1. Corporate Profile

**Domestic Sites**

- **Mie Pref.**
  - Daian Plant (Inabe City, Mie Pref.)
  - Nishio Plant
  - Agui Plant
  - Ikeda Plant
  - Anjo Plant
  - Takatana Plant
  - Kota Plant
  - Zenmyo Plant
  - Toyohashi Plant

- **Aichi Pref.**
  - 9 sites in Chubu area

**Major Products**

- **Environment**
  - Functional Products Manufacturing Dept.
  - ISCV (Idle Speed Control Valve)
  - VCT (Variable Cam Timing)
  - OCV (Oilflow Control Valve)

- **Comfort**
  - Car air-conditioning system
  - Air cleaners, etc.

- **Convenience**
  - Car navigation system
  - ETC on-board equipment
  - Remote security system

- **Safety**
  - Sensing system for driving assist system
  - ABS/ESC actuators & ECUs
  - Airbag sensors and ECUs / Vehicle periphery monitoring system
  - Combination meters

**We deliver satisfaction to our customers by offering attractive products.**
2. Denso's Environment Policy

Denso Eco Vision 2015

**Eco-Management**
Improvement & Expansion of Eco-Management

**Eco-Products**
Development & Designing Ensuring Both Eco-Friendliness & Advanced Performance

**Eco-Friendly**
Cross-company collaboration & improved provision of information concerning eco-activities

---

**Constant Reduction of Impact on the Global Production Environment**

**CO₂ Reduction in Production & Logistics Activities**

1. **Production**
   - Epoch-making improvement in productivity (e.g. innovative production technologies)
   - Building of a change-resistant, energy-saving structure and achievement of significant improvements in per-unit CO₂ emissions by promoting "Energy JIT"*¹ and other activities designed to halve the energy consumption in a long run.
   
   Emission per sales*²: Reduction by 60% from the 1990 level
   Emission: Reduction by 7% from the 1990 level*³

   *¹ JIT: Just In Time
   *² Physical production value (Actual production value adjusted for selling price, etc.)
   *³ Average for the 2008-2012 period.

2. **Logistics**
   Worldwide energy-saving by ensuring efficient transportation and eco-driving.

We are engaged in continuous eco-activities to achieve numerical targets.
The Manufacturing Department is working as one team to implement initiatives and achieve the company's common goals.
4. Performance in Past 3 Years and Goals for FY2011

■ Reduction in CO2 Emission

<table>
<thead>
<tr>
<th>(1,000t-CO₂)</th>
<th>FY2008</th>
<th>FY2009</th>
<th>FY2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>2.29</td>
<td>1.67</td>
<td>1.27</td>
</tr>
<tr>
<td>Actual</td>
<td>2.42</td>
<td>1.74</td>
<td>1.37</td>
</tr>
</tbody>
</table>

■ Unit CO₂ Emission & CO₂ Emission

<table>
<thead>
<tr>
<th>Unit Emission</th>
<th>FY2008</th>
<th>FY2009</th>
<th>FY2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>(t-CO₂/ ¥100M) 9.0</td>
<td>8.9</td>
<td>8.1</td>
<td>7.5</td>
</tr>
<tr>
<td>8.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Recession</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

■ Goal Setting for FY2011

Unit CO₂ emission goals were not achieved due to external factors.

Company Wide

- **<Baseline Goal>**
  Continuous reduction in unit CO₂ emission (40% or more lower than the 1990 level)

- **<Internal Stretch Goal>**
  Improvement of unit CO₂ emission by 3% on a Y-o-Y basis

Functional Products

Unit CO₂ emission: 7.31t-CO₂/¥100M or lower
Reduction in CO₂ emission: 710t-CO₂ or more

⇒ **Stretch Goal:** 1,065t-CO₂

We will continue our efforts toward achieving the unit emission target even if we face unexpected external factors similar to those in 2010.

- **Changes in unit CO₂ emission by energy**
  - FY2008: 1.12 t-CO₂/¥100M
  - FY2009: 0.97 t-CO₂/¥100M
  - FY2010: 0.37 t-CO₂/¥100M

- **Factors of the Increase in Unit Air Consumption**
  - **Factor 1.** Our FY2010 Kaizen activities focused on the saving of electricity.
  - **Factor 2.** The cutting-process in-sourcing increased air usage.

- **Breakdown of CO₂ Reduction by Year/by Energy**
  - FY2009: Electricity 66%, Air 34%
  - FY2010: Electricity 77%, Air 23%

- **Unit Air Consumption**
  - FY2009: 0.97 t-CO₂
  - FY2010: 1.03 t-CO₂
  - FY2011: 1.05 t-CO₂

- **Lines launched in FY2011**
  - Sleeve Cutting
  - Sprocket Cutting #2
  - Cutting for Company M

- **Air Consumption**
  - FY2009: 42,083 m³
  - FY2010: 47,687 m³
  - FY2011: 50,103 m³

---

Reduce the rising air consumption and improve the unit air consumption.
### 6. Review & Analysis of Air Reduction Initiatives

#### Verification of Implementation Using Kaizen Matrix

- **●**: Implemented
- **○**: To be implemented
- **—**: N/A

#### In the past: Improvements

<Kaizen needs are prioritized in order of air consumption/unit>

<table>
<thead>
<tr>
<th>Process</th>
<th>Line Name</th>
<th>Mon. Ave. (m³/m)</th>
<th>Cut</th>
<th>Line Name</th>
<th>Usage per Unit (m³/unit)</th>
<th>Mon. Ave. (m³/m)</th>
<th>Washing M/C</th>
<th>Air Purge</th>
<th>Air Blow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assy</td>
<td>Intake VCT #7</td>
<td>180,020</td>
<td>Cut</td>
<td>VCT Rotor #4</td>
<td>4.2</td>
<td>82,996</td>
<td>—</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Assy</td>
<td>Intake VCT #1</td>
<td>157,693</td>
<td>Assy</td>
<td>Intake VCT #1</td>
<td>3.2</td>
<td>45,958</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Assy</td>
<td>High-vacuum DS</td>
<td>123,693</td>
<td>Assy</td>
<td>ECT #2</td>
<td>2.5</td>
<td>54,212</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Assy</td>
<td>Intake VCT #6</td>
<td>106,293</td>
<td>Cut</td>
<td>NP2 Cutting</td>
<td>2.4</td>
<td>87,397</td>
<td>—</td>
<td>—</td>
<td>⬤</td>
</tr>
<tr>
<td>Assy</td>
<td>RII Housing’</td>
<td>109,293</td>
<td>Cut</td>
<td>RII Housing’</td>
<td>2.2</td>
<td>106,258</td>
<td>○</td>
<td>—</td>
<td>⬤</td>
</tr>
<tr>
<td>Assy</td>
<td>Exhaust VCT #3</td>
<td>87,397</td>
<td>Assy</td>
<td>AT liner #1</td>
<td>1.9</td>
<td>74,139</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Assy</td>
<td>Double AT liner #1</td>
<td>70,120</td>
<td>Cut</td>
<td>E-VCT Cutting</td>
<td>1.7</td>
<td>70,120</td>
<td>—</td>
<td>—</td>
<td>○</td>
</tr>
<tr>
<td>Assy</td>
<td>High-Vacuum DS Off</td>
<td>74,139</td>
<td>Cut</td>
<td>High-Vacuum DS Off</td>
<td>1.7</td>
<td>12,509</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Cutting lines rank high, indicating a lot of Kaizen works to do.

⇒ Assign a person in charge of each item to ensure 100% Kaizen.

Investigate actual state to exert utmost air reduction efforts in cutting lines.

---

**DENSO**
7. Investigation of Actual State to Exert Utmost Air Reduction Efforts

Procedure: Analyze cutting lines' air consumption to identify all Kaizen opportunities.

Review of Air Consumption by Major Cutting Lines

- Double AT Cutting
- RII Valve Cutting
- VCT Rotor Cutting #3: 6.3m³/min
- VCT Rotor Cutting #4: 5.1m³/min

Findings from On-Site Investigation

- Review of Air Consumption by Major Cutting Lines
- Findings from On-Site Investigation
  - List of Inspection Results
    - Investigation by Secretariat in Dec. 2010
    - Classified by Factor
      - Air reduction with no energy-saving consideration (for quality/productivity improvement)
      - Insufficient maintenance & control (administration issue)

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Findings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Continuous air blowing for post-installation improvement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work-feeding blow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Foreign body removing blow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too long airgun discharge time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Excessive air pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No use of energy-saving air guns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incorrect calendar time switch on/off time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Air leakage</td>
</tr>
</tbody>
</table>

Many air-loss cases were identified.

Identify causes by gathering opinions directly from relevant departments.
8. Investigation of Causes for Air Loss (Hearing Directly from Relevant Departments)

- Review meeting with relevant departments

| Air blow is the quickest way to ensure high quality and utilization rate. |
| Are our energy-saving efforts really paying off? |
| Is there any new and efficient air blow technology that costs less but makes instant improvements? |
| Quality & productivity improvement should be prioritized! |
| We are too busy to care about energy-saving. |

<True Causes>

1. Although the importance of energy-saving is well recognized, priority is placed on production activities.

2. Kaizen activities to ensure quality and productivity are hindering energy-saving efforts.

<Challenges>

3. Activate energy-saving initiatives by developing human resources who can play an active and leading role in Kaizen efforts.

4. Develop a new and low-cost air blow technology that can achieve both improvement in quality/productivity and energy saving.

Accelerate energy-saving initiatives through human resource and new technology development.
9-1. Case-1 Development of "Core" Human Resources

Challenge: Activate energy-saving initiatives by developing "core" human resources who can play an active and leading role in Kaizen efforts.

**Process**

- **Step 1**
  Creation of Space for Joyful Experience

- **Step 2**
  Active Human Resource Recruiting

- **Step 3**
  Development of HR Specialized in Energy Saving

**Horizontal Implementation**
Exhibitions to present intra-department Kaizen efforts and promote their horizontal implementation

**Hands-On Experience**
Visual and tactile experiences to physically feel energy-saving effects

**Launch of "Energy-Saving Basic Learning Center" that provides hands-on experience**

**Information Provision**
Ideas, tips, and insights to develop energy-saving technologies

**Showcase of Initiatives**
Exhibitions to present company-wide/intra-department energy-saving initiatives and their goals

**Energy Visualization**
Real-time view of energy consumption at individual production lines and facilities

The Center provides members of the Manufacturing Department with opportunities to learn about energy saving in a nearby place.
9-2. Development of "Core" Human Resources

Process

<table>
<thead>
<tr>
<th>Step1</th>
<th>Step2</th>
<th>Step3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of Space for Joyful Experience</td>
<td>Active Human Resource Recruiting</td>
<td>Development of HR Specialized in Energy Saving</td>
</tr>
</tbody>
</table>

**Energy-Saving Exhibition**
- Sponsored by 8 outside manufacturers (May 27)

**Survey Results**
- Total: 169 respondents
  - I’d like to participate proactively: 75
  - I need to learn more: 30
  - I’d like to participate if time allows: 17

80% or more are interested in energy-saving initiatives.

**Meeting of Energy-Saving Leaders (Organization & Activities)**

- Eng. Div. (4 persons, 1 person/div.)
- Production (17 persons, 1 person/section)
- In-Sourcing Planning (1 person)
- Secretariat (1 person)
- Q&A (26 persons in total)
- Production Mgmt. (1 person)
- Inspection (1 person)

**Survey Results**
- Priority should be given to other works: 5

Energy-saving leaders are to play a central role in promoting energy-saving activities in their workplace.
9.3. Development of "Core" Human Resources

Let people understand Kaizen procedures through practical experience of air leakage repair (HR development)

1. Knowledge about air leakage (Launch of the Basic Learning Center)
   - Amount of leakage and monetary loss
   - Location of leakage
   - Inspection method
   To help obtain sufficient knowledge about current state of air loss

2. On-site leakage inspection
   - Inspection of all facilities using five senses & testing devices
   - Number of Leakage: 51 (1,860NL/min)

3. Inclusion in the Kaizen Timetable/Schedule
   - This leak can be fixed by replacing the packing!
   - Implement Kaizen without fail

4. Confirmation of Practical Effects
   - Confirmation of Kaizen effects using measuring system
   - Constant review of air consumption; Correction of defects if any

Repetitive implementation resulted in the rise in energy-saving awareness and activation of initiatives.

DENSO
10-1. Case 2 Development of New Air Blowing Devices
— Company’s First Pulsed-Air Blower

**Investigation of Actual Air Blow Operation within Department**

<table>
<thead>
<tr>
<th>Blow Method</th>
<th>Image</th>
<th>Air Consumption per location (1,000 m³/year) Operation Time: 8 hrs</th>
<th>Number of Locations (units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connected to Master Valve</td>
<td></td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>Dispensing</td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Valve Open</td>
<td>Left to blow</td>
<td></td>
<td>Locations at which production is prioritized: 159</td>
</tr>
<tr>
<td>Valve Shut</td>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Valve Shut</td>
<td>Standby ON</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Valve Shut</td>
<td>Standby OFF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connected to the Standby Switch</td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Standby ON</td>
<td>Standby OFF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermittent Air Blowing</td>
<td></td>
<td></td>
<td>116</td>
</tr>
<tr>
<td>Start of Work</td>
<td>End of Work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermittent and repetitive blows for maximum effect of impingement pressure</td>
<td>4</td>
<td>Small air consumption; ideal for air-saving</td>
<td></td>
</tr>
<tr>
<td>Pulse (Electric)</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Start of Work</td>
<td>End of Work</td>
<td></td>
<td>Not wide-spread</td>
</tr>
<tr>
<td>Is there any easier way to spread the use?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reasons impeding the spread of (electric) pulse blow**

1. High initial cost
   (Cost to design electric hard/soft circuits; cost to purchase electric parts)
2. Long time required for control/installation; difficult to fabricate
   (Wiring on the control board, work to establish connection to the facilities, adjustments)

**Develop a low-cost, easy-to-attach pulse blow device.**
10-2. Development of Low-Cost & Easy-to-Attach Pulse Blow Device

Joint Review Meeting with Technology Departments

Proposal to the Manufacturer

Can we find any examples in our in-house energy-saving report?

[Production Technology]

[Machineries]

[Production Engineering]

The product will be reliable because Company K has air pump technologies.

There is a device that generates pulses using compressed air only to avoid explosion!

<Investigation on Company K's Air-Pulse Generator>

Air Sequence Device

OR Function

AND Function

<Results>

- There are approx. 40 types of air sequence valves.
- Threshold function is to switch on and off signals using air pressure differences.

This function will enable us to shift to the pulse blow system!

Fabricate an air pulse blowing device and carry out a test.

We want to develop a pulse blow device by combining with existing mechanical valves.

Evaluate the feasibility and costs!

{Prior Comparison with Conventional Method}

<table>
<thead>
<tr>
<th>Item</th>
<th>Current (Electric)</th>
<th>Developed (Air)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaizen Difficulty Level</td>
<td>Difficult</td>
<td>Easy</td>
</tr>
<tr>
<td>Initial Cost</td>
<td>Design Cost</td>
<td>(¥20,000)</td>
</tr>
<tr>
<td>Parts Cost</td>
<td>(¥70,000)</td>
<td>(¥40,000)</td>
</tr>
<tr>
<td>Construction Time</td>
<td>16H ((¥100,000))</td>
<td>4H ((¥20,000))</td>
</tr>
<tr>
<td>Running Cost</td>
<td>(¥100/year) (Electricity)</td>
<td>(¥800/year) (Cost of controlling air)</td>
</tr>
<tr>
<td>Total Cost</td>
<td>(¥190,000)</td>
<td>(¥61,000)</td>
</tr>
<tr>
<td>Payback Period</td>
<td>2.1 years</td>
<td>0.7 year</td>
</tr>
</tbody>
</table>

The development was launched as the air-based system was determined to be superior in all aspects.

The challenge is how to achieve smooth pulse operation and sufficient dispensing volume!
10-3. Pulse Operation Test

Operation Check Using a Test Device

<Operation Flow>

1. Signal air pressure is transmitted.
2. The pressure within the generator rises.
3. The spool moves.
4. The blow starts.
5. The pressure within the generator drops.
6. The spool moves.
7. The blow stops.

*The device repeats the process from step 1 through step 7 until the signal air stops.

<Result>
Well worked (repetitive & smooth operation)

1. Signal air pressure is transmitted.
2. The pressure within the generator rises.
3. The spool moves.
4. The blow starts.
5. The pressure within the generator drops.
6. The spool moves.
7. The blow stops.

The devise must be improved so that it can be controlled only with the valve and the air circuit.

DENSO
10-4. Improvement of Device & Operation Test

Apply the principle of unilateral electromagnetic solenoid valves.

1. The pulse width can be changed arbitrarily. (0.1 sec. – 15 sec.)

- Off
- Blow On
- Off

2. Dispensing Volume Adjustable up to 1,500NL/min.

Let's examine the energy-saving effect using a real device.
10-5. Examination of Energy-Saving Effects Using Actual Device

**Evaluation Test**

- **Selection of Process for Installation**
  1. Time allowance to perform the test
  2. Significant air consumption

  "Aim of Blow"
  Improved productivity in the visual inspection process

  - Removal of cutting water & swarf from the end section
  - Removal of cutting water & swarf from the \( \Phi 20 \) hole

- **Before Improvement**
  Connected to the standby switch
  Once the switch is turned on, the air continues to blow.

- **After Improvement**
  Pulsed Air Blow
  Installed device
  The blow work requires minimum air.

**Confirmation of Effects**

1. Pulse status ... Measurement of flow waveform
   - Flow (L)
   - Time (t)
   *Measured with an airpower meter.

   The pulse wave was shaped as intended.

2. Quality Check
   - Level of Cleanliness
     - Spec: Max. particle size 0.5mm
     - Before: 0.2
     - After: 0.3
     - Inspector’s Visibility
       - Workability: Good

   The result was also satisfactory in terms of quality.

3. Reduction in CO₂ Emission
   - 1.2t-CO₂/year (Oil Equivalent: 1.12Kl/year)
   - (Effect of installation in the Dept.: 90.2t-CO₂/year [Oil Equivalent: 84Kl/year])

We successfully developed a low-cost, easy-to-attach pulse blow device.

DENSO
11. Spreadability & Continuity of Improvements

Versatility and Spreadability

1. Development of Core HR (Energy Saving Leaders)
   - Energy saving leaders’ efforts activated the Department’s energy-saving initiatives and fostered an energy-saving culture.
   - The secretariat's expansion measures and the organized activities by the energy saving leaders (bottom-up activities) brought about synergy effects and achieved a significant reduction in CO₂.

2. Pulsed-Air Blow
   <Versatility: Examples of Use of Pulse Blowers>
   - Work feeding using pulsed-air blow
     - Air blow to remove cutting swarf/foreign bodies
     - Air blow to remove electricity
     - Spraying of semidry cutting water
   Applicable to most air blow work points.

   <Spreadability: Listing in the manufacturer’s catalog>

   Currently expanding the application to offshore sites

Now we have built a foundation for the establishment of energy-saving (low-energy) facilities (our goal).

Continuity of Improvements

1. Plan to Spread the Use of Pulsed-Air Blow to Existing Lines

<table>
<thead>
<tr>
<th>Blow Method</th>
<th>FY2011</th>
<th>FY2012</th>
<th>FY2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection to Master Valve</td>
<td>7 → 0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Connection to Standby Switch</td>
<td>36 → 20</td>
<td>20 → 0</td>
<td></td>
</tr>
<tr>
<td>Intermittent</td>
<td>116</td>
<td>116 → 65</td>
<td>65 → 0</td>
</tr>
<tr>
<td>Pulsed-Air Blow</td>
<td>29</td>
<td>94</td>
<td>159</td>
</tr>
</tbody>
</table>

2. Installation into Newly Launched Lines

   1. Verification of Energy-Saving Efforts Implemented

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection of Energy</td>
<td>Circle the energy being used: Electric / Air / LNG / Steam / Water</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Electrification of air-driven devices</td>
<td>Yes / No</td>
</tr>
<tr>
<td>2.</td>
<td>Switching to energy-saving nozzles</td>
<td>Yes / No</td>
</tr>
<tr>
<td>3.</td>
<td>Use of air blowers in the air blow work</td>
<td>Yes / No</td>
</tr>
<tr>
<td>4.</td>
<td>Elimination or electrification of air pressure booster valves</td>
<td>Yes / No</td>
</tr>
<tr>
<td>5.</td>
<td>Electrification of vacuum generators</td>
<td>Yes / No</td>
</tr>
<tr>
<td>6.</td>
<td>Electrification of air hydro-boosters</td>
<td>Yes / No</td>
</tr>
<tr>
<td>7.</td>
<td>Electrification of air pumps</td>
<td>Yes / No</td>
</tr>
<tr>
<td>8.</td>
<td>Anti-air-leakage measures</td>
<td>Yes / No</td>
</tr>
<tr>
<td>9.</td>
<td>Installation of Pulsed-Air Blowers</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>

Examine whether the energy saving is considered from the planning stage.
12. Summary of Energy-Saving Effects

Effects of Core Human Resource Development

- **CO₂ Reduction within the Department**
  - **Stretch Goal:** 1,065t-CO₂ or more
  - **Actual Reduction:** 1,286t-CO₂
  - **Revised upward to:** 1,150t-CO₂
  - **Company’s mandatory goal:** 710t-CO₂ or more
  - **Reduced 58t-CO₂ (1.5 times the previous year)**

- **Effects of the Introduction of Pulsed-Air Blow Function**
  - The function was introduced to 23 locations and reduced 25t-CO₂ during FY2011. [Oil Equivalent: 23.3kl/year]

- **Actual Unit Air Consumption**
  - **Impact of production loss due to the Earthquake**
    - FY2010 Result: 1.03
    - FY2011 Result: 1.01
  - The unit consumption improved through the air-saving efforts centered on the introduction of pulsed-air blow system.

For further effects, we will implement electricity reduction efforts by leveraging the momentum created through the current energy-saving initiatives.