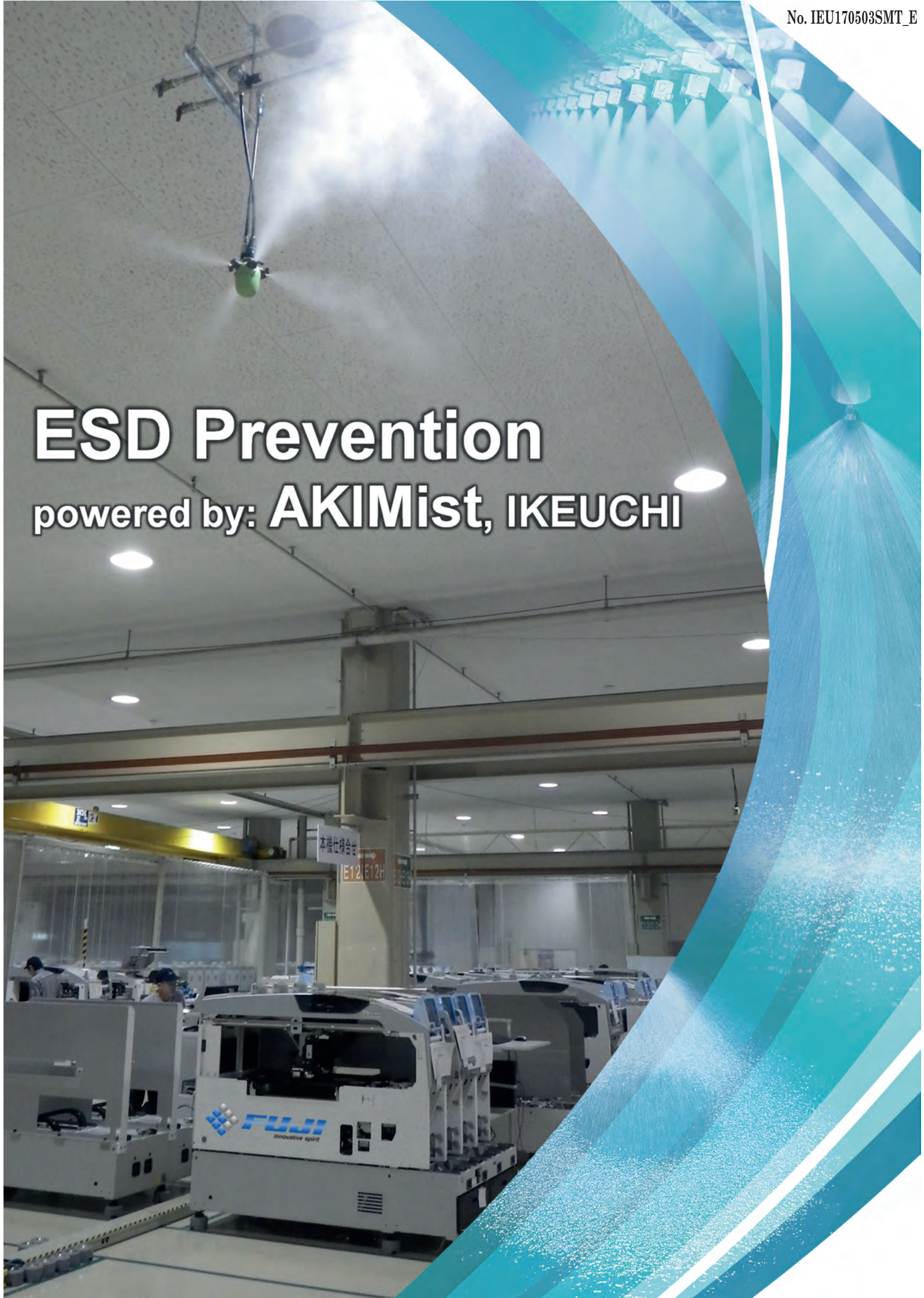


# ESD Prevention

powered by: **AKIMist, IKEUCHI**





# Cut mounting defects to near 0!

Energy-saving humidification system for Surface Mounting

## Problem in Surface Mounting / PCB Assembly processes in Electronics Industry

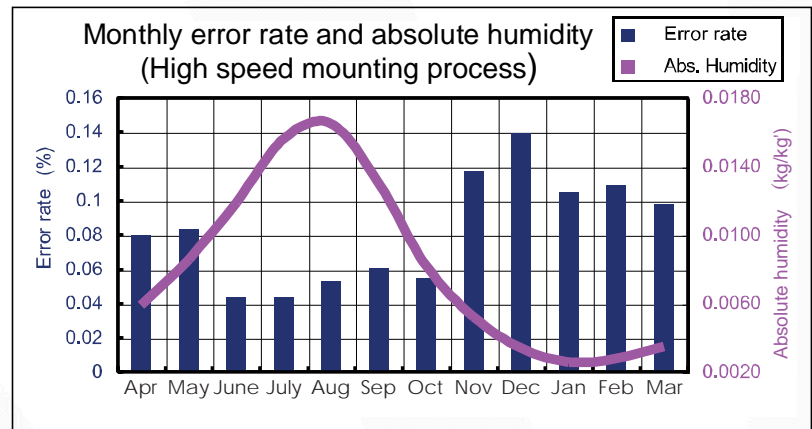
### Humidity and temperature in factory

- ∞ Humidity level influenced by outside air conditions
- ∞ Temperature controlled by HVAC system
- ∞ Error rate increases when humidity level is low, especially during winter season



### Consequences

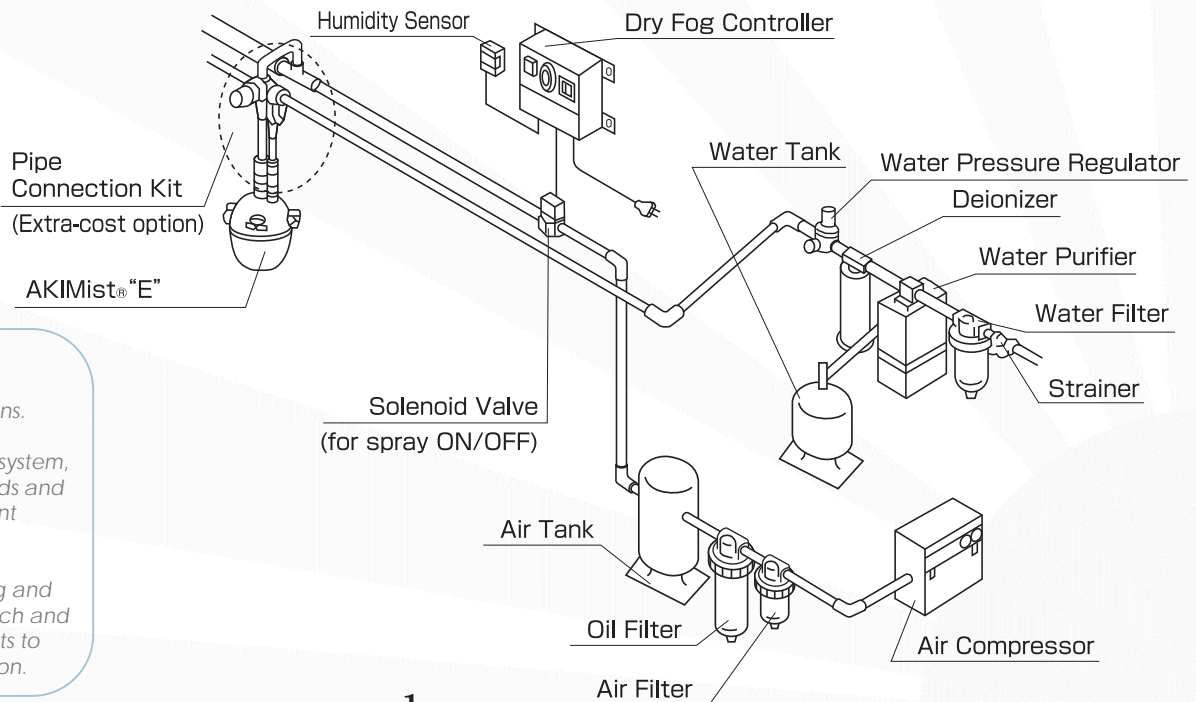
- ∞ ESD
- ∞ Error rates
- ∞ Soldering defect
- ∞ Circuit damage
- ∞ Dust adhesion
- ∞ Bad mounts



Humidity vs. Error rate

## IKEUCHI's solution: Dry Fog Industrial Humidification System AirAKI® with the humidifier AKIMist®"E"

- ∞ **AirAKI®** is a humidification system consisting of the dry fog humidifier AKIMist®"E", control equipment, and reverse osmosis equipment.
- ∞ **Non-wetting Dry Fog** sprayed from AKIMist®"E" creates and maintains a humidity-controlled environment which generates less static charge and thus, will drastically reduce issues such as circuit damage and dust adhesion.



### Standard installation

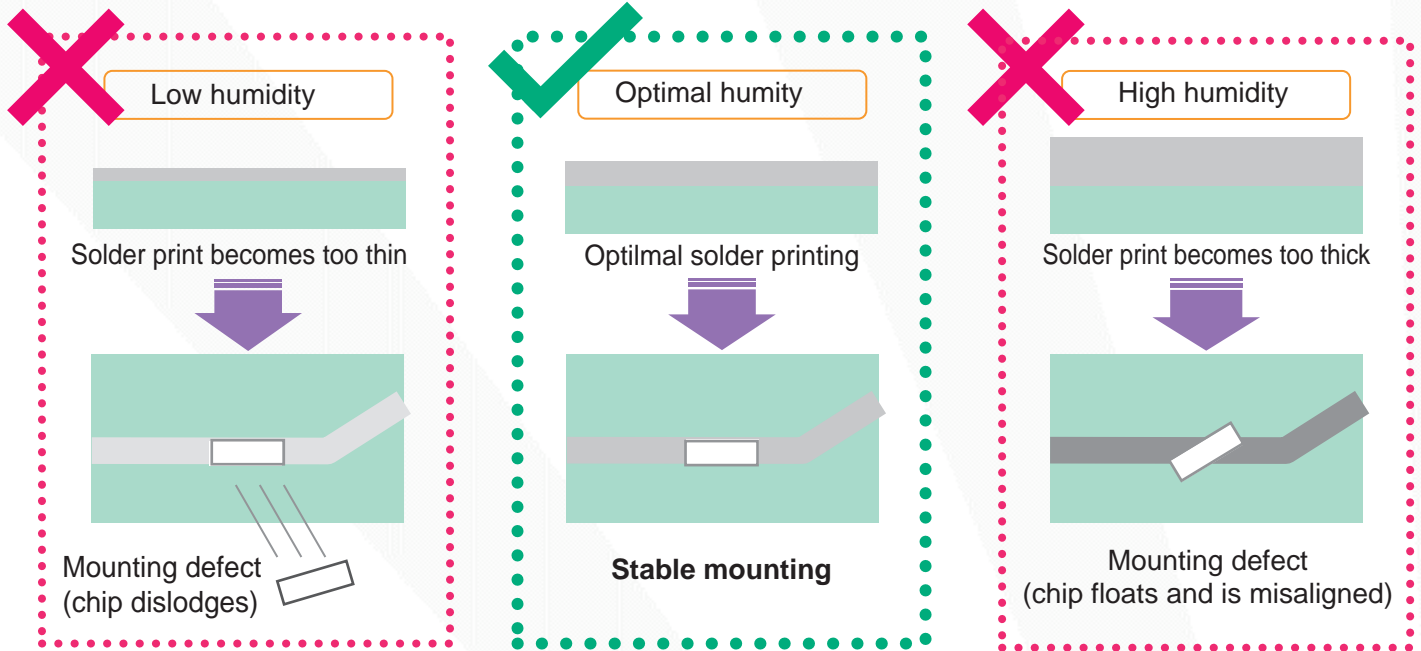
We offer tailor-made solutions.

Before installation of an AirAKI® system, we analyze the customer's needs and site to create the ideal plant environment.

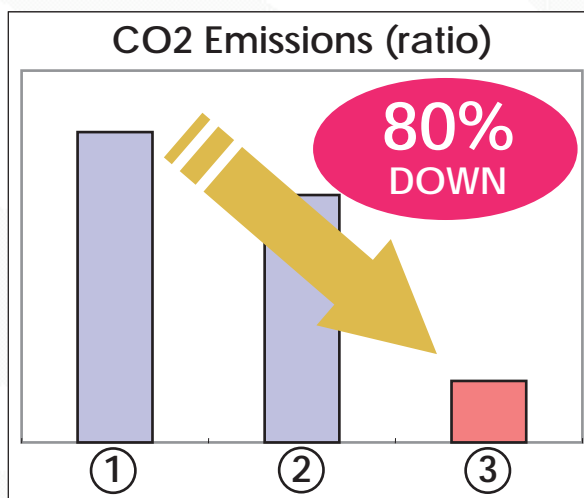
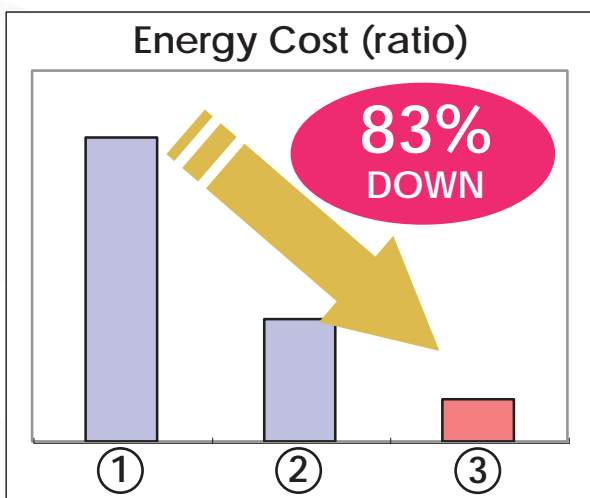
Humidification system planning and layout are designed to meet each and every customer's requirements to achieve the desired condition.

## Applications

- ∞ AirAKI® system will keep an even humidity level year-round, improving the mounting and assembly processes, and thus, the product quality. The mounting quality is influenced by the solder printing aspect which is affected by humidity.



- ∞ Humidifying the working area also prevent machine mounting errors due to static charge and solder thinning/drying.
- ∞ The Dry Fog humidifier AKIMist®“E” is recommended for precision part production where water droplets would be a problem. Spraying droplets at an average size of 7.5 μm, the droplets evaporate before reaching any surface, without wetting.
- ∞ The pneumatic air-water spray method uses much less energy than steam humidifiers.



- ① Steam humidifier (electrode vapor)
- ② Steam humidifier (boiler)
- ③ AirAKI®

# Dry Fog Industrial Humidification System AirAKI® with the humidifier AKIMist®“E”

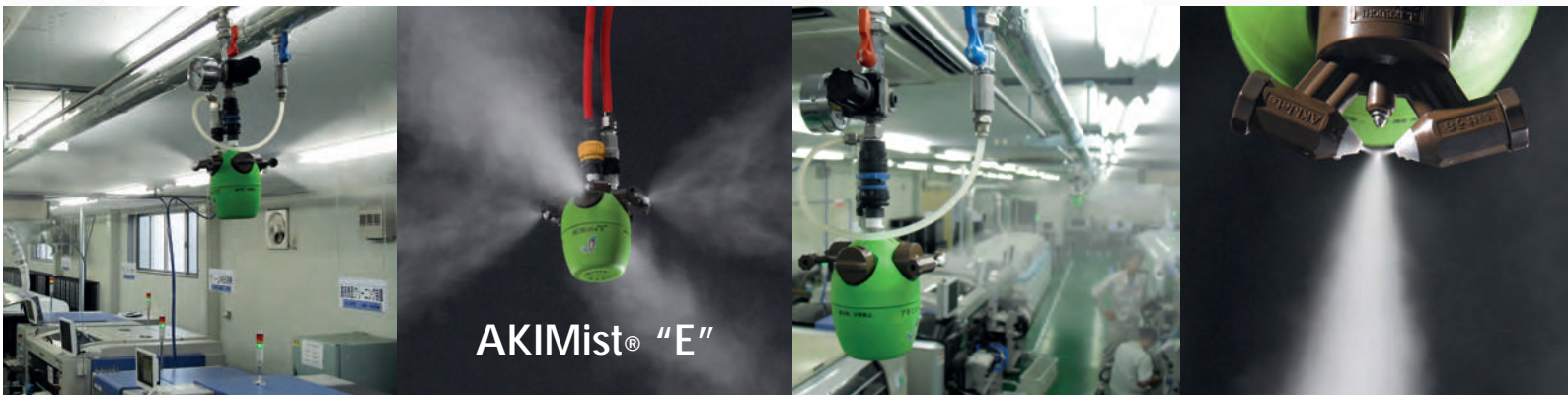
## Advantages

- ∞ Double-edged sword: dust suppression & humidification through atomization
- ∞ Easy installation by adding-on to existing HVAC
- ∞ High efficiency
- ∞ Low maintenance
- ∞ Easily adaptable to changes in floor layout
- ∞ ESD prevention by maintaining even humidity level year-round

# Dry Fog Industrial Humidification System AirAKI® with the humidifier AKIMist®“E”

## Benefits

- ∞ Productivity increased
  - ▶ PCB solder printing and mounting quality improved
  - ▶ Less static charge generated
  - ▶ Defect rate reduced (failure rate by ESD 1/10)
  - ▶ Product quality increased
- ∞ Better working environment
  - ▶ Higher humidity
- ∞ Energy savings
  - ▶ Reduction in air conditioning costs




“The Fog Engineers”

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“Taking the path less traveled”  「人の足跡を踏むな」