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System operating procedures paint circulation and supply

[Document subtitle]

List

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I. Key Points

1. Because paint has a shelf life and its properties change over time, it can easily cause damage.
Pipeline blockages. Therefore, ensuring the smooth flow of the circulation and supply system pipelines is crucial.
Ensuring smooth paint flow is one of the most important tasks on the production line.
output. To ensure the paint circulation and supply system operates stably, the operating procedure...
This regulation has been issued and must be strictly adhered to.

2. Each production line must have 1–2 dedicated main operators.
Responsible for starting and operating equipment and manipulating the paint circulation/supply system.
They are also responsible for ensuring that this procedure is followed correctly.

3. Before spraying paint, the operator must be familiar with the paint technology parameters.
This includes: composition, mixing ratio, curing time, viscosity, spraying conditions,
Drying parameters, paint film quality, paint drip control, and other parameters.
Other related numbers.

If conditions permit, the process should be tested first, then developed.
and store records of paint technology specifications.

II. Structure and understanding of the circulatory and supply systems paint (with illustrations)

It is necessary to study and thoroughly understand the schematic diagram of this system. Details about its structure.
For instructions on how to operate each mechanism, please refer to the user manual.

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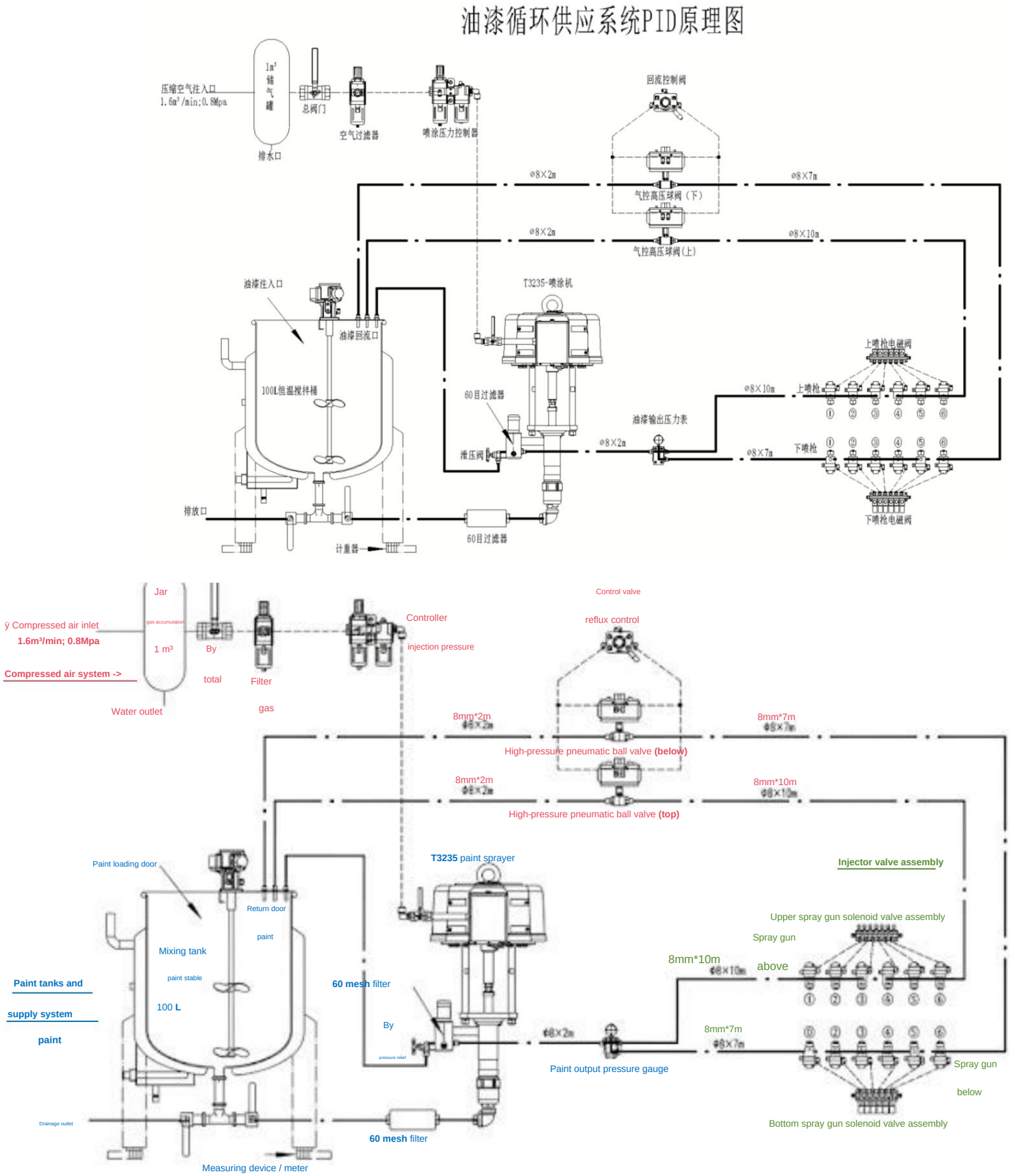

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III. General Regulations of the System

1. Ensure safe grounding:

The equipment must be securely and reliably grounded, with a grounding resistance of ÿ 4 ÿ.

2. Requirements for compressed air:

- Pressure: ÿ 0.6 MPa
- Air supply flow rate: ÿ 1.6 m³/minute
- Water content: ÿ 1.88 g/m³

3. Temperature control:

The paint temperature in the mixing tank should be maintained between 10–30°C.

4. Paint spraying parameters:

4.1. Adjusting the inlet air pressure:

The pressure can be calculated based on the spray pressure at the nozzle (typically 12–15 MPa).

Input air, then adjust the air supply valve.

For example: The compression ratio of the paint spray pump is 1:32, and the required spray pressure at the nozzle is 12.

MPa, then:

Inlet air pressure = 12 MPa ÷ 32 = 0.375 MPa

4.2. Choosing the type of spray nozzle:

Based on the type of paint and the required paint layer thickness, choose the appropriate nozzle size.

- For single-component paints, when a coat thickness of approximately 50–70 mm is required.

ÿm, usable:

Main nozzle : 20B35

Side spray nozzle : 17B30

- For two-component paints or high-viscosity paints, the following should be used:

Main nozzle : 19Z35

Side spray nozzle : 16Z30

4.3. Adjusting the viscosity of the paint:

Based on the viscosity of the paint, add the appropriate amount of thinner.

Suitable. Typically, adjust the viscosity to around 12–25 seconds, measured using a viscometer.

Tu-4 (Tu-4 cup).

Note: The above parameters are typical empirical values when spray painting.

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The specific number should be obtained from the paint supplier or adjusted based on operational/testing results.
practical experience.

IV. During the production process

For two-component paints, the paint in the pipeline must be recirculated.
and replace them periodically (usually every 30 minutes).

Steps to follow: Allow the paint in the return pipe to flow back into the paint tank, while simultaneously flushing.
Remove all remaining old paint from the spray nozzle.

For two-component paints that have been mixed to the correct ratio in the tank, the curing time/limit
The shelf life after mixing is typically 120 minutes. If this time is exceeded, begin...
The paint had to be replaced and the system cleaned.

Note: Curing time of two-component paint and time the paint begins to set.
The connection within the pipeline must be established based on the characteristics and technological process of the pipeline.
each type of paint.

V. Procedures when the machine is stopped for an extended period

1. Limit machine downtime:

"Prolonged machine downtime" is understood to mean when the paint tank is in the closed state.
private:

- Single-component paint: typically no more than 9 hours.
- Two-component paint: typically no more than 2 hours.

This period includes downtime for repairs, maintenance, and shift/production stoppages.
export and similar cases.

2. Paint treatment:

2.1. Drain all remaining paint from the tank. Use 5 L of thinner.
To replace the remaining paint in the pipes, spray/flush each spray gun for 30 seconds.
At the same time, perform a preliminary cleaning of the paint tank and drain all the solution out.

2.2. Add 10 L of diluted solvent to the tank and circulate it to clean the pipes.
3 minutes, then let each spray gun spray/flush for 30 seconds.

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2.3. Ensure the tank and all piping are filled with the diluent, then
He closed the toilet lid tightly.

VI. Changing the type of paint

1. Different types of paint have different compositions, for example, switching from oil-based paint to paint.
Water-based products can undergo chemical reactions that cause coagulation or clumping. Therefore, they must be cleaned.
Complete paint circulation and delivery system.

Use a solvent compatible with the current paint type for cleaning.
at least three times, then use a new solvent suitable for the type of paint you will be switching to.
Clean the pipes one more time. Only switch to a new type of paint after ensuring all pipes have been thoroughly cleaned.
clean.

2. Areas requiring cleaning include:
The entire paint circulation/spraying circuit and critical components such as the mixing tank, pump body,
Paint filters, spray nozzles, and related components.

VII. Requirements for managing the paint mixing room

1. The paint mixing room is a negative pressure room, so the door must not be left open during this time.
Long if unnecessary.

2. When there is paint in the tank but no operation is being performed, the tank must be tightly closed.
The tank lid is used to reduce the evaporation of VOCs (volatile organic compounds) from the solvent.
and reduce environmental pollution.

VIII. Maintenance and Servicing Requirements

- The tubular filter at the bottom of the mixing tank should be cleaned at least once a week.
and the filter at the paint outlet of the spray gun. If the filter is severely clogged, it must be replaced.
Replace it with a new accessory.

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• For two-component paints or zinc-rich paints that are prone to sedimentation, the frequency of application should be increased.

cleaning rate.

• During each shift, the lubricating oil cup of the paint spray pump must be checked.

High pressure operation without the use of air (airless) and ensuring sufficient lubrication at all times.

• A logbook must be kept to monitor the cleanliness of the filtration system, recording the cleaning schedule.

The cleanliness and the replacement of components/parts after each service.

presently.

IX. Handling Emergency Situations

1. Leak handling:

In the event of a paint or solvent leak, all related work must be stopped immediately.

Contain the affected area. Use absorbent sheets/cotton, sand, or other suitable materials to isolate and absorb the moisture.

Absorb the liquid to prevent leakage from spreading. The absorbed waste must be collected.

Specialized containers and disposal procedures for hazardous waste.

2. Handling a fire:

The paint mixing room and paint spraying area must be fully equipped with fire extinguishers (such as

Dry powder extinguishers, COÿ extinguishers, and fire-extinguishing sand. If a fire occurs, immediately cut off the power supply.

Electricity and gas sources, use fire extinguishers or sand to put out the fire, and act quickly.

Immediately notify the fire department.

3. Handling cases of employee food poisoning:

During the cleaning process, operators must be fully equipped with protective equipment.

Personally, avoid contact of the solvent with skin or inhalation of solvent vapors.

If the operator inhales too much volatile gas/vapor and symptoms appear...

If poisoning occurs, immediately move the person to a well-ventilated area and loosen their neck.

Wear protective clothing, ensure a clear airway, and promptly transport the patient to a medical facility for treatment.

4. Repair process:

When it is necessary to access the main paint sprayer for repairs, the mode must be activated.

Maintenance Mode is used to ensure employee safety.

After activating maintenance mode, you must:

• Disconnect the power supply to the device.

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- Turn off the air supply
- Disconnect the paint supply.
- Post a "UNDER REPAIR" warning sign in a visible location on the equipment.

bag

- Assign dedicated staff to supervise the entire repair process.