

AMS

Nitrogen Generator Installation for Liquefied Nitrogen Line

(150Nm³/hr, 99.99%)



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Background of Proposal

Objective

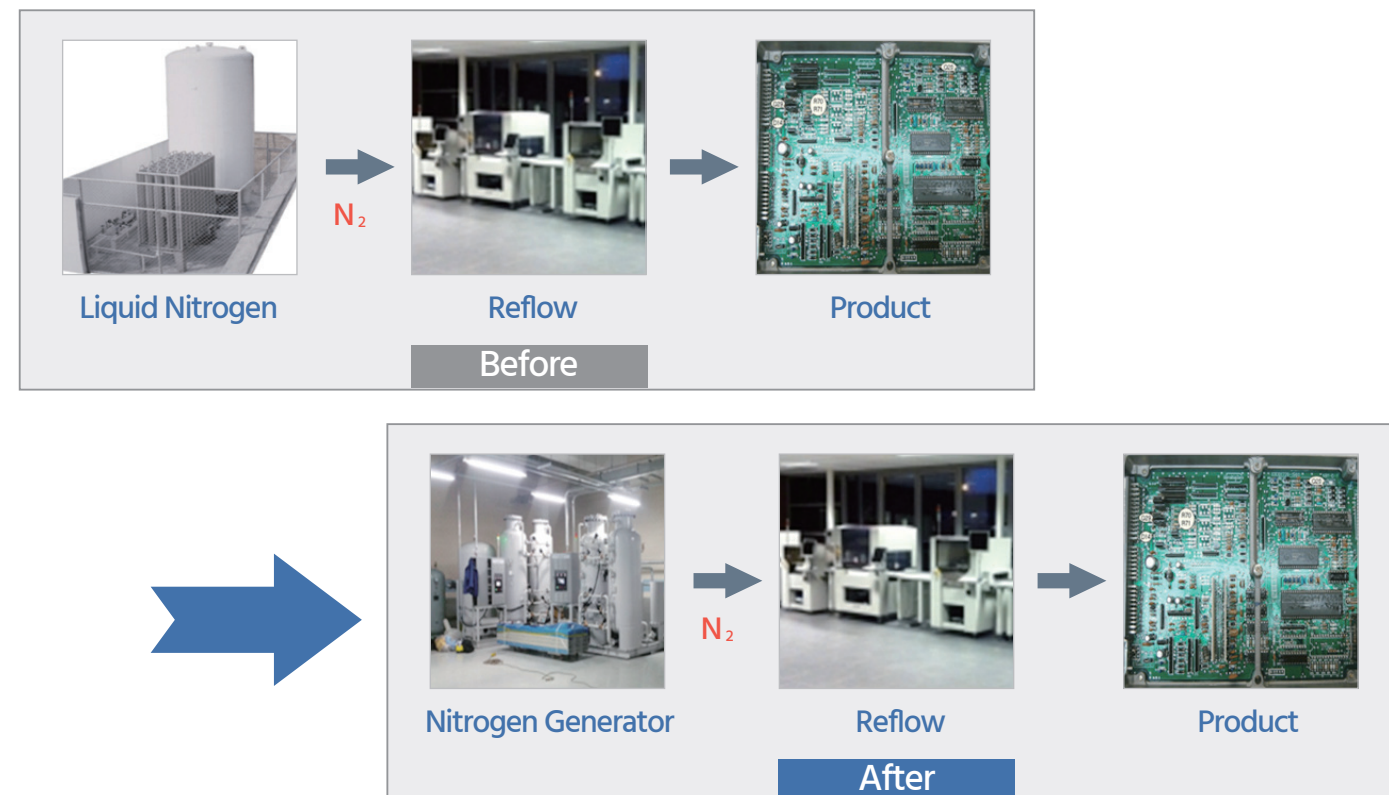
Cost Reduction: Due to excessive cost of Liquid Nitrogen Gas, currently used in ECU reflow facility, Nitrogen Generator helps reduce the operating cost.

Advantages

- On-Site Nitrogen Gas generation.
- Unattended operation.
- Simple structure and compact design allows installation in small/compact areas.
- Quick start up / loading time (Supplies within 15 minutes)
- Excluding the application of the High Pressure Gas Handling Act and the appointment of safety managers.
- Capable of operating facilities at minimal cost in addition to electricity expense (mainly air compressors).

Content

Change in Nitrogen Generator line: Liquid Nitrogen (Vaporizer) to Reflow > Nitrogen Generator to Reflow.



Product Configuration



Specification of Nitrogen Generator

| Description & Specification | Q'ty |
|--|-------|
| <p>Nitrogen Gas Purifier</p> <p>Model : GT150M-4N</p> <p>N₂ Capacity : ≥150Nm³/hr</p> <p>N₂ Gas Purity : ≥99.99%</p> <p>O₂ Gas content: ≤100ppm</p> <p>N₂ Gas Outlet Pressure : ≥0.6Mpa</p> <p>1) Oil Separator (Activated Carbon), JEC / JAPAN</p> <p>2) CMS(Carbon Molecular Sieve), JEC / JAPAN</p> <p>3) Adsorption Tank 2EA , Receiver Tank 1EA</p> <p>4) Control Panel, Silencer , Auto Air Valve 11EA</p> <p>5) Gas Filter, regulator , Flow Meter</p> <p>6) O₂ Analyzer (Range : 0.000~1.000%),Fujikura / JAPAN</p> <p>7) Touch Monitoring System(Monitor, PLC / LSIS)</p> <p>8) Recording (N₂ Gas Purity , Flow, Pressure) Text and Graph</p> <p>Power : 220V,60hz,1Ph, 0.2kw</p> <p>imension : 2,300W*1,950D*3,386H</p> | 1 SET |

Utility Requirements

| Div | Specification | Remarks |
|----------------------------|--|---------|
| Power Supply (Electricity) | | |
| Capacity | 120Kw | |
| Voltage | 380V/220V | |
| Frequency | 60±0.5Hz(±1 %) | |
| Phase | Three phases four wires, neutral grounding | |

Usage of Electricity

| No. | Name | Rated Capacity (Kw) | Voltage class | Remarks |
|--------------|------------------------|---------------------|---------------|---------------|
| 1 | Air compressor | 110 | 380V/60Hz/3PH | |
| 2 | Refrigerated Air Dryer | 3.1 | 220V/60Hz/1PH | |
| 3 | Desiccant Air Dryer | 0.5 | 220V/60Hz/1PH | Heatless Type |
| 4 | N2 Generator | 0.2 | 220V/60Hz/1PH | |
| Total | | 113.8 | | |

Note: Electricity consumption related machine unit is subject to official data provided by unit manufacturer.

Service Operations Plan

Build a maintenance system through TPM activity

- Obtain 2 years operation worth of spare parts.
- In addition to spare parts, obtain key critical parts in advance.
- Establish and implement facility unit preventive maintenance plan.



24 hour standby system

- Assign and manage personnel for the site.
- On-site support in the event of facility troubles within 24 hours.



Quality assurance of Nitrogen Gas

- Regular quality test
- Instruments Calibration

Back-up Plan

- Use back up Liquid Nitrogen Line

