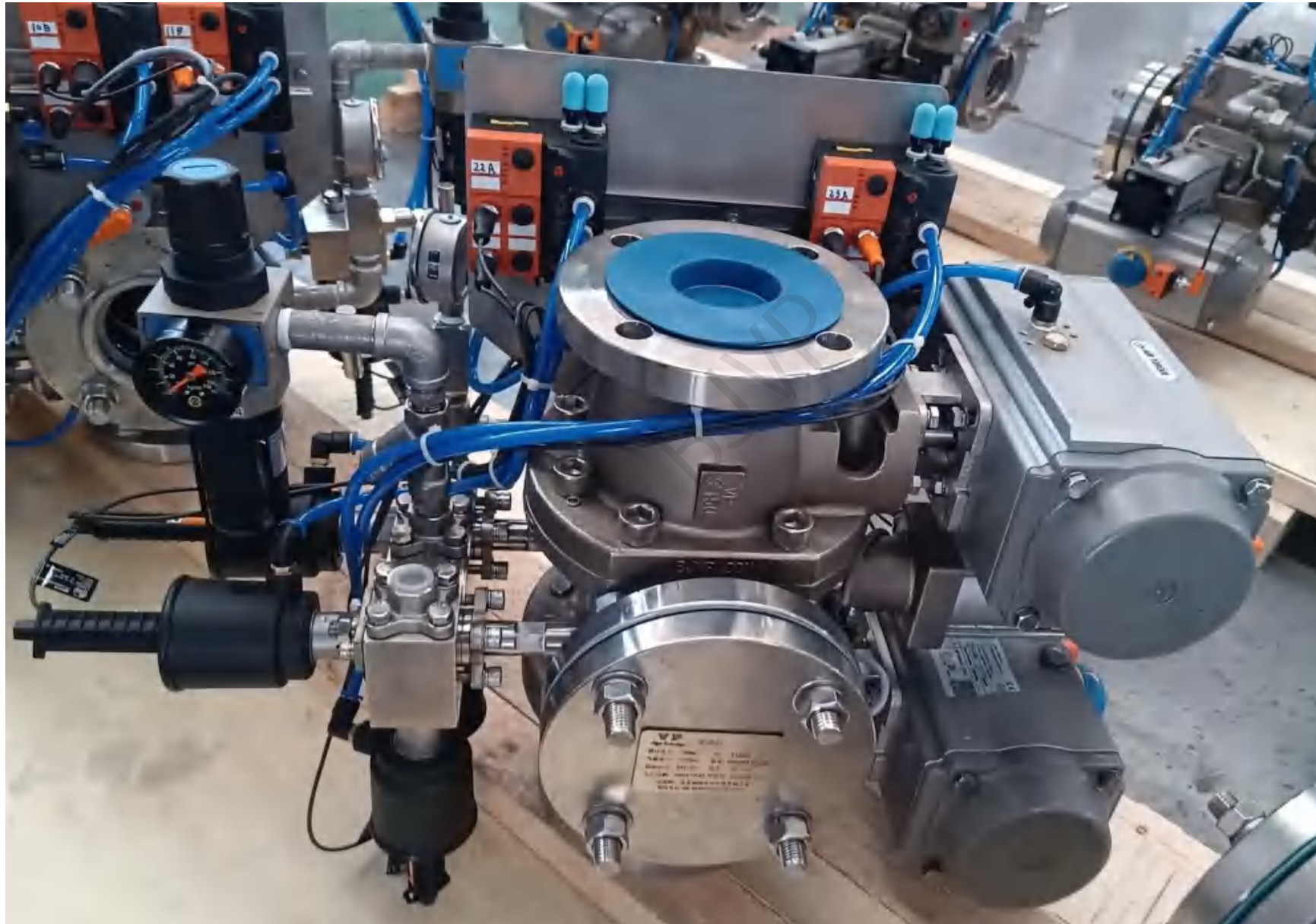


Twin product valve  
Middle Station

# 2 Product Valve-Launcher/Receiver

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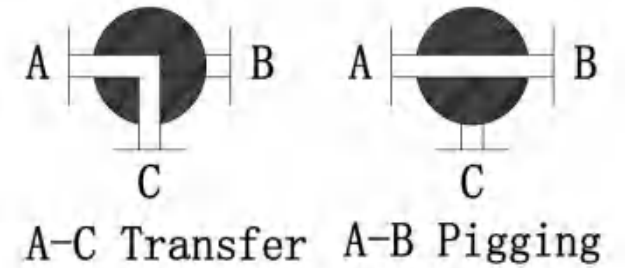
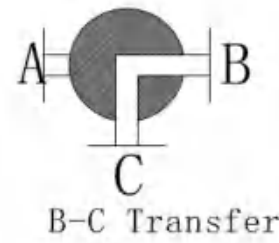
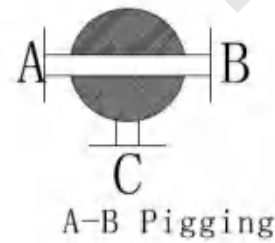
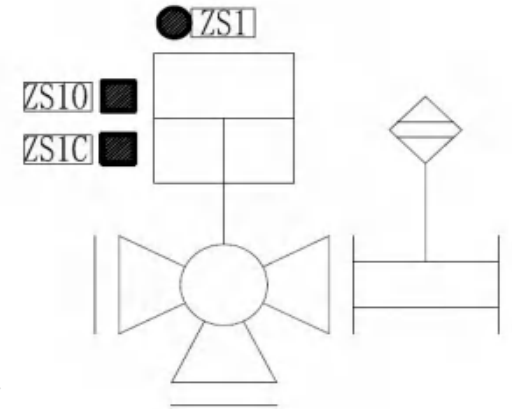


# 2 Product valve – Middle Station



# 7-T-Valve

## T-Valve Pigging System



Type 1

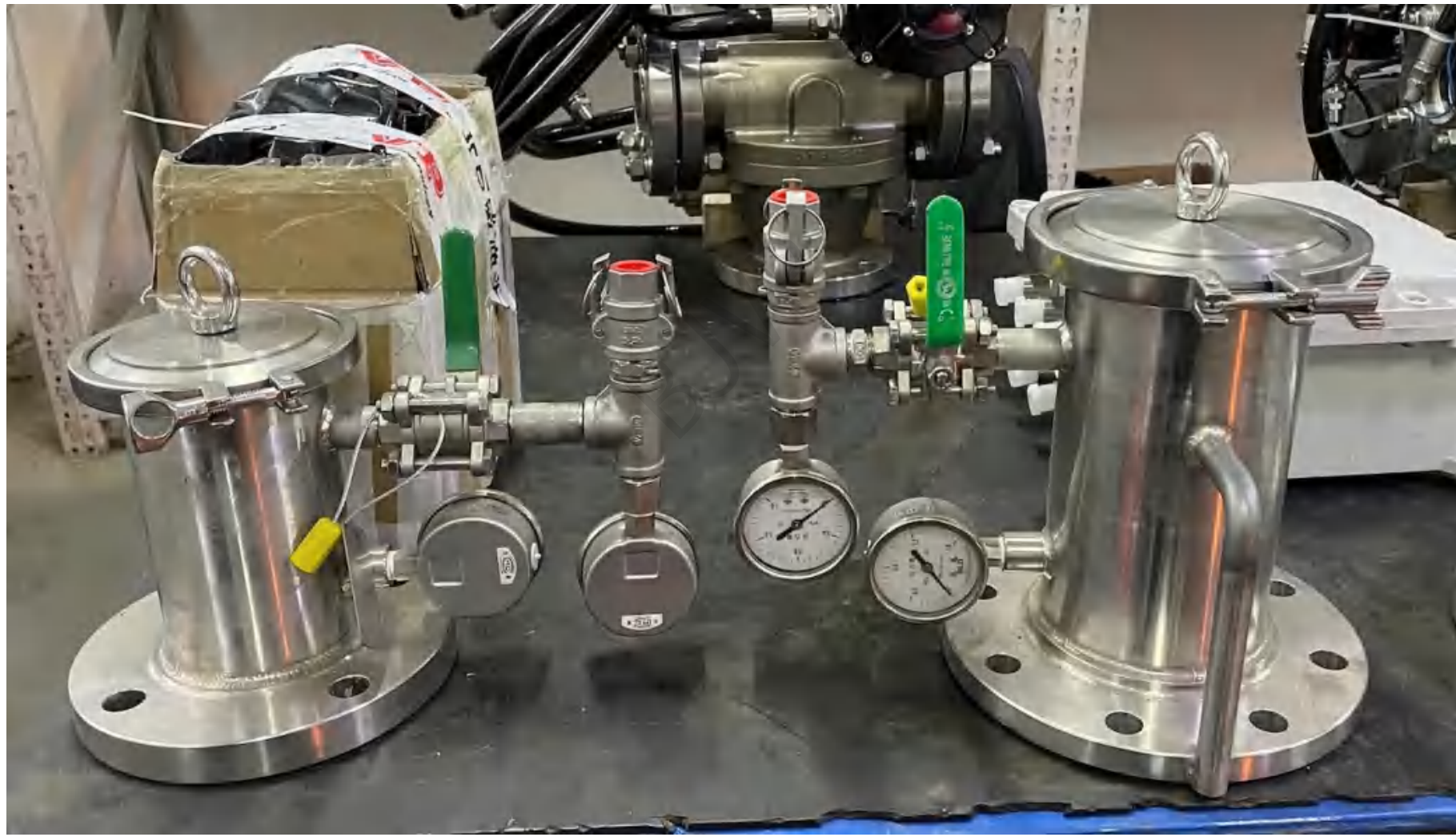
Type 2

# T-Valve

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# 8-Pig Catcher



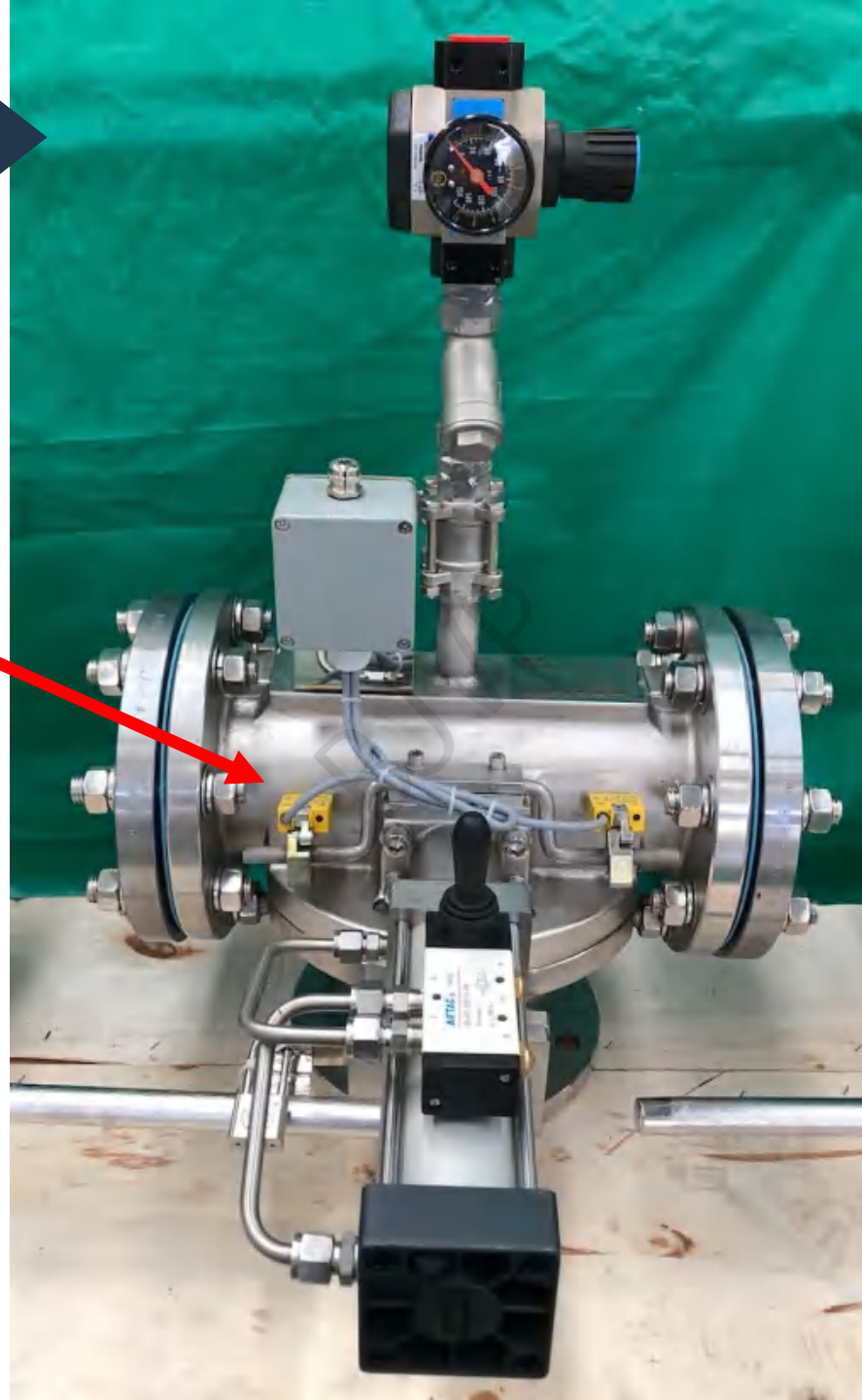
# 9-Pigging Airline Demister



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# Structure

- Pig Detector



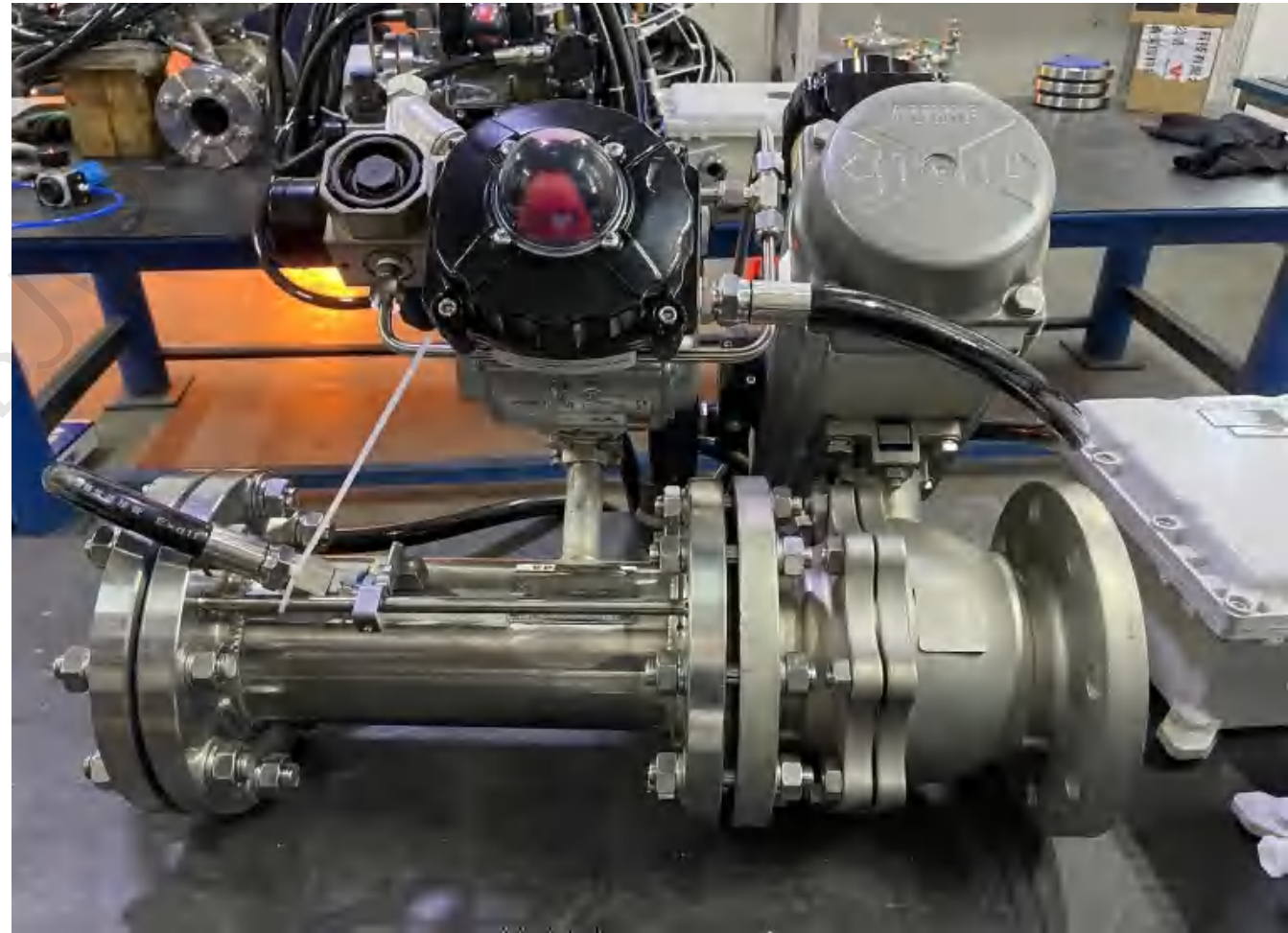
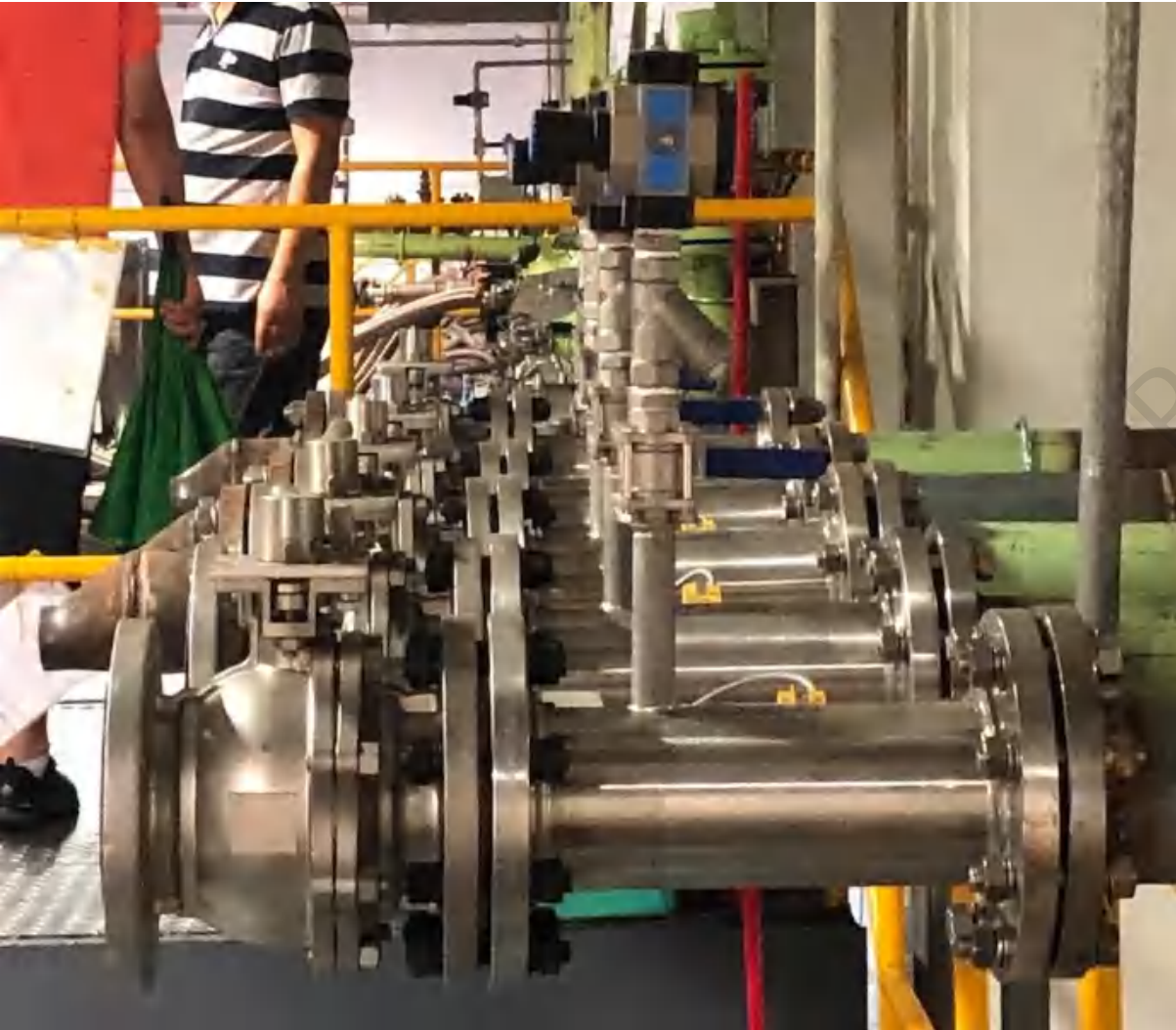
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# VP PIGGING SYSTEM Product Series

Pig Stop

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# VP PIGGING SYSTEM Product Series



BJVP Pig station-3 way



BJVP Pigging Tee



# VP PIGGING SYSTEM Product Series

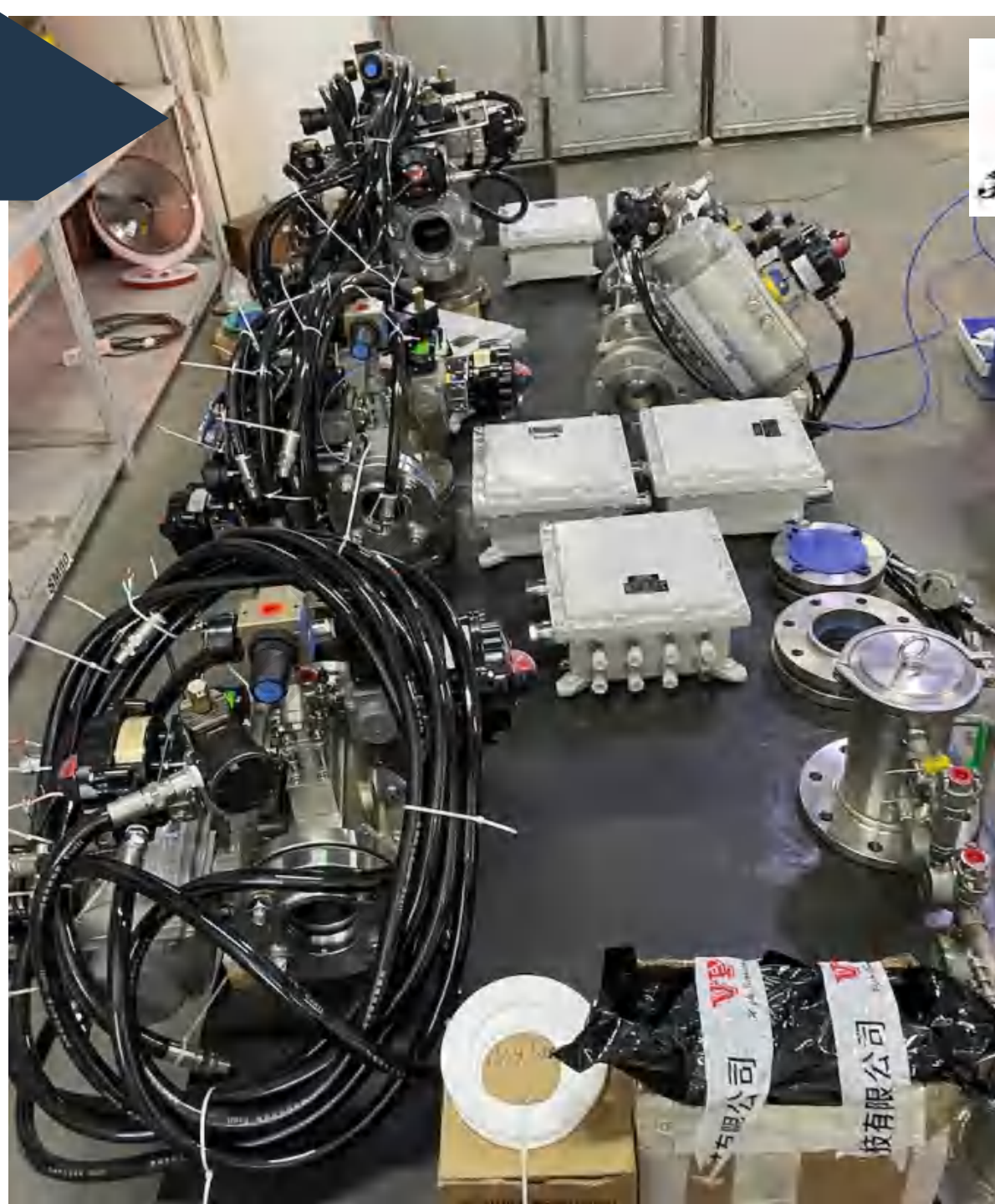


## BJVP Pig station-Mid-station



# Explosion Proof

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# VP PIGGING SYSTEM Product Series



## BJVP Pig station-Middle Station



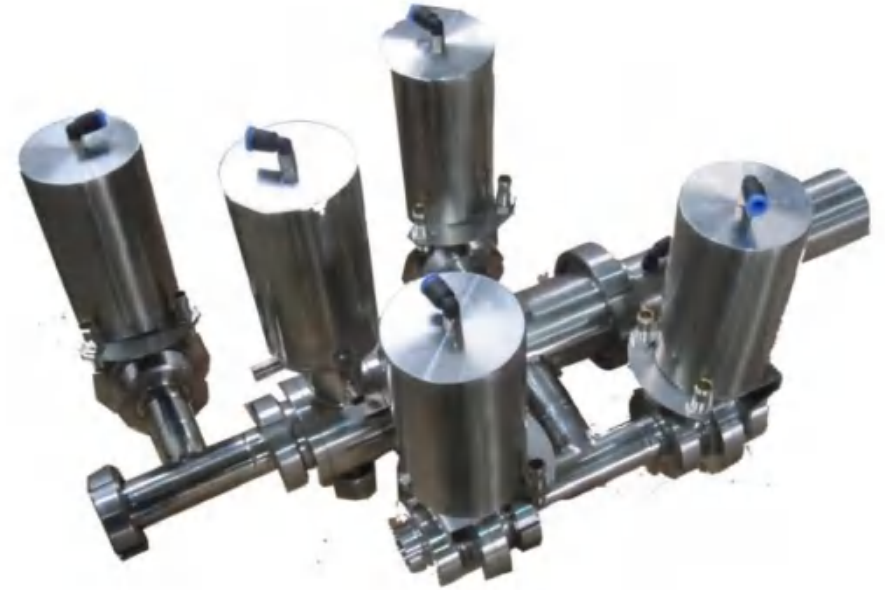
## BJVP Pig station-Receiver



# Sanitary Pigging System

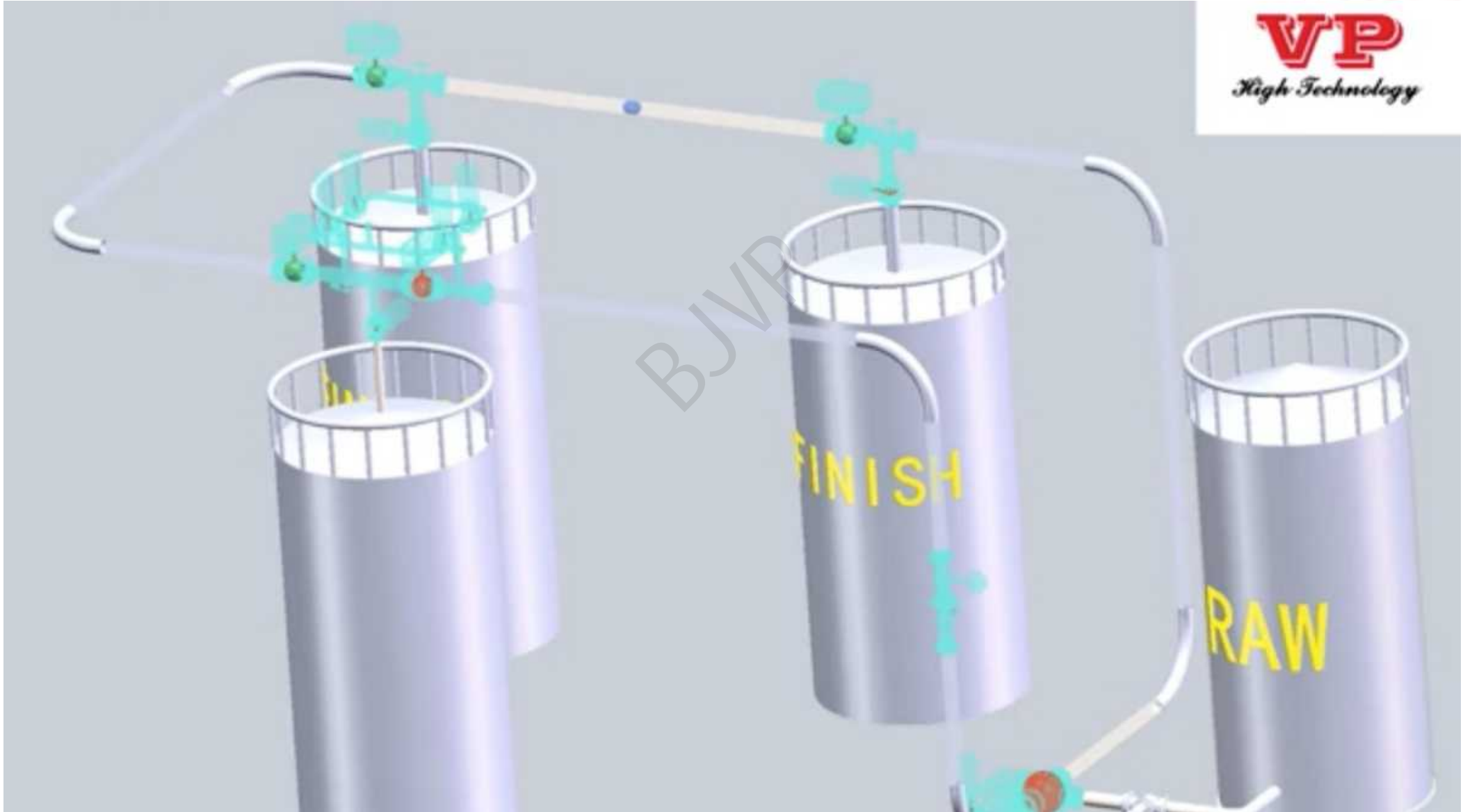


## Sanitary Pigging System



# Sanitary Pigging System

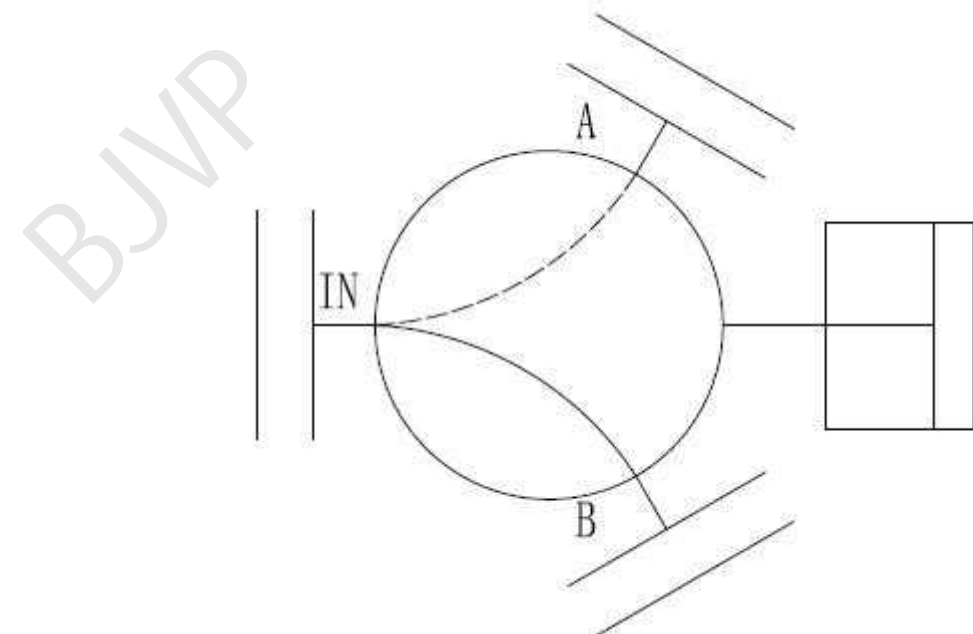
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# Sanitary Pigging System



## Sanitary 3 way distribution Pigging Valve





# Sanitary Pigging System



Sanitary T-way valve



## Pigging System Piping Construction Guide

There are some important issues to **remind** in the construction work of pigging system:

1. The straight pipe between two elbows should not be less than 10D;
2. Each end of elbow should have straight extend ,length should not be less than 1.5D ;
3. Elbow should not installed direct to the pig station. There should be at least 6D straight pipe between the elbow to the pig station.
4. Elbow should be standard 45,60,90 degree. Irregular degree elbows are not recommended.
5. Elbow 5D or larger are recommended.
6. Each pig station need proper independent support. All the pigging pipes should have enough support per 4-6 meters to avoid pipe misalignment after disassemble.

# 10-BJVP Magnetic Pig

BJVP Pig is designed by BJVP and made the world most advanced PU technology in France.

BJVP developed various material to fit for the right application.

The lip seal is separated with the pig body. Lower cost for the maintenance.



BJVP



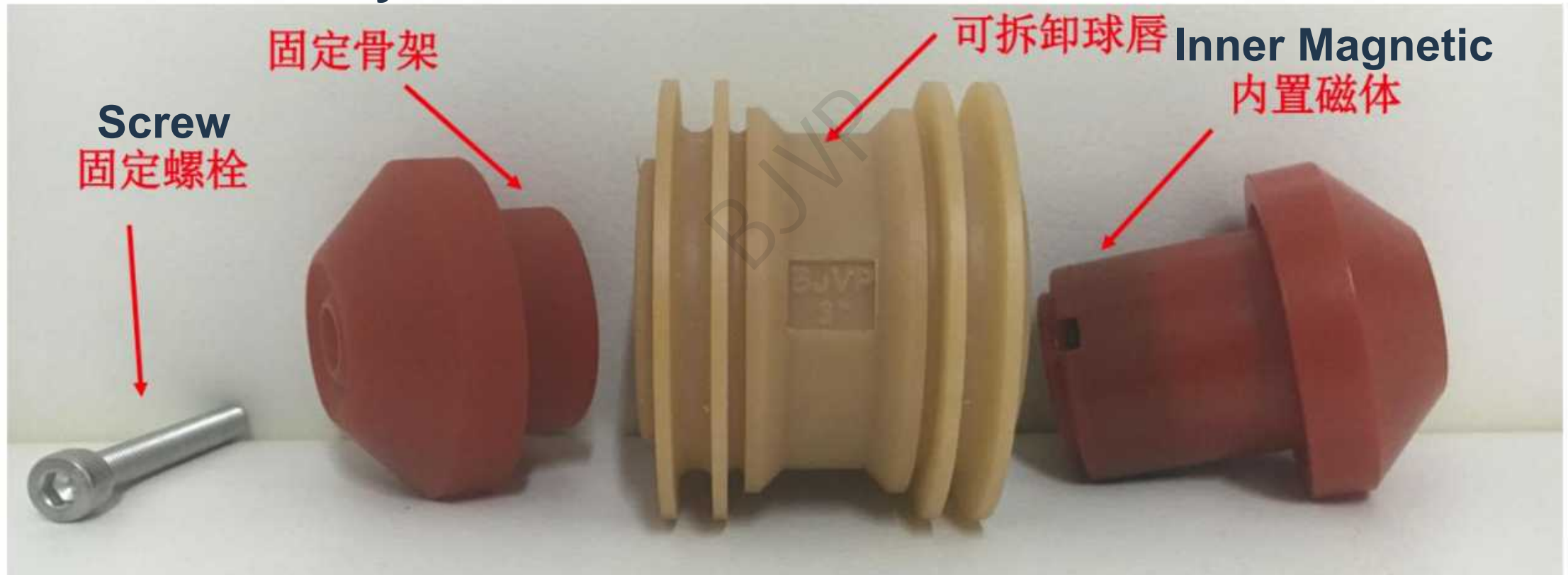
VP

# BJVP Magnetic Pig



Body

Replaceable Lip



固定骨架

可拆卸球唇

Inner Magnetic

Screw

固定螺栓

内置磁体

# BJVP Pig Material



- **COMPOSITE PU** 聚氨酯复合材料
- **FLUOROELASTOMER** 氟橡胶
- **SILICON RUBBER** 硅橡胶
- **STEEL BRUSH** 钢刷

# 11-Pigging Pipe & Elbows



- **5D ELBOWS**



# VP Pigging

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# VP Pigging



B



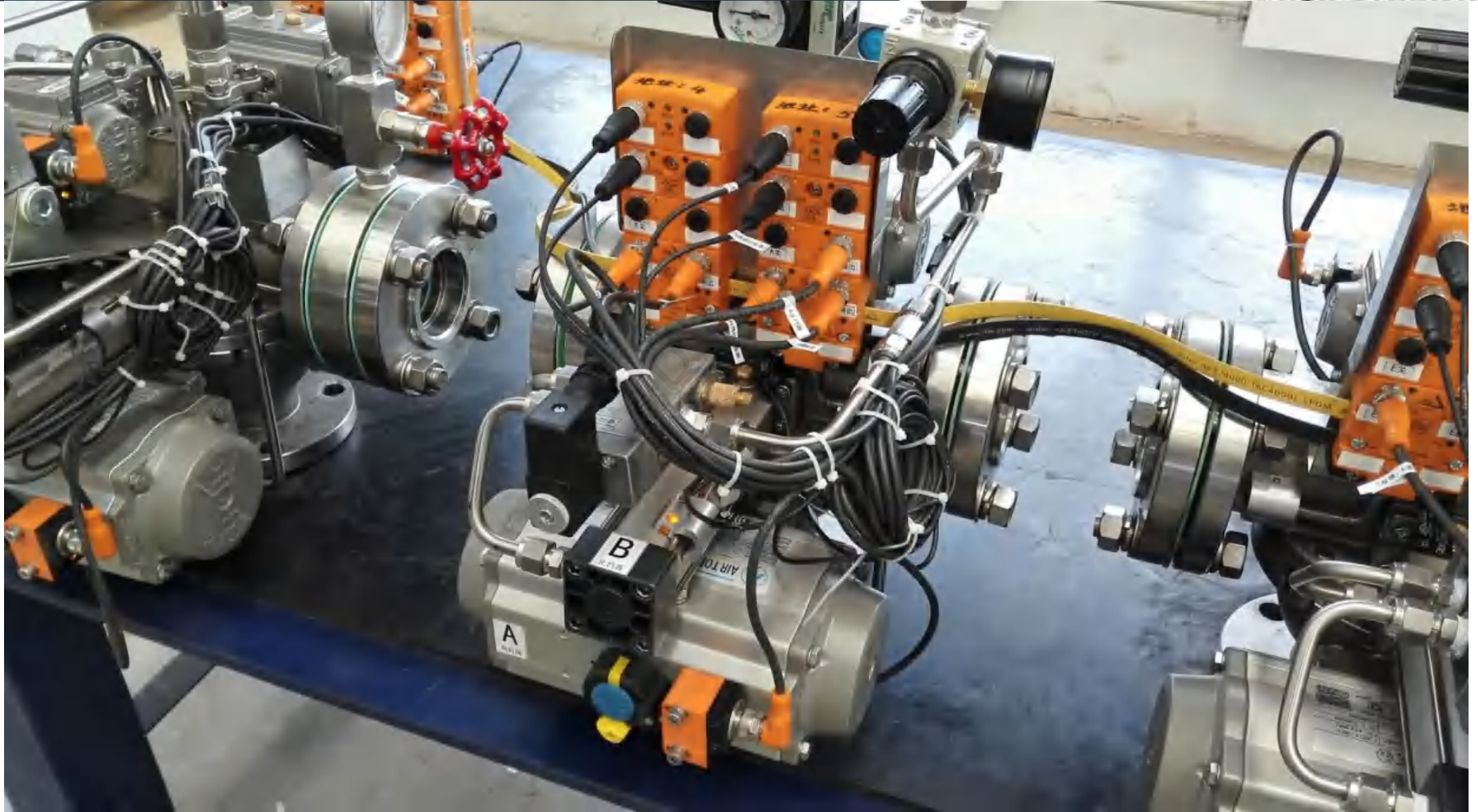


# VP Pigging



# VP Pigging-Launcher/Receiver

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# VP Pigging

**VP**

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**04**

**VP MANUAL  
PIGGING SYSTEM  
At Pier**

# Pigging Launcher & Receiver



Pigging launcher & receiver consists of quick opening closure, mainly barrel, reducer, the second barrel, into the material inlet pipe (launcher for the material inlet, receiver for the material outlet) pressure gauge adapter, sewage out fall, vent pipe, saddle type safety valve (intelligent pigging receiver is also provided with a balance port). The attachment of connected with pigging launcher & receiver are :pressure gauge, drain valve, vent valve, safety valve, ball indicator, and the matching flange, bolts, nuts and washers.



# Quick Opening Closure



## Clamp ring QOC



### Definition

Quick opening closure is used for pressure pipeline and pressure vessel, a circular opening and can realize a mechanical device for opening and closing quickly.

### Structure

It mainly consists of the cover, the base, opening mechanism, seal ring, tumbler, safety lock plate, pressure relief. Self-locking function consist of safety lock plate and pressure relief (closure self-locking, shake-proof, loose –preventing, and opening under secondary pressure relief)

### Features

XL series of quick opening closure is our self-developed patented product (which patent No. is ZL03 2 13594.7) which is designed and manufactured refer to the most advance products, and the source of standard is SY/T0556-2010 *Quick Opening* .No comparative rotation between the sealing ring which is uneasy to be damaged and the sealing surface when the closure is tightly closed so as to protect the sealing system better. The external ring is three-part lock ( which interlocking area is more than 90%), tightly locking while achieving simultaneous operation, uniform forces, reduced opening length of lead screw which makes the switch more flexible and reliable. Meanwhile, the lifting surface area of the undercut is enhanced and proper for natural pipeline with high pressure and large diameter. The main pressure parts of quick opening closure are made of integral forge steel without weld assembly.



**05**

# **BJVP Manifold Technology**

- **1-AUTOMATIC VALVE TYPE  
MANIFOLD**
- **2-MANUAL CART MANIFOLD**
- **3-MANUAL VALVE TYPE MANIFOLD**

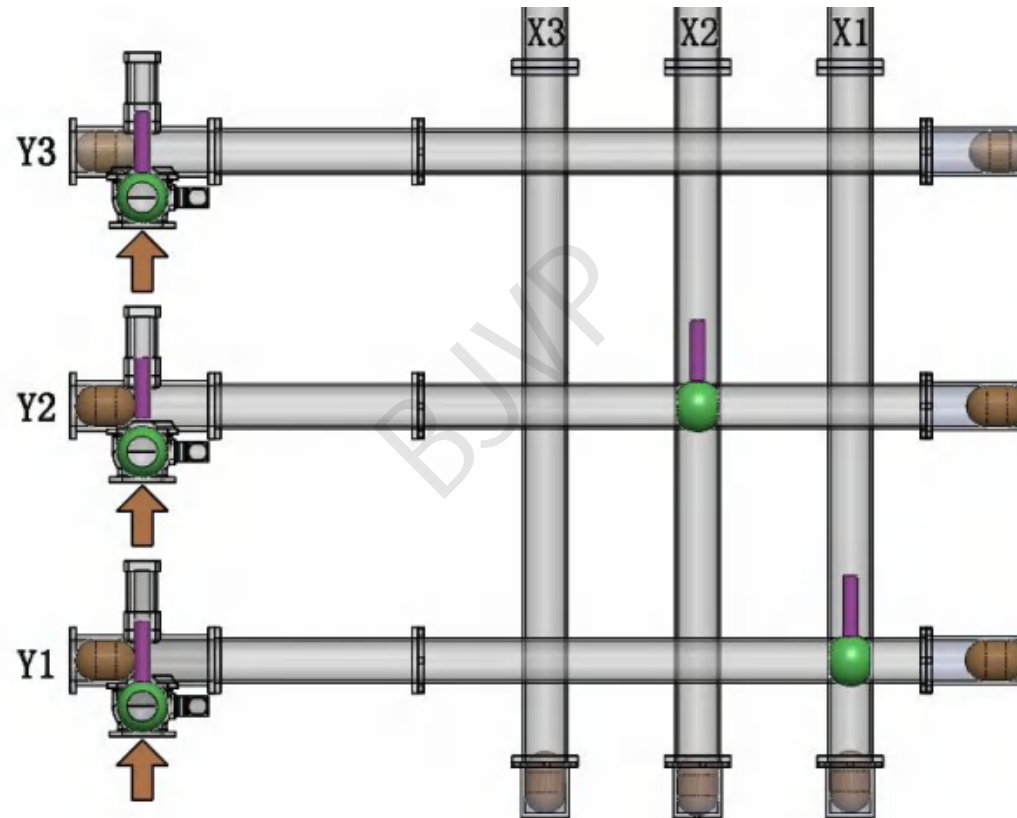


# Manual Manifold

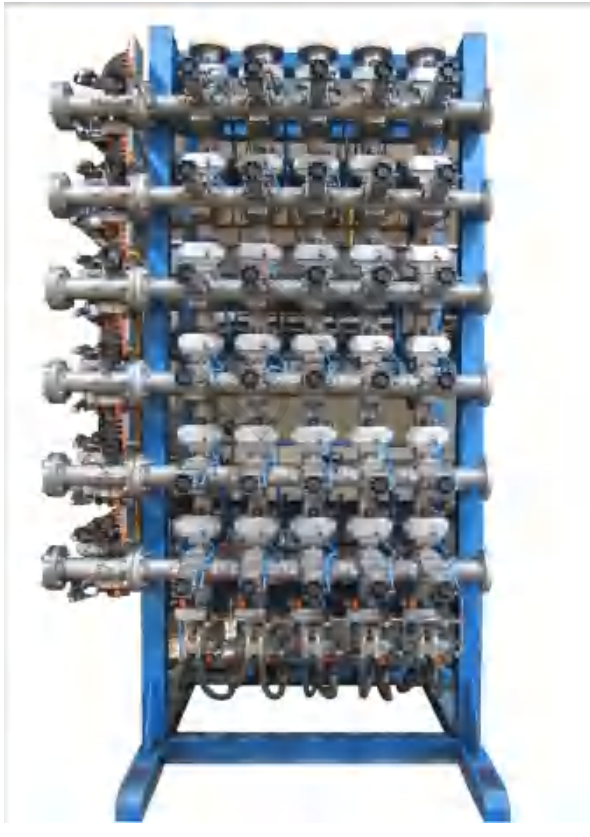
**VP**  
*High Technology*



# Automatic Manifold Principle



# Automatic Manifold



# VP Manifold



VP manifold is designed to simplify piping layout, and thoroughly clean up the residue liquids in pipelines by pigging system .



# Automatic Manifold

**VP**  
*High Technology*



# Automatic Manifold



**VP**

*High Technology*

NULEON

# Manifold Operation



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A decorative graphic on the left side of the slide, consisting of a dark blue arrow pointing right, with a light blue arrow pointing right inside it, and a white arrow pointing right inside that. The number '06' is written in white inside the dark blue arrow.

**06**

**BJVP ABB**  
**Automatic Batch**  
**Blending Unit**



# Batch Blending Production



## ABB,SMB,ILB

are designed for the batch blending process.

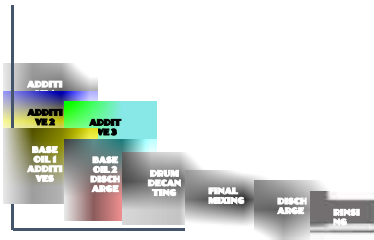
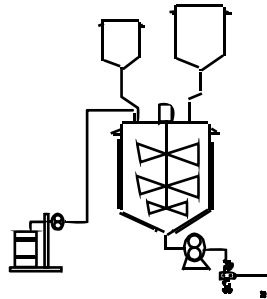
(1) ABB is used for the Small batch and multiple varieties production;

(2) SMB or ILB is used for the Large quantities and varieties production

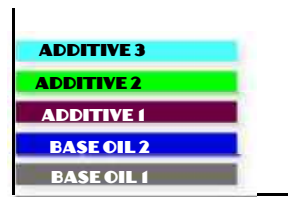
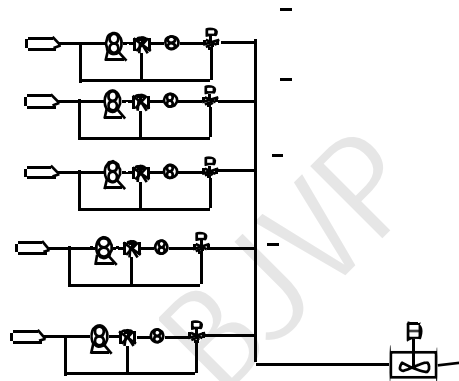
# Comparison of All Kinds of Blending Method



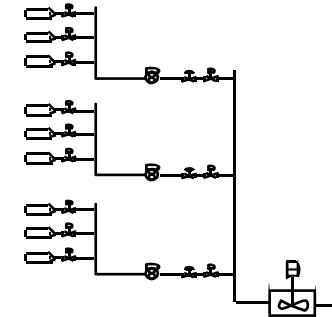
ABB



ILB



SMB



# ABB Main Blending Process

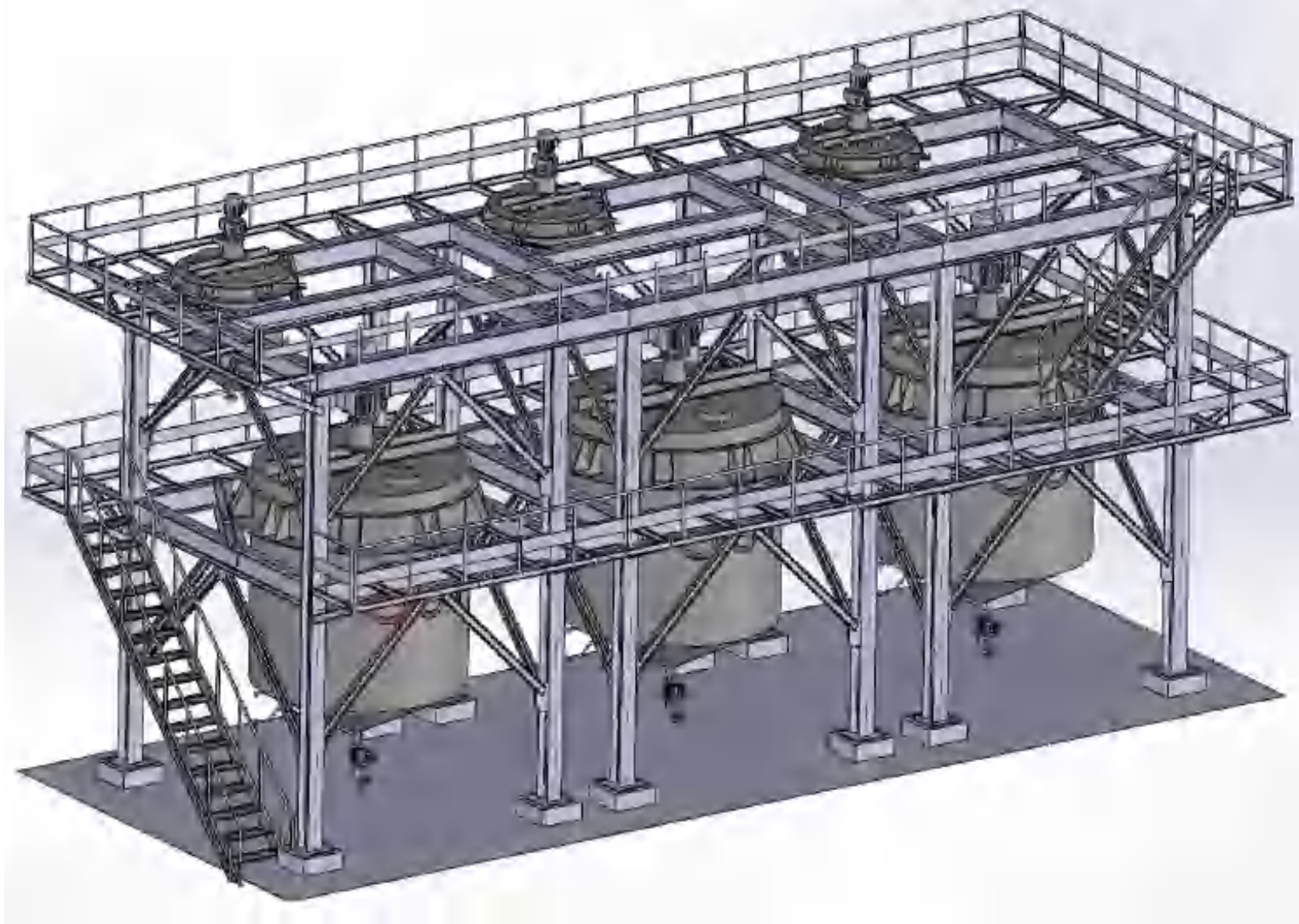


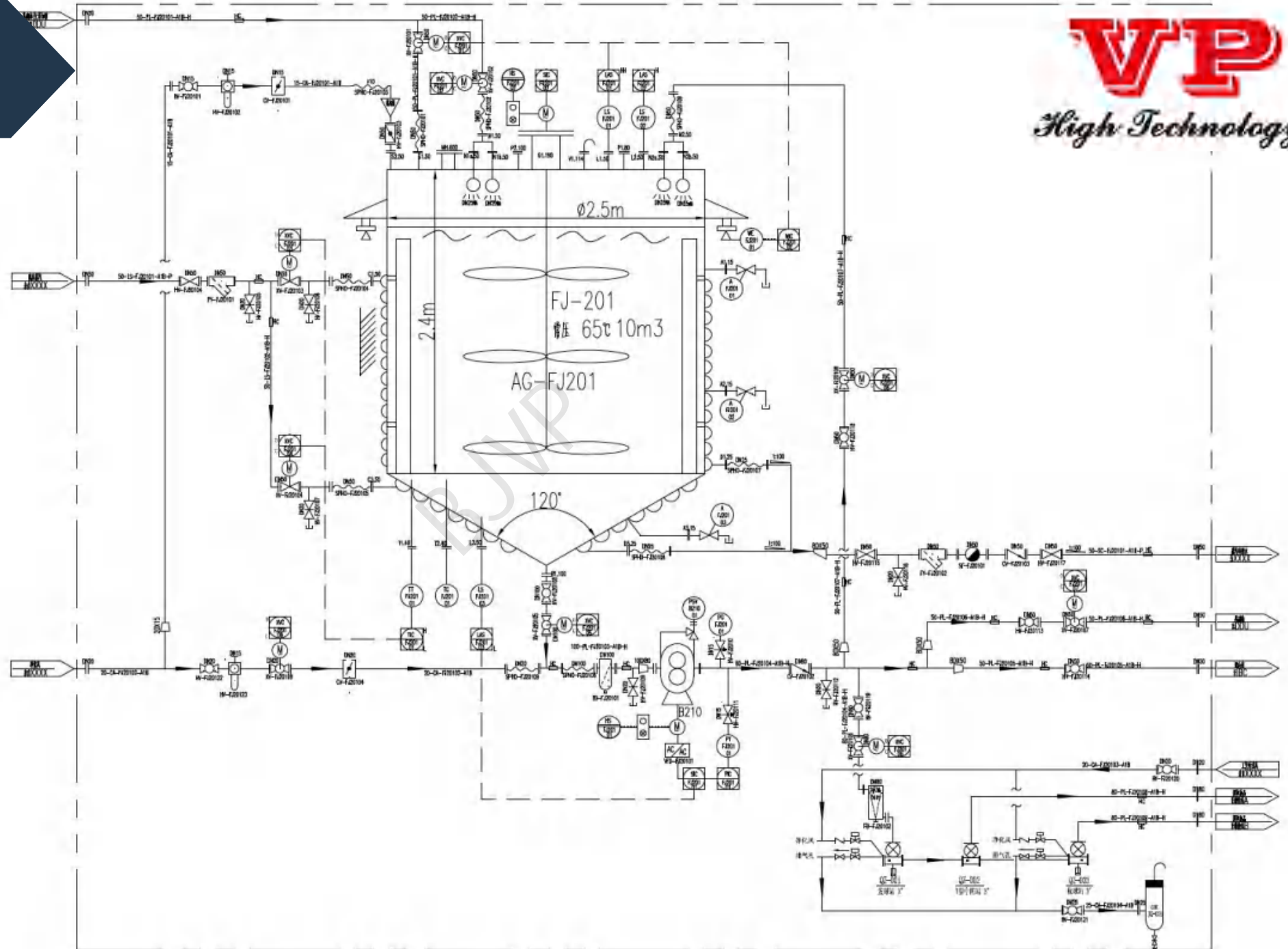
- a. Add the base oil into main blending kettle
- b. Add the additive to main blending kettle
- c. Add the additive from DDU to main blending kettle
- d. Heating and stirring process in main blending kettle
- e. Main blending heating process is carried segment, computer will control the heating process.
- f. The product pipeline also can be cleaned by VP pigging process.



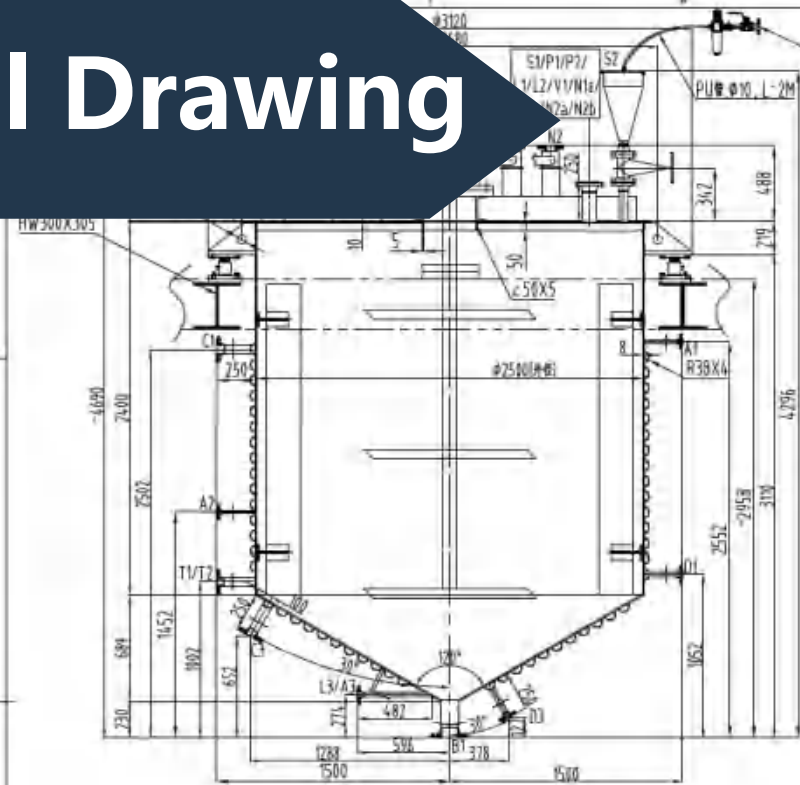
# BJVP ABB Unit Design

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# Detail Drawing



HW300X305

B

4.276

2320

7400

7502

7500

684

1452

1402

652

1457

1452

230

1788

1500

4.87

596

67

378

1500

1450

90°

750

400

850

1000

1070

70°

20°

L3/A3

T1 60°

T 45°

N1

N2

N1

N2

N1

N2

N1

N2

720

20

78

375

375

600

700

900

160°

AV/A2/A3

35°

17 300°

650

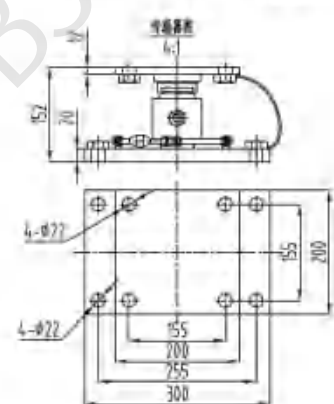
400

240°

770°

C1/A3

875



注物

1) 壳体、端盖、密封及支撑垫板执行相应国家相应标准。

2) 壳体执行GB/T19091-2002 标准, 壁厚不低于4mm。

3) 法兰执行HG/T20610-2009(3) 1526 B1标准。

4) 所有密封材料材质为316L或316LSS。

5) 固体加料口, 配置。

6) 大端头螺栓遵照GB/19703-2000标准。 A1921标准: 六角螺帽遵照GB/T6170-2000标准。 A194 20mm 六角螺帽内加工; 螺帽螺母: 内六角螺帽 GB2 5.8 螺帽使用防松螺母防松垫圈。

7) 壳体外加工(单壁零件): 焊件(5x2.5)处理。焊后使用耐高温或耐腐蚀涂料。执行相应标准。

8) 壳体外加工(双壁零件): 焊件(5x2.5)处理。然后使用防松螺母(灰色)垫圈。执行相应标准。

9) 密封材料: 使用氟橡胶或聚四氟乙烯密封材料。 (密封材料需与物料相容)。

设计数据表

设计参数		一类	二类
容器类别		III类	III类
参数名称	容积内	容积内	容积内
工作压力 bar		5	5
设计压力 bar		5	5
工作温度 °C		65	65
设计温度 °C		65	65
介质		腐蚀性	腐蚀性
介质特性	有毒非易燃	有毒非易燃	有毒非易燃
介质密度 kg/m³		899	899
主要受压元件材质		Q245R	Q245R
筒体壁厚 mm		L2	L2
焊接接头系数 φ		0.7	0.95
全部制 m²		15.9	7
光面系数		78.6%	7
安全系数 MPa		7	7
传热面积 m²		15m²	
材料		碳钢	
壁厚 mm		10	
重量 kg		3020	



搅拌电机: YBX3-132M-4-B5/7.5KW/EXDIIBT4/IP65  
 搅拌桨: 二级桨式搅拌  
 搅拌转速: 83RPM

AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD
AS	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD	ASD

每缸 重量 8区 2X24T 基名 每月非  
 型号 FJ201 品牌 10ms

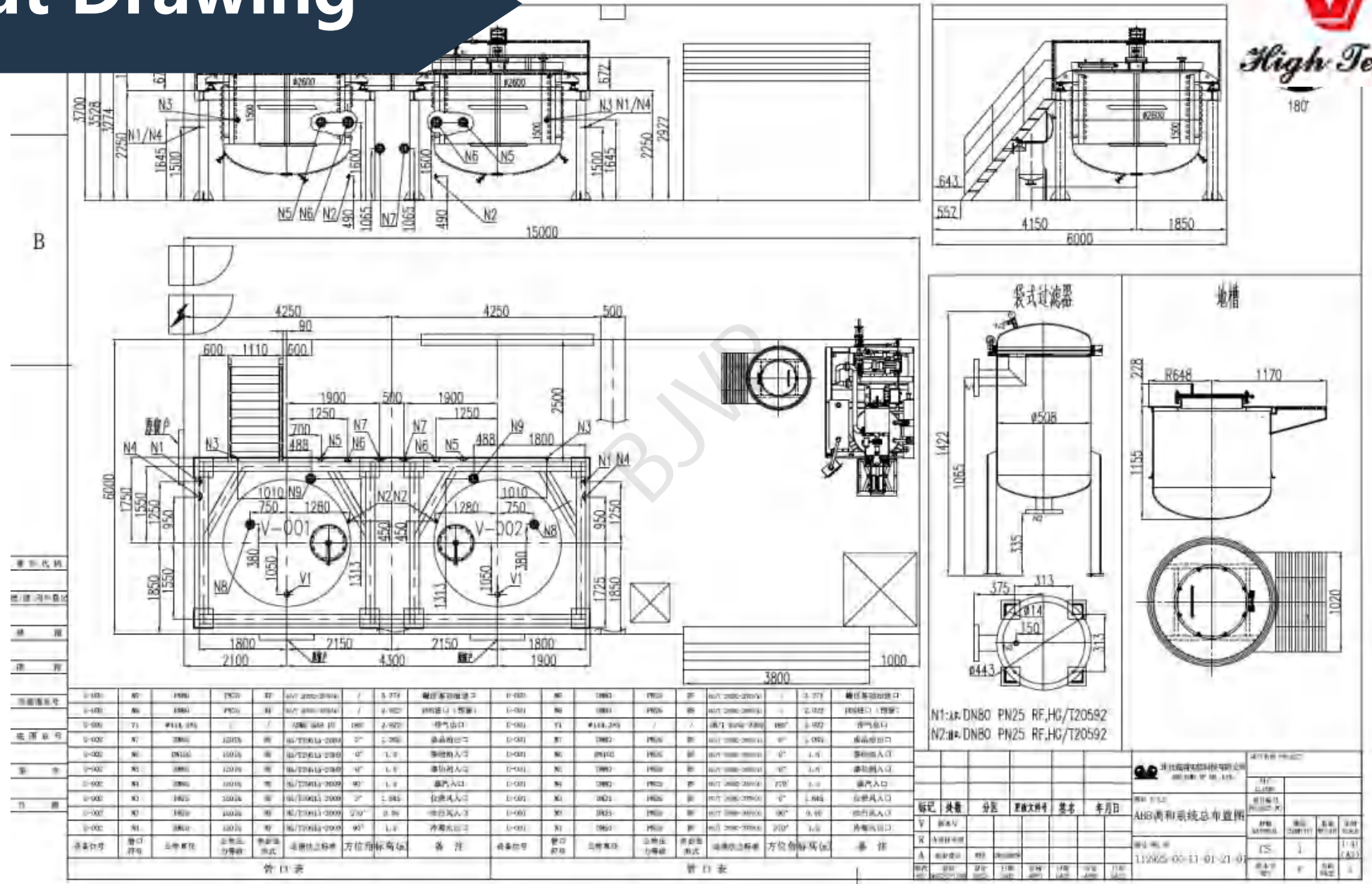
112002-1-1-01-1

# Layout Drawing



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180



图例
说明
备注

设备名称
规格
数量
备注

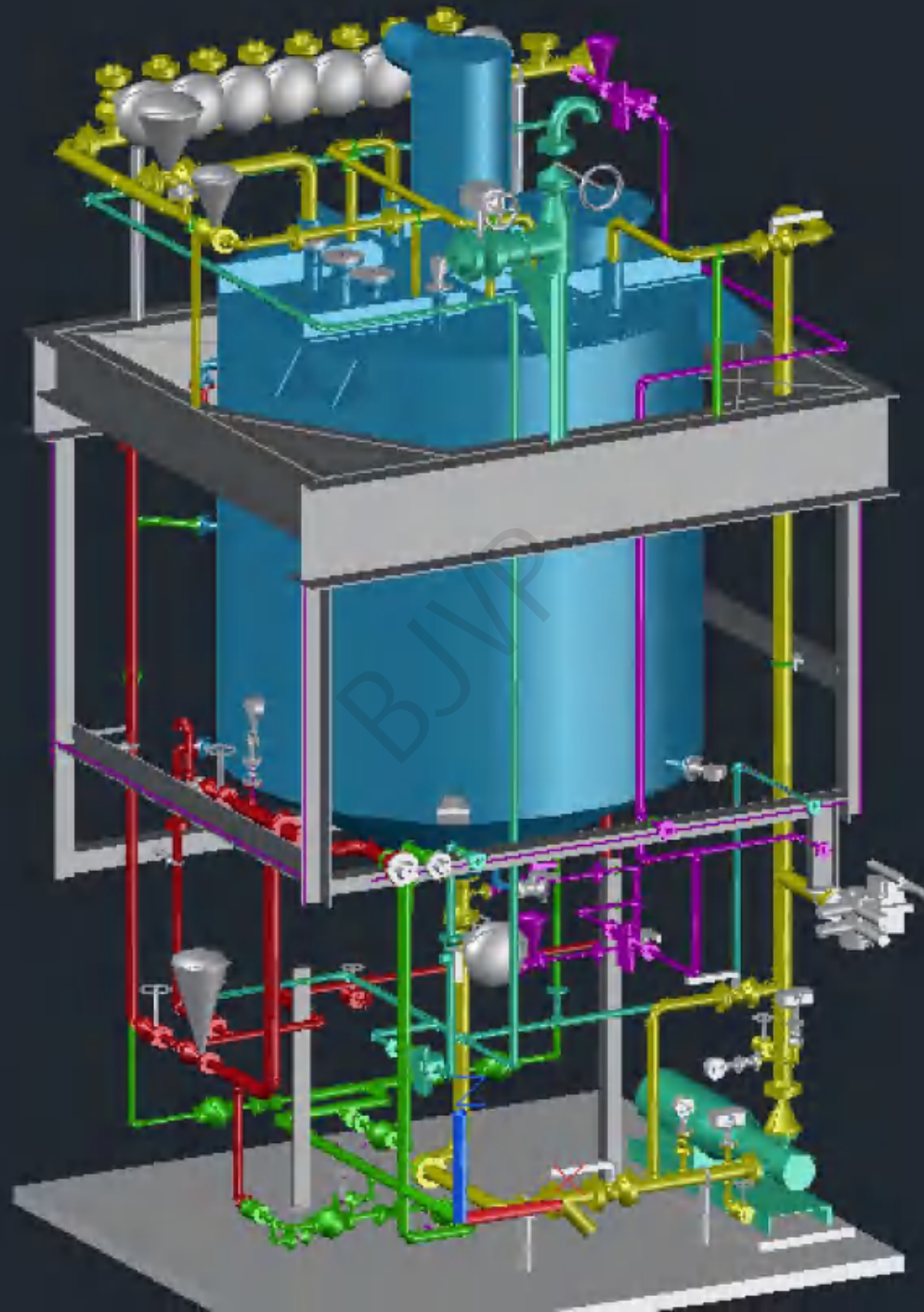
设备名称	规格	数量	备注
罐体	1010x1010x2000	2	
过滤器	1010x1010x2000	1	
沉淀池	1010x1010x2000	1	
管道	DN80 PN25 RF, HG/T20592	若干	

图例	说明	备注
图例	说明	备注
图例	说明	备注

图例	说明	备注
图例	说明	备注
图例	说明	备注

图例	说明	备注
图例	说明	备注
图例	说明	备注

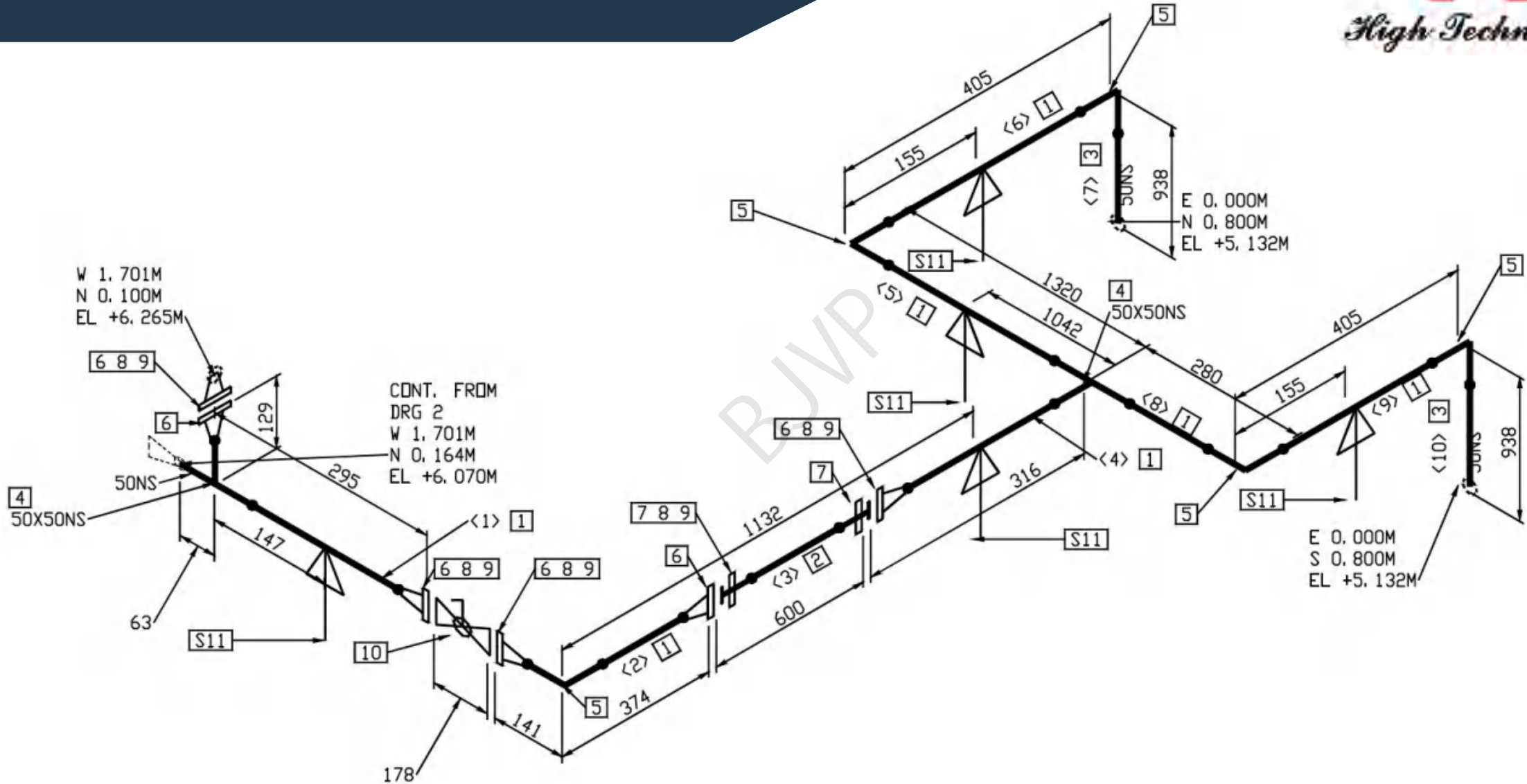
# 3D Model



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# Pipe Isometric Drawing



# Control System



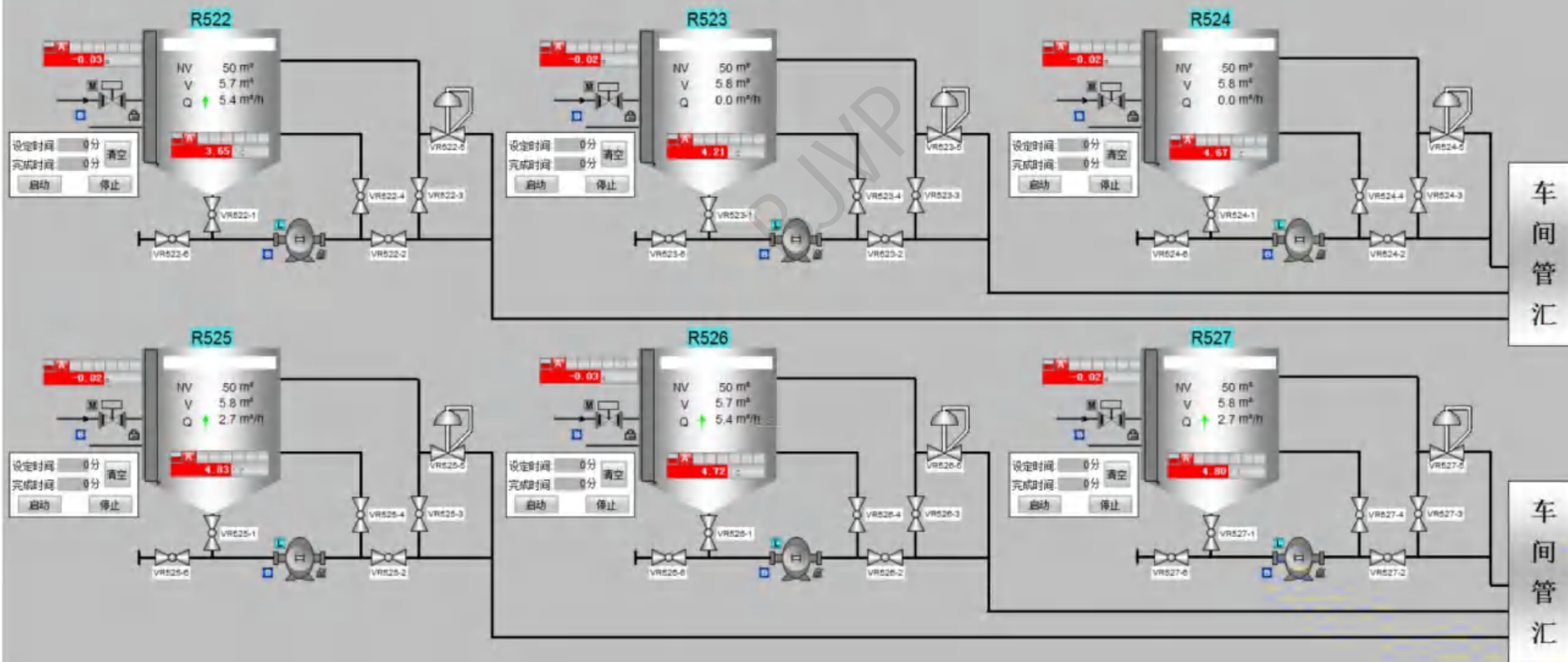
High Technology

29/12/18 12:23:29.0610		T201206/LIAS-206/LS-206		206基础油罐高高液位显示 输出 - 直位		到达并离开		2018/12/29 13:47:28	
罐区概览	泵状态一览表	批次	T201-T206	T207-T210	T301-T308				
T304-T310	T311-T316	T317-T320	分配站	管汇	R501-R502				
R503509	R508	R510-R515	R516-R521	R522-R527	R528-R529				
半成品罐	灌装线1楼	灌装线2楼	槽车灌装	烘箱	连锁				



High Technology

## R522~527 (调和罐)



# Automatic Batch Blending



# Mini-Bulk

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**07**

**BJVP SMB**  
**Simultaneous**  
**Metering Blending**

# BJVP SMB



SMB is designed to simultaneously measure liquids with a flow meter in correct ratio through a header. The system applies a product feed piping network, optionally separated by family groups. The SMB does not require a kettle as with ABB design. Instead the header(s) direct the output to storage tanks, usually dedicated for a specific blender. All tanks must be equipped with mixers to blend the product into a homogenous state once all the components have been charged into the tank.



# SMB at Site



*High Technology*



**08**

# **BJVP VI Dissolving Unit**



# VI High Shear Dissolving Unit



## VI Dissolving System

### System Composition:

VI dissolving system is supplied in form of skid with optional tank volume of 15T, 20T and 30T, consisting of the following parts:

- \* External coils (with hot oil or steam heating) and VI dissolving tank with temperature controller
- \* Slanting insert special high-speed cutter
- \* High-speed cutting & online blender
- \* Base oil weighing & metering system
- \* VI loading & lifter
- \* Unloading pump
- \* Cabinet and integrated control system

### Advantages

- \* High efficient VI dissolving: no need to cut, adding material directly, the system has auto-lifting & loading equipment.
- \* Integration of cutting and dissolving process, saving time and cost, safety and environment-friendly.
- \* Cutting and dissolving VI by double circulating system, homogenizes and dissolves the product completely under the dual role of blender and temperature control.



# VI High Shear Dissolving Unit

**NO  
Cutter  
Requirement  
!  
High Efficient!**



# VI High Shear Pump

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# Vacuum Chucks



# VI Elevator



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# VI Crusher



**VP**  
*High Technology*

# VI Transportation System

**VP**  
*High Technology*



# VI Transportation System

**VP**  
*High Technology*





# VI Cutter

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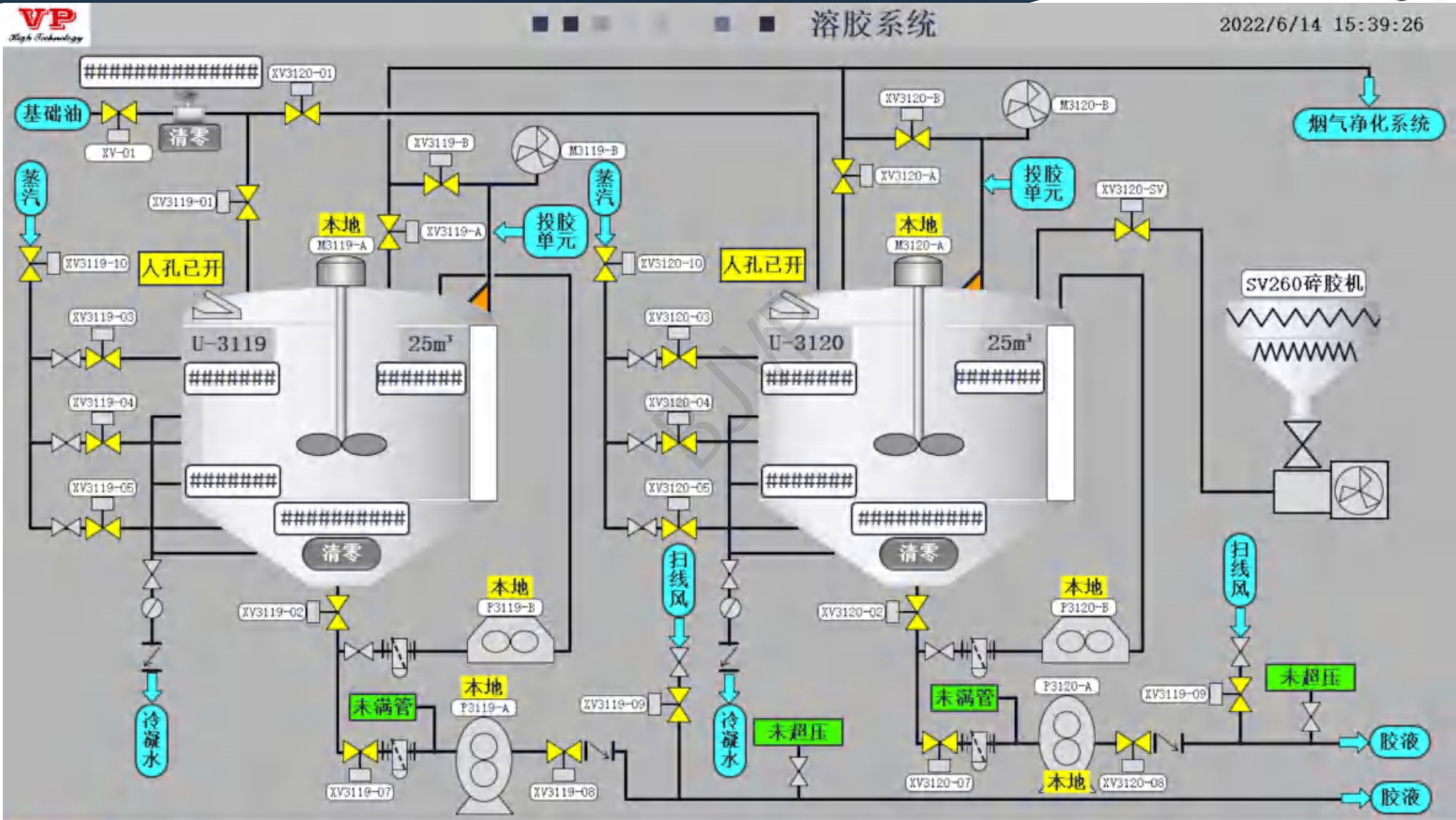


# VI Low Shear Dissolving Unit Cutter and Conveyer

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# VI Dissolver-Main Process Manu



2022/6/14 15:39:26

溶胶系统

# VI Block Conveying System



High Technology

## 溶胶系统

2022/6/14 15:40:16

**手动** U-3119 转载机

滚筒机 **启动** 运行  故障

转载机 **启动** 运行  故障

顶升气缸 **上升** 高位  低位

**手动** 3120挡板

**上升** 高位  低位

**手动** U-3120 转载机

滚筒机 **启动** 运行  故障

转载机 **启动** 运行  故障

顶升气缸 **上升** 高位  低位

**手动** X31A2 转载机

滚筒机 **启动** 运行  故障

转载机 **启动** 运行  故障

顶升气缸 **上升** 高位  低位

**手动** 31C传送带

**启动** 运行  故障

设定值 ##### 实际值 #####

+ -

**手动** 31B传送带

**启动** 运行  故障

设定值 ##### 实际值 #####

+ -

**手动** 提升机

**启动** 运行  故障

设定值 ##### 实际值 #####

+ -

3119切胶机

**本地 手动**

运行  故障  传送故障  切刀故障  出料故障

**启动** **停止**

U-3119

预送 ##### 已送 #####

真空吸吊机

**手动** 3120切胶机

**本地 手动**

运行  故障  传送故障  切刀故障  出料故障

**启动** **停止**

U-3120

预送 ##### 已送 #####

**手动** X31A挡板

**上升** 高位  低位

**手动** 上料传送带

**启动** 运行  故障

主工艺

提升切胶

U-3119

U-3120

生产数据

参数设置

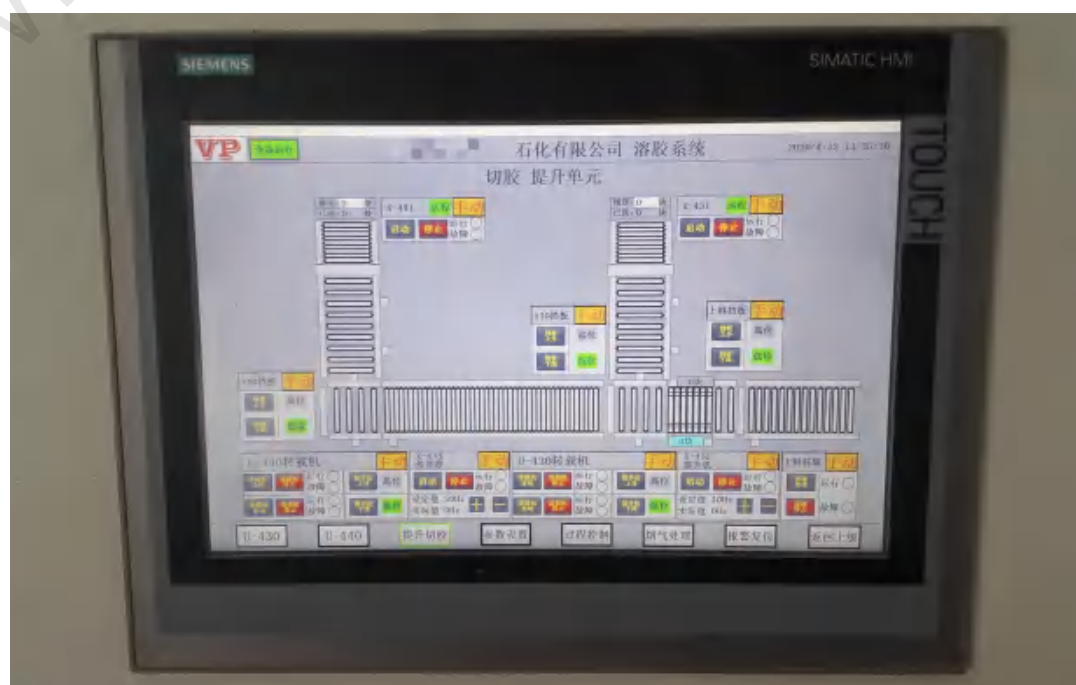
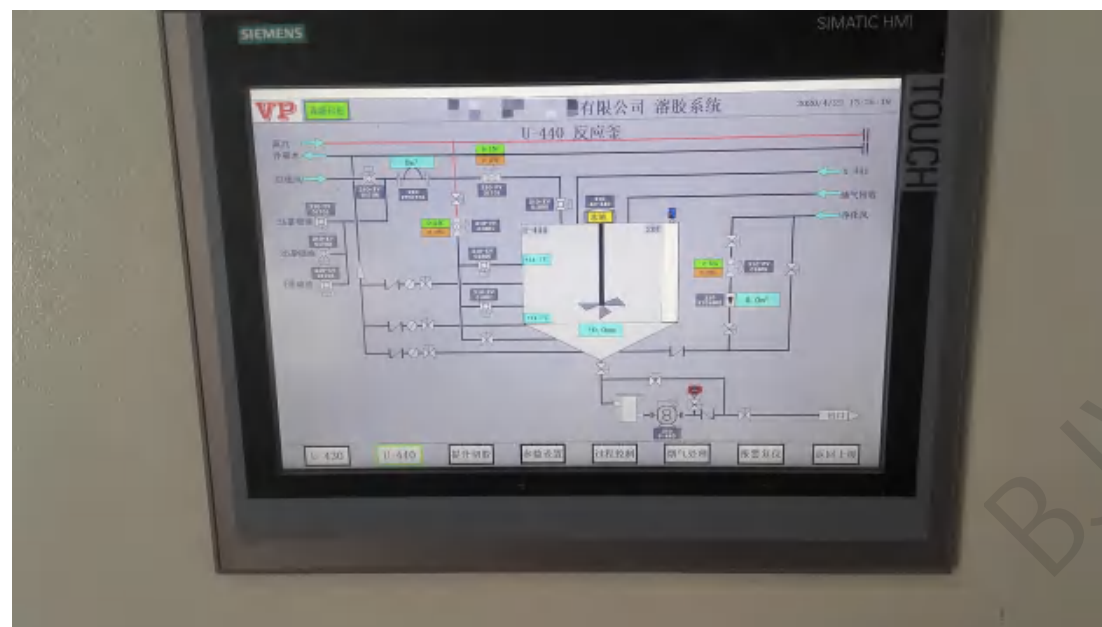
报警查看

用户管理

用户登录

报警复位

# VI Dissolving Control System



**09**

# **High Viscosity Pump**

# Internal Gear Pump Principle

**VP**  
*High Technology*



# U Series Pump Scope Range



Flowrate:  $\sim 365 \text{ m}^3/\text{H}$

Differ.Pre.:  $\sim 1.6 \text{ MPa}$

Temp:  $-84 \sim 427 \text{ }^\circ\text{C}$

Viscosity:  $0.1 \sim 440,000 \text{ mm}^2/\text{s}$



# BJVP Internal Gear Pump

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# Electric Heating Pump

**VP**  
*High Technology*



# API682 Seal Pump



A decorative graphic on the left side of the slide, consisting of a dark blue arrow pointing right, with a light blue arrow pointing right inside it, and a white arrow pointing right inside that.

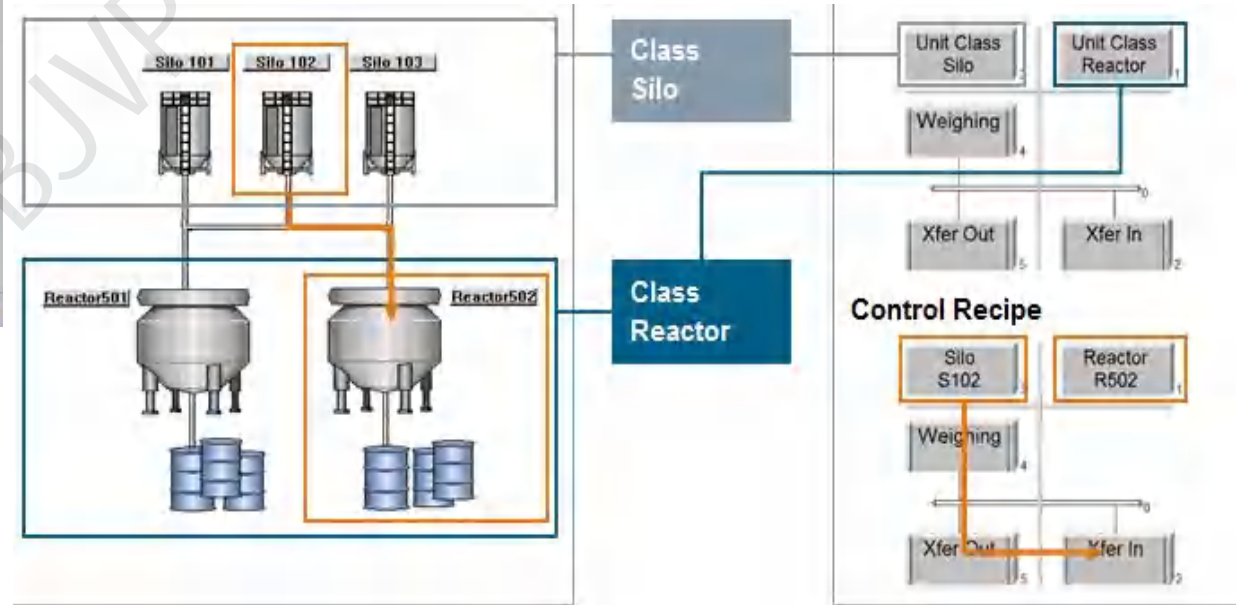
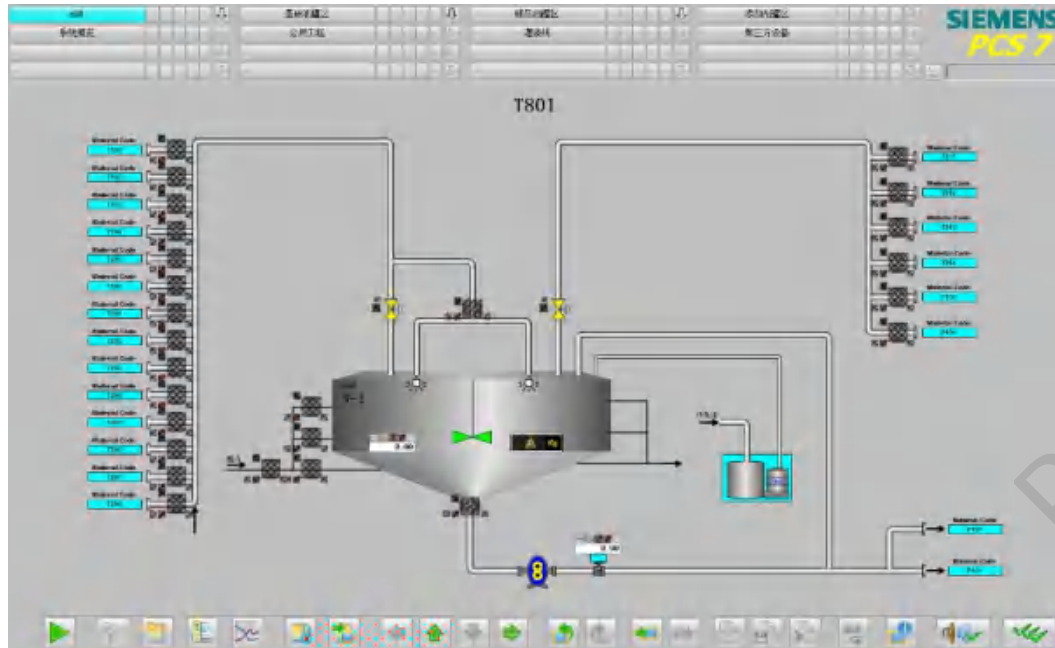
**10**

# **BJVP Controls DCS / Batch**

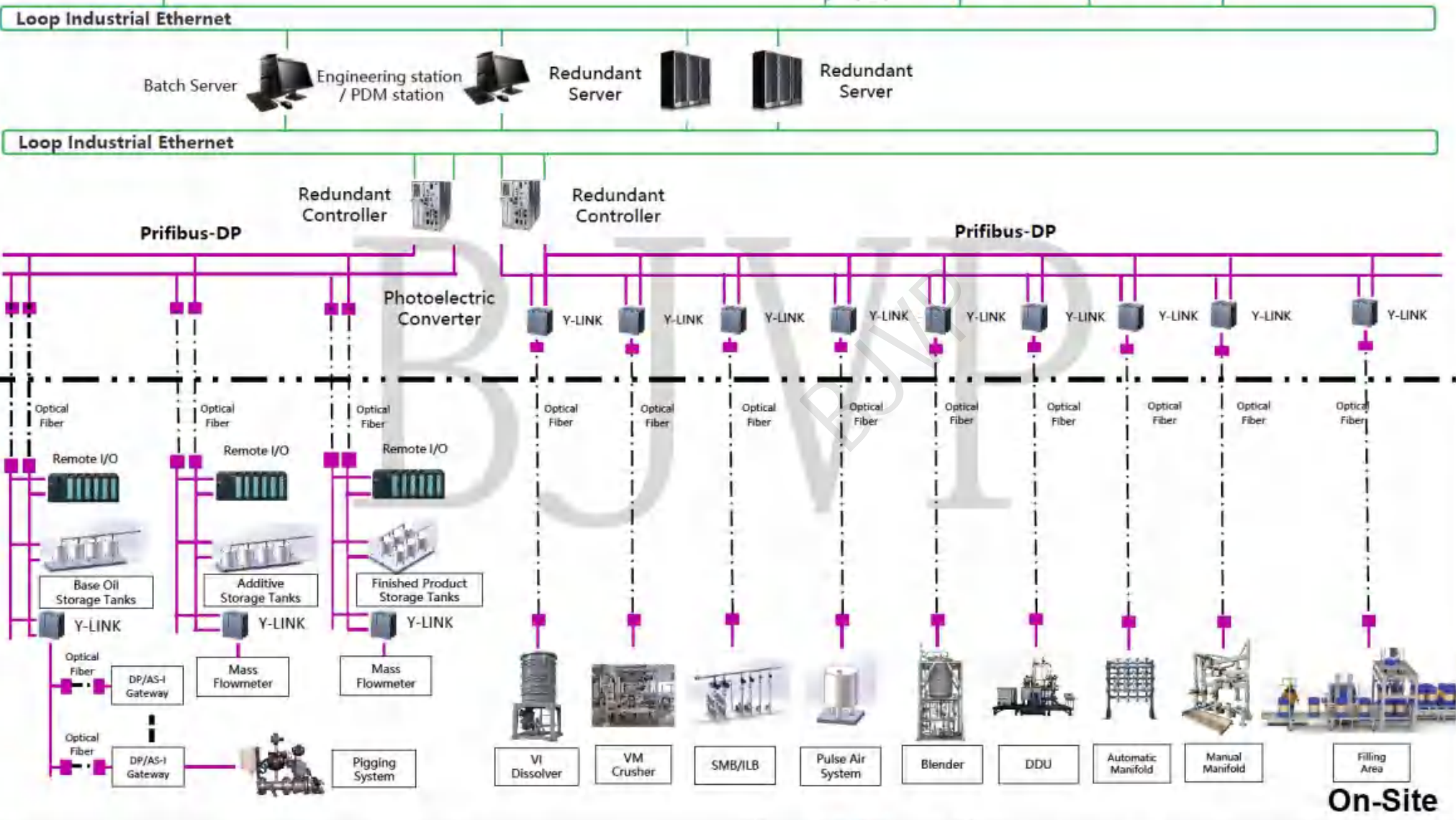
VPBLEND® Blending Control System designed and implemented by BJVP for Lube-Oil blending, product transfer and storage facility. VPBLEND® application running on the Sever PC coordinates all real-time blend control algorithms running on the DCS, maintain configuration data, batch data, process runtime data and historian data.

VPBLEND® able to respond quickly to market demands, producing high-stand, quality products with significantly reduced manpower and inventory cost. VPBLEND® solutions specifically developed for the blending industries with the will to the company assets, to react quickly to customer demands with the permanent care of product quality and plant productivity.

# Lube Oil Control System & BATCH

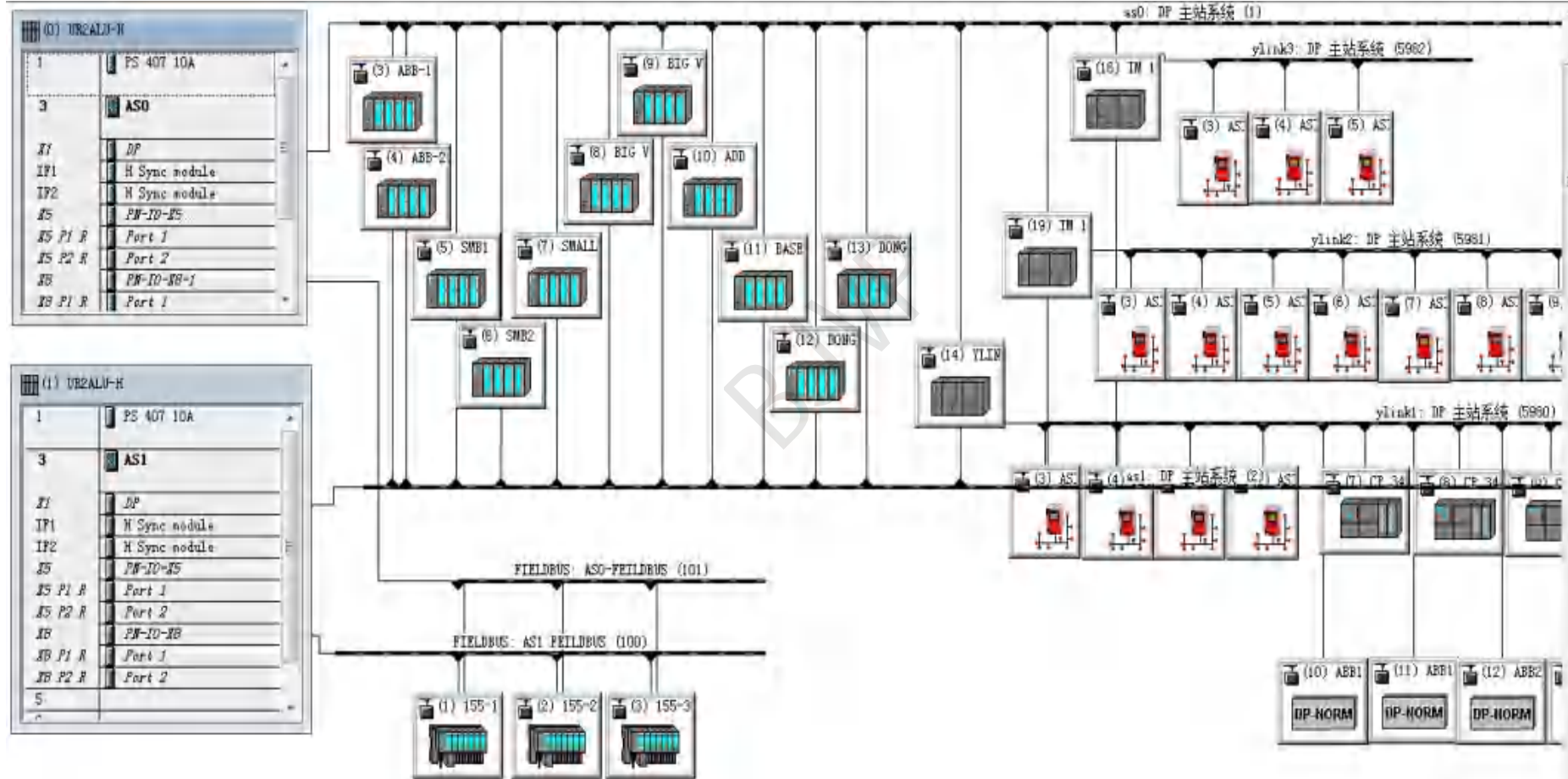


# DCS架构图



BJVP  
DCS  
System  
Topology

# Status Screen DCS Construction





# SIEMENS PCS7:CFC



The screenshot displays the Siemens PCS7 CFC (Control Function Block) editor. On the left, a vertical ladder logic diagram shows a sequence of blocks: START, Automatic, OOSE, Level1 (highlighted in blue), Close1, Stop, Start Tra..., Stop Tra..., and Start Str... The OOSE block is currently active. Below the diagram is a control panel with buttons for RUN, HOLD, and RESUME, and a green play button. At the bottom, there are various control icons for Start, Hold, Resume, Abort, Complete, Stop, Restart, Reset, and Error.

A Properties dialog box is open over the OOSE block, titled "Properties - Level1(FALSE) -- team07\Johnsson\Reactors\R310\R310". The dialog has several tabs: General, Current Cond., OS Comment, Previous Cond., and Cond. after Er. The Current Cond. tab is selected, showing a table with the following data:

Value	Variable	Operator	Variable	Value
0.0	Input1.PV.Out.Value	>=	-GEN\PARAsfc.Kg1	40.0

The dialog also includes a Close button and navigation arrows.

# Automatic Batch Blending Status Screen

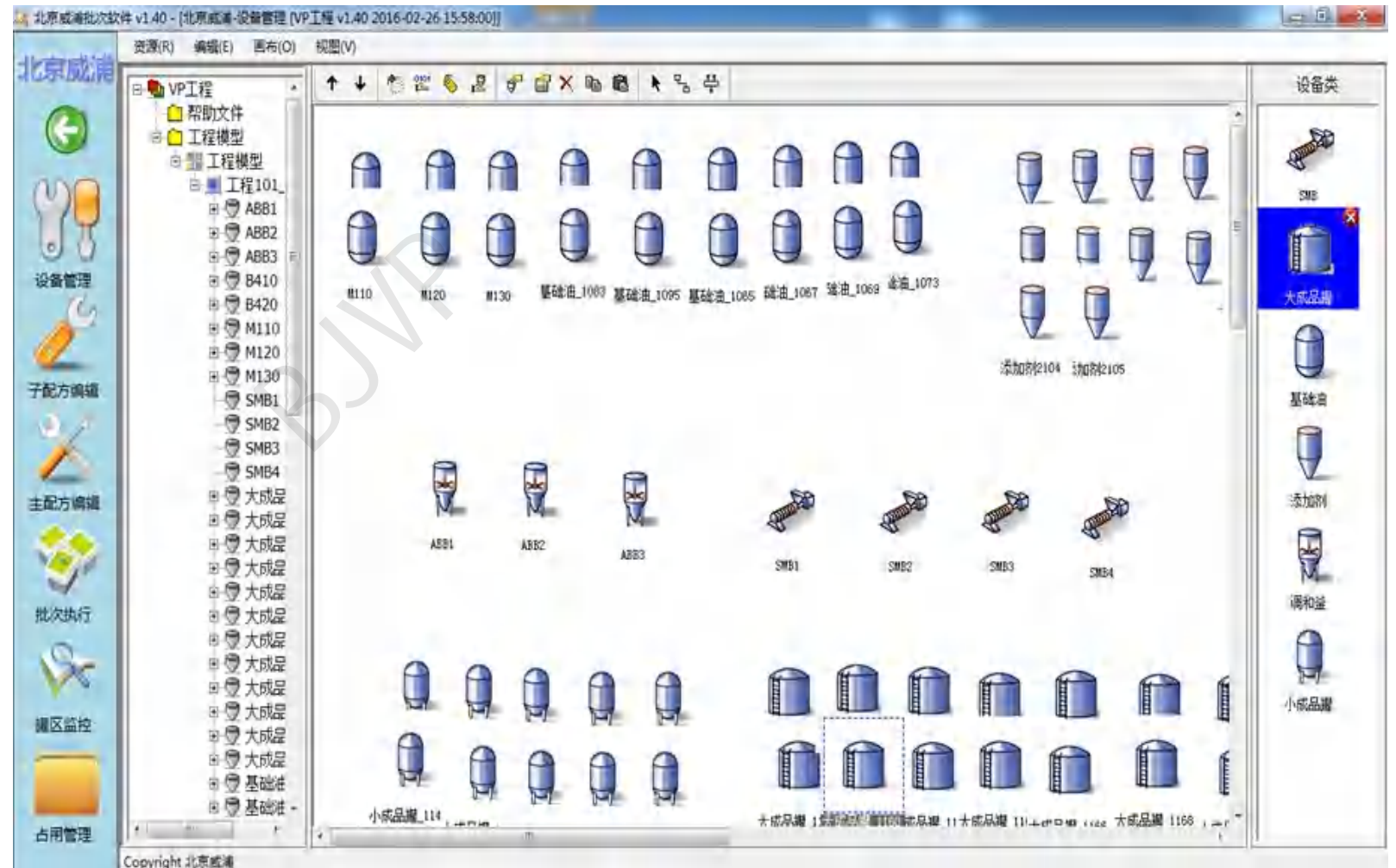


VPBATCH® Batch Control System designed, developed and copyrighted by BJVP for Lube-Oil blending batch management. VPBATCH® Batch Control System suit for any Lube-Oil blending application, can be connected to most mainstream of automation control system(DCS or PLC). VPBATCH® provide modular OP interface, flexible batch data configuration, open-source mode for recipe management. Batch configuration can be modified by On-site operator, no need to wait for professional systems engineer to modify various batch parameters. VPBATCH® greatly improves production efficiency of Lube-Oil blending.

# VP BATCH-Unit



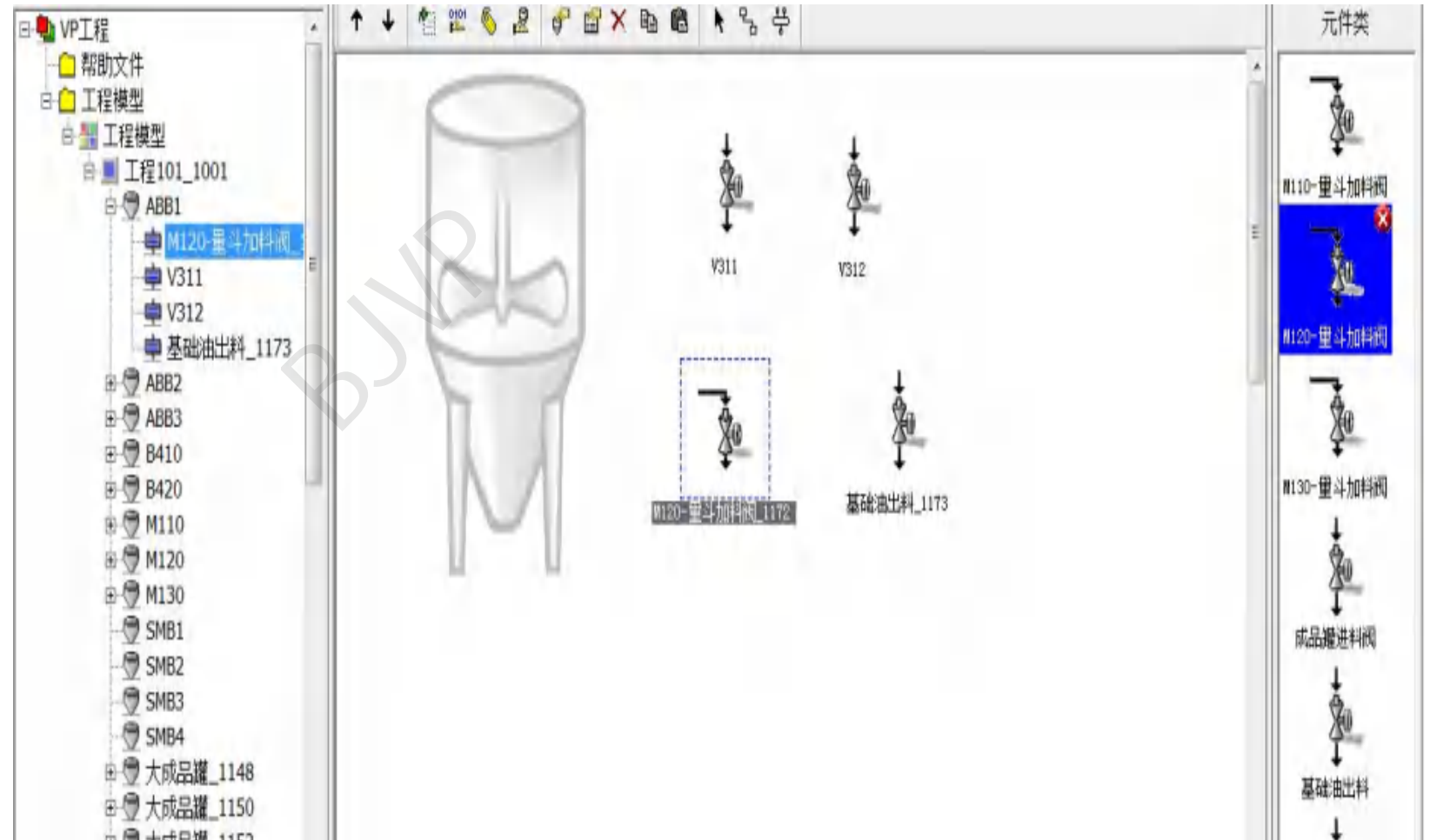
VP Batch provide a flexible solution for DCS Control in lube oil plant. The changeable final product need an open gate to select the recipe. VP Batch provides the client open channel to change the process logic.



# VP BATCH-Device



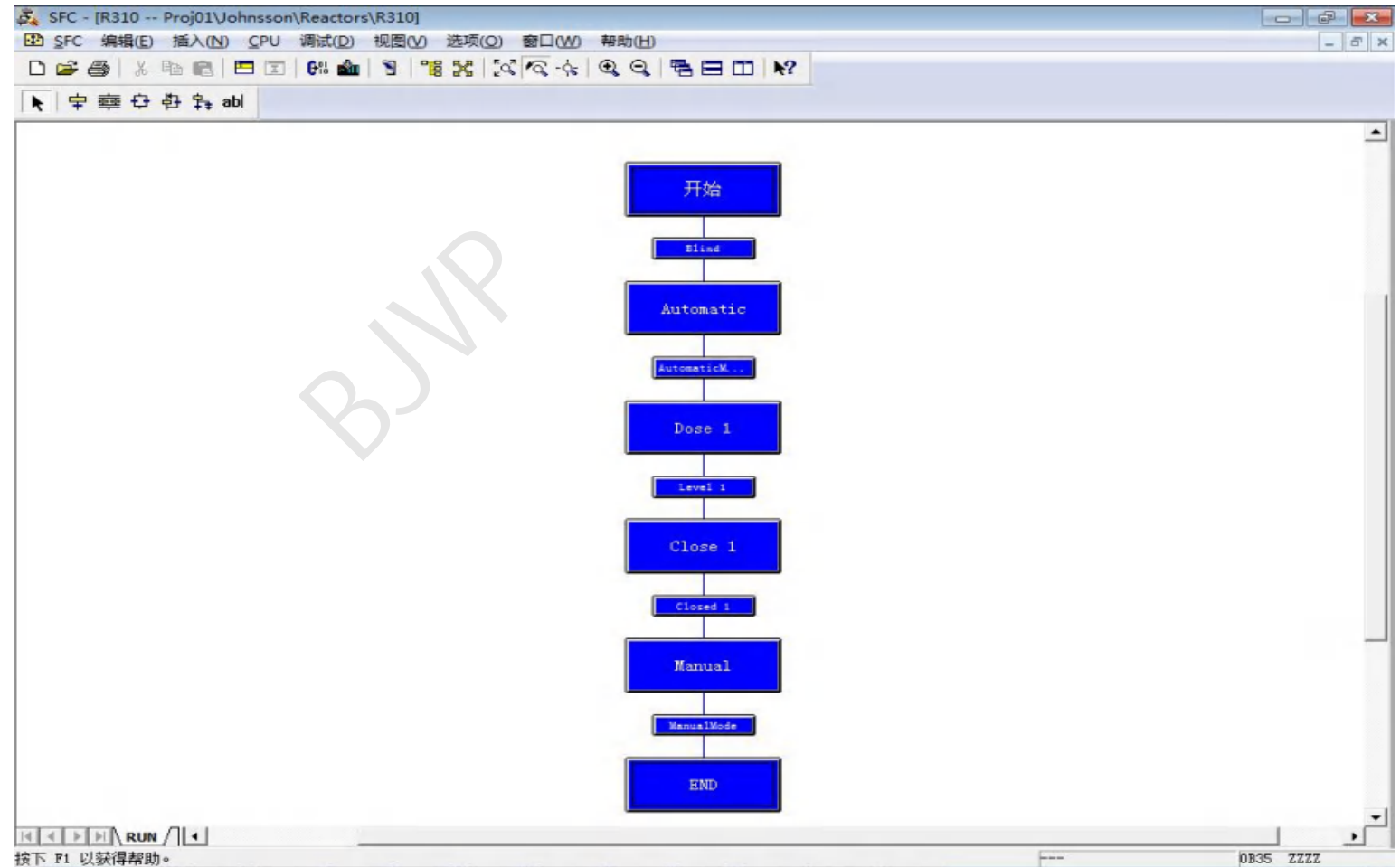
**EACH UNIT HAS A LOT OF DEVICES , EACH DEVICE HAS A SFC .**



# SFC



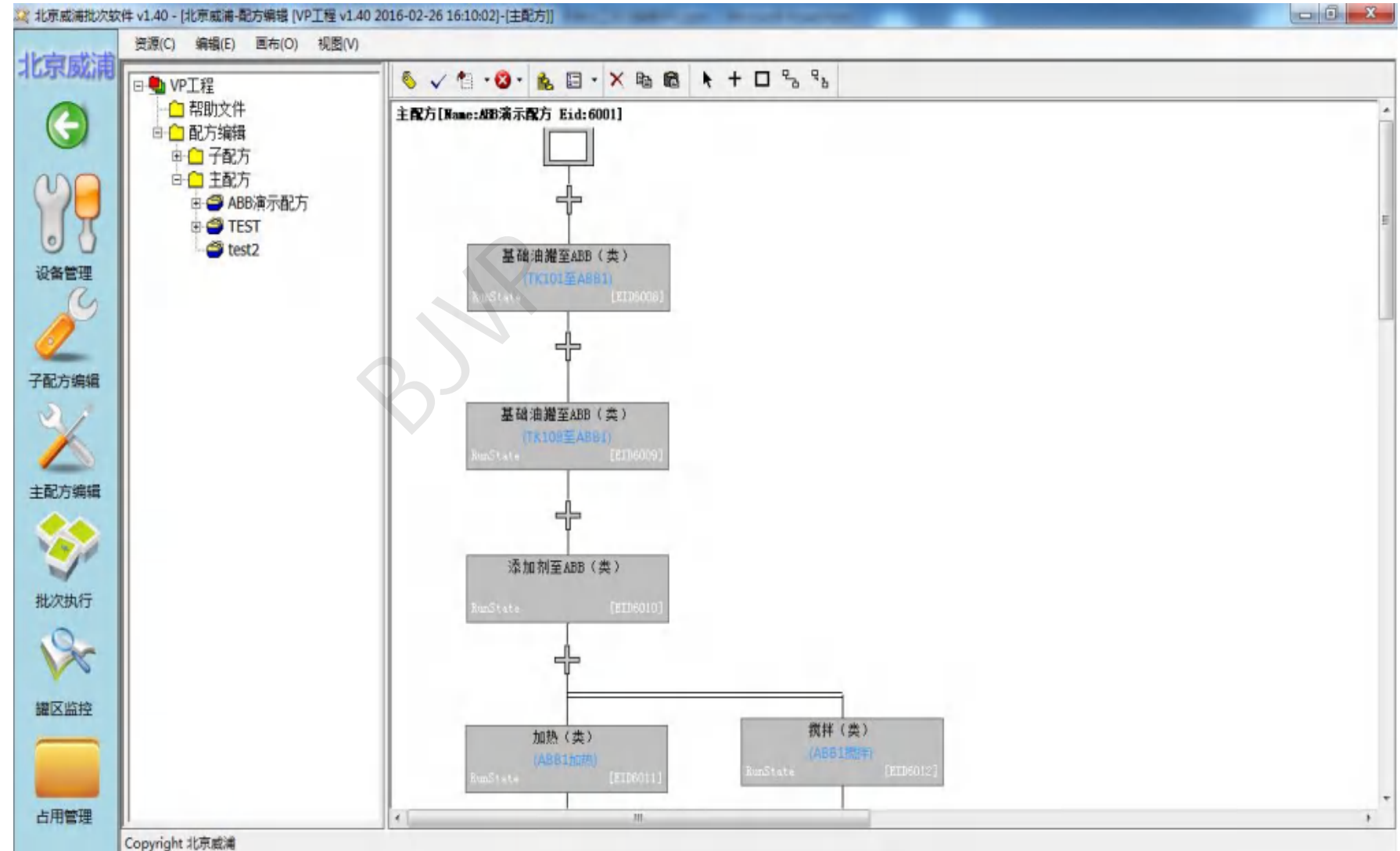
BJVP make the logics of all the sub-units , SFC.



# VP BATCH-Main Recipe (by User)



The client only operate this Main Recipe .



# VP BATCH-Recipe Execute



Report and data can be inspected from this page.

The screenshot displays the VP BATCH-Recipe Execute software interface. On the left, a project tree shows the following structure:

- VP工程
  - 帮助文件
  - 配方执行
    - 发布配方
      - TEST
      - test2
    - 批次执行
      - 默认
        - test2(SN00017)
      - sss
        - test2(SN00018)
        - test2(SN00016)

The main area shows a process flow diagram with two steps, both labeled "M110-D210":

- The top step is a grey box labeled "已完成 [EID6008]" (Completed).
- The bottom step is a green box labeled "运行中 [EID6009]" (Running).

On the right side of the main area, the following information is displayed:

- 线程状态 | 北京威浦
- [批次ID: SN00017]
- 主配方名称: test2
- 批次状态: 已停止
- 开始时间: 2016-02-25 10:21:07
- 执行时长: 00:35:30



# Batch Receipt from ERP



29/12/18 12:23:29.061 | T201206/LIAS-206/LS-206 | 206基础油罐高高液位显示 输出 - 置位 | 到达并离开 | 2018/12/29 13:58:59

罐区概览 泵状态一览表 批次 T201-T206 T207-T210 T301-T308  
 T304-T310 TS11-T316 TS17-T320 分配站 管汇 R501-R502  
 R503509 R508 R510-R515 R516-R521 R522-R527 R528-R529  
 半成品罐 灌装线1楼 灌装线2楼 槽车灌装 烘箱 连锁

**批次:** 批次列表

批次ID:  状态:  配方行:  集合管:  目标罐:  手动设备:   
 产品代码:  产品名称:   
 产品介绍:  产品描述:

开始: 1899/12/30 0:00:00  
 结束: 1899/12/30 0:00:00

手动控制

原料名称	原料罐	百分比	设定量(kg)	完成量(kg)	误差量(kg)	开始时间	结束时间	持续时间(min)	优先级	暂停值(kg)	暂停	手动
基础油1	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value=""/>	<input type="text" value="0"/>
基础油2	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value=""/>	<input type="text" value="0"/>
基础油3	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value="0.0"/>	<input type="text" value=""/>	<input type="text" value="0"/>
添加剂1	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="0"/>
添加剂2	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="0"/>
添加剂3	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="0"/>
添加剂4	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="0"/>
添加剂5	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="0"/>
添加剂6	<input type="text" value="空"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="00:00:00"/>	<input type="text" value="00:00:00"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="0"/>

原料名称	设定量(kg)	完成量(kg)	原料名称	设定量(kg)	完成量(kg)	原料名称	设定量(kg)	完成量(kg)
桶装剂1	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	桶装剂2	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	桶装剂3	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
桶装剂4	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	桶装剂5	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	桶装剂6	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
桶装剂7	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	桶装剂8	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	桶装剂9	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>

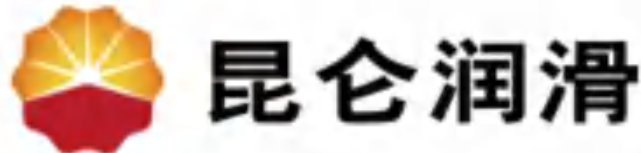
合计: 设定量  百分比  完成值  误差值

保存数据  
 启动  
 暂停  
 恢复  
 中止

# BJVP Customers



# BJVP Lube Oil Customers



孙霞

Sabrina Sun

技术总监

Technical Director

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**VP**

*High Technology*

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THANK YOU

DATE: 2020/5/9