Financial Summary and MIURA Growth Strategy

Daisuke Miyauchi
President & CEO

November 20th, 2019 (Wed)
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1. Company Profile
Company Profile

Name: MIURA CO., LTD.

Location: 7 Horie, Matsuyama, Ehime

Established: May 1959

Group company

Japan: 10 companies
Overseas: 15 companies

*As of September 30, 2019

Employees

Group total: 5,881
1,708 employees overseas included (29.0%)

Business

Manufacturing, sale, and maintenance of equipment

Rating

“A” maintained as of October 2018

Publicized by Rating and Investment Information, Inc.

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**Consolidated Net Sales**

<table>
<thead>
<tr>
<th></th>
<th>Overseas</th>
<th>Japan</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18/3</td>
<td>124,883</td>
<td>138,880</td>
<td>263,763</td>
</tr>
<tr>
<td>19/3</td>
<td>23,140</td>
<td>25,755</td>
<td>48,895</td>
</tr>
<tr>
<td>20/3 (Plan)</td>
<td>28,500</td>
<td>115,500</td>
<td>144,000</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>&lt;IFRS&gt;</th>
<th>FY2017</th>
<th>FY2018</th>
<th>FY2019 Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue (Million yen)</td>
<td>124,883</td>
<td>138,880</td>
<td>144,000</td>
</tr>
<tr>
<td>Operating profit (Million yen)</td>
<td>13,868</td>
<td>16,682</td>
<td>17,500</td>
</tr>
<tr>
<td>Profit before income taxes (Million yen)</td>
<td>14,183</td>
<td>17,130</td>
<td>17,800</td>
</tr>
<tr>
<td>Profit attributable to owners of parent (Million yen)</td>
<td>10,363</td>
<td>12,280</td>
<td>12,800</td>
</tr>
<tr>
<td>Basic earnings per share (Yen)</td>
<td>92.09</td>
<td>109.10</td>
<td>113.71</td>
</tr>
</tbody>
</table>
2. FY2019 2nd Quarter Summary Overview
# First half results

<table>
<thead>
<tr>
<th>&lt;IFRS&gt;</th>
<th>FY2018 2nd</th>
<th>FY2019 2nd</th>
<th>Increase rate</th>
<th>FY2019 (Plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>65,632</td>
<td>67,714</td>
<td>3.2 %</td>
<td>144,000</td>
</tr>
<tr>
<td>Cost of revenue</td>
<td>39,913</td>
<td>40,471</td>
<td>1.4 %</td>
<td>86,500</td>
</tr>
<tr>
<td>Selling, general, and administrative expenses</td>
<td>18,673</td>
<td>19,160</td>
<td>2.6 %</td>
<td>41,000</td>
</tr>
<tr>
<td>Operating profit</td>
<td>8,022</td>
<td>8,726</td>
<td>8.8 %</td>
<td>17,500</td>
</tr>
<tr>
<td>Profit before income taxes</td>
<td>8,310</td>
<td>8,848</td>
<td>6.5 %</td>
<td>17,800</td>
</tr>
<tr>
<td>Profit attributable to owners of parent</td>
<td>5,933</td>
<td>6,392</td>
<td>7.7 %</td>
<td>12,800</td>
</tr>
</tbody>
</table>

**Overview**

**Japan**
- **Equipment sales**: Rise in sales of boilers and medical equipment with maintenance business staying buoyant
  - Responding to customers’ demands collected through public relation activities such as MIURA Fairs
  - Steady sales of water treatment equipment and high pressure steam sterilizers

**Marine equipment**: Good performance overall including ballast water management system

**Overseas**
- **Sluggish boiler sales, but maintenance staying solid**
  - **China**: Deceleration due to US-China trade war and slowdown of environmental regulations
FY2019 2nd Quarter Summary Overview

<table>
<thead>
<tr>
<th>Domestic and overseas sales (IFRS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit: 100 million yen</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Japan</th>
<th>Overseas</th>
<th>Overseas sales ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017/9</td>
<td>448</td>
<td>103</td>
<td>18.7%</td>
</tr>
<tr>
<td>2018/9</td>
<td>532</td>
<td>124</td>
<td>18.8%</td>
</tr>
<tr>
<td>2019/9</td>
<td>554</td>
<td>123</td>
<td>18.1%</td>
</tr>
</tbody>
</table>
## Analysis

<table>
<thead>
<tr>
<th>FY2019 2nd quarter summary overview</th>
<th>Plan</th>
<th>Result</th>
<th>Achievement rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>68,000</td>
<td>67,714</td>
<td>99.6 %</td>
</tr>
<tr>
<td>Operating profit</td>
<td>8,300</td>
<td>8,726</td>
<td>105.1 %</td>
</tr>
<tr>
<td>Profit before income taxes</td>
<td>8,400</td>
<td>8,848</td>
<td>105.3 %</td>
</tr>
<tr>
<td>Profit attributable to owners of parent</td>
<td>6,100</td>
<td>6,392</td>
<td>104.8 %</td>
</tr>
</tbody>
</table>

### Operating profit (%)

<table>
<thead>
<tr>
<th>Region</th>
<th>September 30, 2018</th>
<th>September 1, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>77.3</td>
<td>81.7</td>
</tr>
<tr>
<td>Inax Corporation</td>
<td>10.5</td>
<td>6.1</td>
</tr>
<tr>
<td>Overseas</td>
<td>12.2</td>
<td>12.2</td>
</tr>
</tbody>
</table>
## FY2019 2nd Quarter Summary Overview

### Comparison with the first half plan

Unit: 100 million yen

<table>
<thead>
<tr>
<th>Domestic</th>
<th>FY2018 Result</th>
<th>FY2019 Plan</th>
<th>FY2019 Result</th>
<th>Difference Result–Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler</td>
<td>285</td>
<td>294</td>
<td>299</td>
<td>5</td>
</tr>
<tr>
<td>Water treatment equipment</td>
<td>14</td>
<td>17</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>Marine equipment</td>
<td>48</td>
<td>51</td>
<td>57</td>
<td>6</td>
</tr>
<tr>
<td>Food &amp; medical equipment</td>
<td>51</td>
<td>54</td>
<td>56</td>
<td>2</td>
</tr>
<tr>
<td>Laundry</td>
<td>104</td>
<td>94</td>
<td>92</td>
<td>-2</td>
</tr>
<tr>
<td>Others (Special equipment, new business, environment, etc.)</td>
<td>30</td>
<td>35</td>
<td>31</td>
<td>-4</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>532</strong></td>
<td><strong>545</strong></td>
<td><strong>554</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overseas</th>
<th>FY2018 Result</th>
<th>FY2019 Plan</th>
<th>FY2019 Result</th>
<th>Difference Result–Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>24</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>Korea</td>
<td>36</td>
<td>36</td>
<td>38</td>
<td>2</td>
</tr>
<tr>
<td>China</td>
<td>42</td>
<td>50</td>
<td>39</td>
<td>-11</td>
</tr>
<tr>
<td>ASEAN, Taiwan</td>
<td>22</td>
<td>24</td>
<td>22</td>
<td>-2</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>124</strong></td>
<td><strong>135</strong></td>
<td><strong>123</strong></td>
<td><strong>-12</strong></td>
</tr>
</tbody>
</table>

| **Total**                                     | **656**       | **680**     | **677**       | **-3**                 |
### FY2019 2nd Quarter Summary Overview

**Domestic sales**

Unit: 100 million yen

- **Water treatment equipment**
  - September 2017: 13
  - September 2018: 14
  - September 2019: 19

- **Marine equipment**
  - September 2017: 40
  - September 2018: 48
  - September 2019: 57
  - Marine equipment including ballast water management system staying good

- **Food & medical equipment**
  - September 2017: 50
  - September 2018: 51
  - September 2019: 56

- **Laundry**
  - September 2017: 41
  - September 2018: 104
  - September 2019: 92
  - For three months only

- **Others**
  - September 2017: 27
  - September 2018: 30
  - September 2019: 31

(Marine equipment including ballast water management system staying good for three months only)

(Special equipment, new business, environmental business)
FY2019 2nd Quarter Summary Overview

<table>
<thead>
<tr>
<th>Overseas sales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit: 100 million yen</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>September 2017</th>
<th>September 2018</th>
<th>September 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>17</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Korea</td>
<td>35</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>China</td>
<td>35</td>
<td>42</td>
<td>39</td>
</tr>
<tr>
<td>ASEAN &amp; Taiwan</td>
<td>16</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

*Mexico consolidated from FY2018 2nd quarter*

US-China trade war
Slowdown of China economy
## Overseas sales in local currencies

<table>
<thead>
<tr>
<th>Country/region</th>
<th>Unit</th>
<th>2017/9</th>
<th>2018/9</th>
<th>2019/9</th>
<th>YoY growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>10 thousand CAD</td>
<td>338</td>
<td>411</td>
<td>611</td>
<td>↑</td>
</tr>
<tr>
<td>United States</td>
<td>10 thousand USD</td>
<td>1,195</td>
<td>1,322</td>
<td>1,210</td>
<td>↓</td>
</tr>
<tr>
<td>Mexico</td>
<td>10 thousand MXN</td>
<td>–</td>
<td>3,576</td>
<td>5,200</td>
<td>↑</td>
</tr>
<tr>
<td>Brazil</td>
<td>10 thousand BRL</td>
<td>209</td>
<td>1,094</td>
<td>1,394</td>
<td>↑</td>
</tr>
<tr>
<td>Korea</td>
<td>100 million KRW</td>
<td>350</td>
<td>358</td>
<td>412</td>
<td>↑</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Million NTD</td>
<td>149</td>
<td>241</td>
<td>274</td>
<td>↑</td>
</tr>
<tr>
<td>China</td>
<td>Million CNY</td>
<td>214</td>
<td>252</td>
<td>248</td>
<td>↓</td>
</tr>
<tr>
<td>Singapore</td>
<td>10 thousand SGD</td>
<td>426</td>
<td>416</td>
<td>342</td>
<td>↓</td>
</tr>
<tr>
<td>Indonesia</td>
<td>100 million IDR</td>
<td>410</td>
<td>649</td>
<td>661</td>
<td>↑</td>
</tr>
<tr>
<td>Turkey</td>
<td>10 thousand TRY</td>
<td>–</td>
<td>–</td>
<td>296</td>
<td>↑</td>
</tr>
<tr>
<td>Thailand</td>
<td>Million THB</td>
<td>80</td>
<td>105</td>
<td>77</td>
<td>↓</td>
</tr>
</tbody>
</table>
Analysis of overseas sales factors

Due to the yen’s ascent, overseas income decreased.

<table>
<thead>
<tr>
<th>Currency</th>
<th>September 2018</th>
<th>September 2019</th>
<th>Increase rate</th>
<th>FY2019 plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>110.26</td>
<td>108.06</td>
<td>- 1.5%</td>
<td>109.00</td>
</tr>
<tr>
<td>CAD</td>
<td>84.87</td>
<td>81.73</td>
<td>- 3.7%</td>
<td>83.50</td>
</tr>
<tr>
<td>CNY</td>
<td>16.74</td>
<td>15.68</td>
<td>- 6.4%</td>
<td>15.80</td>
</tr>
<tr>
<td>KRW (100 W)</td>
<td>10.04</td>
<td>9.22</td>
<td>- 8.2%</td>
<td>9.80</td>
</tr>
<tr>
<td>IDR (100 Rp)</td>
<td>0.78</td>
<td>0.77</td>
<td>- 1.0%</td>
<td>0.74</td>
</tr>
<tr>
<td>NTD</td>
<td>3.65</td>
<td>3.49</td>
<td>- 4.5%</td>
<td>3.50</td>
</tr>
<tr>
<td>BRL</td>
<td>29.27</td>
<td>27.56</td>
<td>- 5.8%</td>
<td>26.30</td>
</tr>
<tr>
<td>MXN</td>
<td>5.75</td>
<td>5.64</td>
<td>- 2.0%</td>
<td>–</td>
</tr>
<tr>
<td>THB</td>
<td>3.40</td>
<td>3.49</td>
<td>2.6%</td>
<td>3.30</td>
</tr>
<tr>
<td></td>
<td>First half</td>
<td>FY2018 Result</td>
<td>FY2019 Plan</td>
<td>FY2019 Plan (revised)</td>
</tr>
<tr>
<td>----------------</td>
<td>------------</td>
<td>---------------</td>
<td>-------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>Domestic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiler</td>
<td></td>
<td>617</td>
<td>623</td>
<td>631</td>
</tr>
<tr>
<td>Water treatment</td>
<td></td>
<td>35</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td>Marine equipment</td>
<td></td>
<td>99</td>
<td>107</td>
<td>117</td>
</tr>
<tr>
<td>Food &amp; Medical equipment</td>
<td></td>
<td>109</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>Laundry</td>
<td></td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Others (Special equipment, new business, environment, etc.)</td>
<td></td>
<td>70</td>
<td>74</td>
<td>74</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>1,130</td>
<td>1,155</td>
<td>1,173</td>
</tr>
<tr>
<td><strong>Overseas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td></td>
<td>49</td>
<td>53</td>
<td>53</td>
</tr>
<tr>
<td>Korea</td>
<td></td>
<td>74</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>China</td>
<td></td>
<td>90</td>
<td>105</td>
<td>87</td>
</tr>
<tr>
<td>ASEAN, Taiwan</td>
<td></td>
<td>45</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>258</td>
<td>285</td>
<td>267</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1,388</td>
<td>1,440</td>
<td>1,440</td>
</tr>
</tbody>
</table>

Unit: 100 million yen
3. Profit Share and Stock
3 Profit Share and Stock

1. Sustaining stable dividends
2. Targeting 30% consolidated payout ratio

FY2018
- Middle: 14 yen
- End: 19 yen
- Total: 33 yen

FY2019
- Middle: 16 yen
- End: 19 yen
- Total: 35 yen (Forecast)

【Changes in dividend per share】

(Yen)

<table>
<thead>
<tr>
<th>Date</th>
<th>Middle</th>
<th>End</th>
<th>Payout ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>15/3</td>
<td>8.67</td>
<td>11</td>
<td>30.0%</td>
</tr>
<tr>
<td>16/3</td>
<td>10</td>
<td>11</td>
<td>30.3%</td>
</tr>
<tr>
<td>17/3</td>
<td>10</td>
<td>12</td>
<td>30.6%</td>
</tr>
<tr>
<td>18/3</td>
<td>11</td>
<td>17</td>
<td>30.4%</td>
</tr>
<tr>
<td>19/3</td>
<td>14</td>
<td>19</td>
<td>30.8%</td>
</tr>
<tr>
<td>20/3</td>
<td>16</td>
<td>19</td>
<td>31.0%</td>
</tr>
</tbody>
</table>

【Reference】
- Total number of issued shares (excluding treasury shares): 112,696,346 shares
- Treasury shares: 12,594,766 shares
- As of March 31st, 2019

Management target: Maintaining ROE 10%

Dividend increase: 2 yen
4. Ballast Water Management System (BWMS) Business
Ballast Water Management System (BWMS) Business

Sale plan revision of BWMS

Unit: 100 million yen

- **Publicized May 2017**
- **Revised November 2017**
- **Revised May 2018**
- **Revised November 2018**
- **Revised May 2019**
- **Revised November 2019**

USCG Type Approval obtained

MIURA’s HK is the first in Japan to have obtained the approval for its filtration method with UV treatment (Based on MIURA’s own research)

Sales target: 1,200 units in total (by the end of FY2020)
5. Current China and Our Business Strategy
FY2019 2nd Quarter Summary Overview
FY2019 2nd Quarter Summary Overview

Difference between our plan and result

Sales in China

(100 million yen)

<table>
<thead>
<tr>
<th></th>
<th>17/3</th>
<th>18/3</th>
<th>19/3</th>
<th>20/3 (Plan)</th>
<th>20/3 (Plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale</td>
<td>59</td>
<td>72</td>
<td>73</td>
<td>87</td>
<td>64</td>
</tr>
<tr>
<td>Maintenance</td>
<td>8</td>
<td>11</td>
<td>17</td>
<td>-18</td>
<td>23</td>
</tr>
</tbody>
</table>

November 5th, 2019
China’s sales forecast at the end of this fiscal year lowered by 1.8 billion yen, to 8.7 billion yen (No amendment to MIURA’s total sales amount)

Factors of difference

1. **Economic deterioration in China**
   - Eased penalties regarding environmental regulations and postponement of regulation amendment

2. **US-China trade war**
   - Investment enthusiasm dampened
   - Our target shift towards food industry

3. **Currency exchange influence**

Our second factory in Suzhou is under construction as planned
Economic deterioration in China + US-China trade war

Withheld facility investment
Wait-and see stance

Economic stagnation
Worsening economy

Easing environmental regulations

Coal boiler use prohibition postponed in gas shortage areas
Replacement with gas-fired boiler has been postponed or suspended

Pellet boiler abolition stopped (excluding urban areas)
Adoption of pellet boiler increased

- Stagnant automobile industry
- Deflating apartment prices
- Bankruptcies of small and medium-sized enterprises
Two-Step Environmental Regulation

The gas pipeline from Russia will be completed in December. → Environmental regulations start gradually?

Dealing with Low NO\textsubscript{x} is our key strategy
- Low NO\textsubscript{x} burner replacement in progress → One of high profitability factors
- Gas-to-gas replacement → Energy saving proposal to promote boiler replacement by performing log analysis and load analysis

Two-step environmental regulation

1\textsuperscript{st} step
Soot PM2.5

2\textsuperscript{nd} step
NO\textsubscript{x}

Coal to gas
Low NO\textsubscript{x}

Rural area
Urban area
High levels of nitrogen dioxide (NO₂) can cause damage to the human respiratory system.

Nitrogen oxide (NOₓ) such as nitrogen monoxide (NO) and nitrogen dioxide (NO₂) is produced from the reaction among nitrogen (N) and oxygen (O₂) during combustion at high temperatures.

Two-step environmental regulation

1st step

Soot
PM2.5

2nd step

NOₓ

Coal to gas

Low NOₓ

Rural area

Urban area

Nutrogen monoxide
(NO)

Nitrogen dioxide
(NO₂)
Boiler manufacturers in China

Struggle for survival due to economic deterioration

- 18 companies bankrupted this year
- 20 companies reduced their production by 50% or more
- Taiwan’s leading boiler manufacturer withdrew from Chinese market

Intensified price competition

- Other bidders may sell their stocks at a discount
- However, customers tend to consider aspects other than pricing during a bid

<Point system is used for bid evaluation>

<table>
<thead>
<tr>
<th>Previous</th>
<th>Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price 80%</td>
<td>Price 40%</td>
</tr>
<tr>
<td>Technology, installation results, maintenance systems 20%</td>
<td>Technology, installation results, maintenance systems 60%</td>
</tr>
</tbody>
</table>

Suggest solutions with our products and maintenance

Prioritize based on MIURA’S standard style

Reliable boiler manufacturer will survive

Stand our ground for more years to be the No. 1 boiler manufacturer

Source: MIURA
Prospects and Strategies
Prospects and Strategies

Boiler installation analysis on MIURA users

<table>
<thead>
<tr>
<th>M</th>
<th>Gas to gas</th>
<th>Coal/bio to gas</th>
<th>New installation</th>
<th>Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2017</td>
<td>316</td>
<td>2,452</td>
<td>2,515</td>
<td>396</td>
</tr>
<tr>
<td>FY2018</td>
<td>557</td>
<td>2,220</td>
<td>3,396</td>
<td>923</td>
</tr>
<tr>
<td>FY2019 (Plan)</td>
<td>1,965</td>
<td>1,751</td>
<td></td>
<td>480</td>
</tr>
</tbody>
</table>

Increase by approx. 3.5 times

Construction tends to delay by about three months. If construction and installation fall behind schedule, the 3Q sales result may increase.
Boiler installation analysis on MIURA users

(Million yen)

- FY2016
- FY2017
- FY2018
- FY2019 (Plan)

- Gas-to-gas
- Coal/bio-to-gas
- New installation
- Expansion
Boiler market analysis in China

Target industry
- Food (↑)
- Pharmaceutical (↑)
- Cardboard (↓)
- Feed (↓)

(Million yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Food</th>
<th>Pharmaceutical</th>
<th>Cardboard</th>
<th>Feed</th>
<th>Beer</th>
<th>Chemical</th>
<th>Textile/dyeing</th>
<th>Steel/machinery</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY2018</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY2019 (Plan)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Prospects and Strategies

Enhancing solution-oriented sales
Performing log and load analysis on other manufacturer’s boilers to suggest much more efficient system

Log and load analysis
Contract closed rate

FY2017 FY2018 As of September 2019
478 1,165 924
2.6% 23.9% 26.4%

Inquiry occurrence rate (i.e. Quotation submission) 81.9%

Note: Cases whose load analysis and contract-conclusion were done in different years are included above.
Prospects and Strategies

Our new factory

Completion in April 2020, operation in September

Production capacity in the future: 4,000 to 5,000 units annually

We will stand our ground for some years of economic deterioration and increase our market share in China, based on the “gas-to-gas” replacement strategy!
6. Domestic Business in Accordance with the Times
Domestic Business in Accordance with the Times

Hardly susceptible to economic fluctuations

Not only selling our products, but also maintaining them—our maintenance and consumable sales continue.

With a boiler’s 15-year life

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales amount (Unit: Thousand yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>10,000</td>
</tr>
<tr>
<td>2nd year</td>
<td>1,000</td>
</tr>
<tr>
<td>3rd year</td>
<td>1,000</td>
</tr>
<tr>
<td>4th year</td>
<td>1,000</td>
</tr>
<tr>
<td>5th year</td>
<td>1,000</td>
</tr>
<tr>
<td>6th year</td>
<td>1,000</td>
</tr>
<tr>
<td>7th year</td>
<td>1,000</td>
</tr>
<tr>
<td>8th year</td>
<td>1,000</td>
</tr>
<tr>
<td>9th year</td>
<td>1,000</td>
</tr>
<tr>
<td>10th year</td>
<td>1,000</td>
</tr>
<tr>
<td>11th year</td>
<td>1,000</td>
</tr>
<tr>
<td>12th year</td>
<td>1,000</td>
</tr>
<tr>
<td>13th year</td>
<td>1,000</td>
</tr>
<tr>
<td>14th year</td>
<td>1,000</td>
</tr>
<tr>
<td>15th year</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Product sales + Maintenance & chemical sales = Stable cashflow

Virtuous circle with our users

Product confidence & face-to-face security

Long-term relationship starts on purchase

No effect of economic fluctuations

Sales of products other than boilers

Repeat rate increase (replacement rate)

Replacement rate Approx. 90%
Domestic Business in Accordance with the Times

Being a leading manufacturer

- Overwhelming share/Price leader
- High profit
- Confidence of customers
- Grasping the market trend and responding its changes
- Unique customer services
- High replacement rate Approx. 90%

Share maintained

Installation

Replacement

Maintenance/inspection

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### Domestic Business in Accordance with the Times

#### Decreasing maintenance staff in Japan

**Boiler workers**

<table>
<thead>
<tr>
<th>Year</th>
<th>19 and under</th>
<th>20's</th>
<th>30's</th>
<th>40's</th>
<th>50's</th>
<th>60's</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>315</td>
<td>102</td>
<td>118</td>
<td>122</td>
<td>142</td>
<td>113</td>
<td>860</td>
</tr>
<tr>
<td>2011</td>
<td>198</td>
<td>106</td>
<td>111</td>
<td>122</td>
<td>145</td>
<td>107</td>
<td>700</td>
</tr>
<tr>
<td>2012</td>
<td>299</td>
<td>103</td>
<td>111</td>
<td>113</td>
<td>144</td>
<td>111</td>
<td>646</td>
</tr>
<tr>
<td>2013</td>
<td>199</td>
<td>107</td>
<td>96</td>
<td>103</td>
<td>121</td>
<td>107</td>
<td>568</td>
</tr>
<tr>
<td>2014</td>
<td>279</td>
<td>8</td>
<td>11</td>
<td>11</td>
<td>7</td>
<td>12</td>
<td>52</td>
</tr>
<tr>
<td>2015</td>
<td>231</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>50</td>
</tr>
<tr>
<td>2016</td>
<td>18</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>2017</td>
<td>18</td>
<td>6</td>
<td>3</td>
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<td>6</td>
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<td>20</td>
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<tr>
<td>2018</td>
<td>16</td>
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<td>3</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>20</td>
</tr>
</tbody>
</table>

**Source:** "Basic Survey on Wage Structure"

**Examinees of the 2nd grade boiler technician**

<table>
<thead>
<tr>
<th>Year (Persons)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>159</td>
<td>10</td>
<td>209</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>147</td>
<td>209</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>299</td>
<td>145</td>
<td>144</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>199</td>
<td>144</td>
<td>227</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>279</td>
<td>227</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>231</td>
<td>136</td>
<td>135</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>18</td>
<td>135</td>
<td>129</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>107</td>
<td>129</td>
<td>129</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>2018</td>
<td>77</td>
<td>129</td>
<td>145</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** "Basic Survey on Wage Structure"

**Examinees**

**Passing examinees**
Profit/Loss management in small groups

Trio profitability — MIURA’s “Triple system”

Good. We can make a profit for another person. Let’s have an additional person next year!

We spent expenses more than we had planned...

I regret I bought too many tools...

All together now to offset it!

Employer’s goal

To let each and every employee engaged in maintenance have “ownership”

Employees’ goal

To achieve profitability with his trio members

100 locations around Japan, approx. 1,100 people

All staff in MIURA aim to achieve profitability!

To the same goal
Domestic Business in Accordance with the Times

Customer account strategy
MIURA’s divisions and branches

Customer account manager
shares issues with customers

Best partner strategy
Long-term trust & confidence

Total solutions strategy
Continuance of resolving customer’s problems

- No need to find maintenance companies
- Service of the same quality as for boilers to all other products
- Problem/issue solved
e.g.) Effective use of waste water, cost cutting

Boiler maintenance
Food & medical equipment maintenance
Special equipment maintenance
Medical equipment sales
Food equipment sales
Special equipment sales
Heat utilization sales

Contributing to our customer’s stable operation
Leading to our long-term stable performance

Contributing to our customer’s stable operation

Leading to our long-term stable performance
Installation example: Food company in Aichi

Not only boilers but also other MIURA products

Sale of processing equipment with utilities
Proposal of thoroughgoing cost reduction

Heat source: Boilers
Water used: Filtration equipment
Compressed air: Compressor
Maintenance

Manufacturing process: Retort sterilizer, etc.
Installation example: Nagoya Railroad Co., Ltd.
From boiler sales to solution sales of water for car-washing

Testing site

Boiler installation was the ice-breaker...

19 units of our water treatment equipment are to be installed (from FY2018 to FY2020)

After our RO equipment installation, Labor and expenses spent for polishing and wiping after car-wash were largely reduced!
Domestic Business in Accordance with the Times (offering total solutions)

Installation example: Chemical company in Wakayama

- Steam boiler
- Water treatment equipment
- Industrial water filtration for whole factory
- Water
- Various pure water
- Chemical management
- RO for silica removal
- Maintenance
- Dissolved oxygen removal
- Heating
- Cooling
- Drain
- Reactor
- Crystallizer
- Stable pure water
- Type heating and cooling
- Heating
- Cooling
- Drain
- Reactor
- Crystallizer
- Chemical company
- Heat
- Compressed air
- Depressurized steam
- Steam driven air compressor
- Using depressurized steam

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Installation example: Brewery company in Kyoto

Brewery in Kyoto

Steam boiler

Steam driven air compressor

Compressed air

Depressurized steam

Using depressurized steam

Heat

Pasteurizer CIP heating

Quality improvement of water used

Pasteurizer drain

Reuse for boiler feed water to save water

Drain

Discharged water reuse replenishes insufficient water

Water treatment equipment

Underground water (chronically insufficient)

Water used: highly filtrated

(UF membrane filter)

Removal of cryptosporidium

Water ensured/ environmental friendliness

Maintenance

Water

Removal of cryptosporidium
Installation example: Ehime Prefectural Central Hospital
Preparing for emergency regarding BCP (Business continuity planning)

- Fuel selectable boiler
- Steam sterilizer system
- Vacuum boiling
- Filters
- Vacuum cooler

Disaster-resistant
Improved efficiency in cure & care
Fully equipped medical treatment

Maintenance

Steam sterilizer system

Preparing for emergency regarding BCP (Business continuity planning)
Domestic Business in Accordance with the Times (develop new markets)

Domestic share
Steam boiler market in Japan

- Fire-tube boiler: 17%
- Water tube boiler: 9%
- Once-through boiler: 74%

Total amount of steam output of the market:
Approx. 200,000 t/h
(Note) Estimated value

Once-through boiler market in Japan

- MIURA: Share No.1 57%
- Others

Total amount of steam output:
Approx. 150,000 t/h
(Note) Estimated value

“Once-through-ism” movement

- District heating and cooling (DHC)
- Cardboard/paper mill
- Japan railway / other private railways
- In-house power generation (boilers of Electricity Business Act)

(Note) The share of once-through boilers is based on MIURA’s investigation and the actual results may differ from that.
Installation example: Heat supply company (district heating and cooling) in Tokyo

Advantages of Multiple Installation (MI)

- Highly efficient even if the load fluctuates
  - Summer, winter, daytime → High demand
  - Spring, fall, nighttime → Low demand

- Energy-saving and environmentally friendly
  - Central management of large-scale facility

- Space-saving
  - Close installation of boilers
  - Easy to carry into the basement

Replacing fire-tube boiler with MI boilers
Installation example: Chemical company in Fukuoka (replacing boilers of Electricity Business Act)

Before

*These images may differ from actual facilities.
Power generation boiler × 2 units
200 t/h per unit

Total: 400 t/h

After

• 4 t/h once-through boiler×16 units (2.45 MPa specification)
• 7 t/h once-through boiler×22 units (1.57 MPa specification)

Total: 218 t/h

MIURA’s once-through boilers and online maintenance were introduced!
Forthcoming hydrogen society (low carbon to de-carbon)
## New model fuel cell “FC-5B” (Sales started from October 1st, 2019)

<table>
<thead>
<tr>
<th>4.2-kW solid oxide fuel cell system (SOFC)</th>
<th>“suidel” Small hydrogen generator (co-developing with Tokyo Gas Company)</th>
<th>“HYSERVE” Compact on-site hydrogen generator (manufactured on commission from Osaka Gas Engineering Co., Ltd.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cogeneration equipment to generate electricity and heat (hot water) using city gas. Contributes to saving energy!</td>
<td>Generates hydrogen at 5 m³N/h using city gas as fuel. Small amount of hydrogen can be supplied! *suidel is a registered trademark of Tokyo Gas.</td>
<td>Generates hydrogen using city gas or LPG. MIURA manufactures HYSERVE 300 and HYSERVE 100. *HYSERVE is a registered trademark of Osaka Gas.</td>
</tr>
</tbody>
</table>
Reference
### MIURA Business Model

#### History

- **1959**: Incorporation. Full scale production of the Z boiler began.
- **1972**: Development of high efficiency boiler. ZMP Contract started.
- **1974**: Development of gas-fired boiler with Tokyo Gas Company.
- **1977**: Commercialization of the MI (Multiple Installation) system.
- **1978**: Diversified business started.
- **1982**: Listed shares on the 2nd Section of the Osaka Securities Exchange.
- **1984**: Listed shares on the 2nd Section of the Tokyo Stock Exchange.
- **1986**: Patent received for the MI system.
- **1991**: Development of low NOx boiler.
- **2004**: Sale of SQ-2500ZS, the world’s first gas-fired boiler with an NOx value of 25 ppm begun.
- **2009**: 50th Anniversary. Launch of the SQ-7000Z, high pressure steam boiler. Acquisition of a laundry business company.
- **2017**: Acquisition of a laundry business company.

#### FY2019 sales target: 144 billion yen!

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>Incorporation. Full scale production of the Z boiler began.</td>
</tr>
<tr>
<td>1972</td>
<td>Development of high efficiency boiler. ZMP Contract started.</td>
</tr>
<tr>
<td>1977</td>
<td>Commercialization of the MI (Multiple Installation) system.</td>
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<tr>
<td>1978</td>
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<td>Listed shares on the 2nd Section of the Tokyo Stock Exchange.</td>
</tr>
<tr>
<td>1986</td>
<td>Patent received for the MI system.</td>
</tr>
<tr>
<td>1989</td>
<td>Listed shares on the 1st Sections of the Tokyo and Osaka Stock Exchange.</td>
</tr>
<tr>
<td>1991</td>
<td>Development of low NOx boiler.</td>
</tr>
<tr>
<td>2004</td>
<td>Sale of SQ-2500ZS, the world’s first gas-fired boiler with an NOx value of 25 ppm</td>
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<tr>
<td>2009</td>
<td>50th Anniversary. Launch of the SQ-7000Z, high pressure steam boiler.</td>
</tr>
<tr>
<td>2017</td>
<td>Acquisition of a laundry business company.</td>
</tr>
</tbody>
</table>
What is the reason for steam utilization?

- **Feed heat through steam**
- **95% thermal efficiency**
- **Utilize heat efficiently**
- **Steam-driven facility**
  - Stir ingredients while turning blades
  - Produce side dishes, soup, jam, paste, etc.
- **Waste Energy**
  - 5%
  - 70%
  - 30%

**About the boiler**
Example of using steam (Direct heating)

About the boiler

Once-through boiler

“It’s warm.”

Foot bus

H₂O

Pump
### Example of using steam (Indirect overheating)

- **Heating**
  - Produce side dishes, soup, jam, paste, etc.
  - Stir ingredients while turning blades

**Coating process**
- **Spiral fin tube**
- **Role of a dryer or drying**

**Dyeing process / Plating process**
- **Steam-driven facility**
- **Blades**
- **Corrugated tube**

---

**About the boiler**

**Steam**
- **Drain**

**Coating process**
- **Spiral fin tube**
- **Steam**
- **Drain**

**Dyeing process / Plating process**
- **Steam**
- **Drain**

**Coil**
- **Steam**
- **Drain**
About the boiler

Must be maintenance for the steam boiler

Greatest enemy for the boiler

1. Corrosion → Occur a Pitting corrosion in a vessel → Removal of Dissolved Oxygen → DOR

Vacuuming

2. Scale → Lower boiler efficiency or Rupture of water pipes → Water softener

Water softener

Raw water → Water (Scale prevention)

Ion exchange resin
About the boiler

Must be maintenance for the steam boiler

Steam boiler

Condense scale

P

Blowdown

Hot water boiler

Hard to build scale, as the whole water drains.

Vertical section of a pipe

1000°C

200°C

Scale buildup

1000°C

Scale insulates heat.

400°C

A pipe melts.

About the boiler
Type of Boilers

Types of boilers — Same capacity

Once-through boiler
Water tube boiler
Fire tube boiler
What is Multiple Installation (MI) System?

**MIURA MI (Multiple Installation) System**

Provides steam of required amount when needed, reducing operation costs and emission of CO$_2$ and NOx.

- One large capacity boiler
- Small capacity boilers in MI system

---

Why is MI system efficient?

- Energy Saving
- Space Saving
- Labor Saving
- Low pollution

- Same water content even if the number of potatoes reduced
- Water content reduced when the number of potatoes reduced

---

Why is MI system efficient?

One large capacity boiler

Small capacity boilers in MI system

3 pcs

1 pc

Same water content even if the number of potatoes reduced

Water content reduced when the number of potatoes reduced

Energy Saving

Space Saving

Labor Saving

Low pollution
In 1986, MI system patented

**MI system** (Multiple Installation system)

Once-through boiler design makes energy savings a reality.

Provide steam when needed and only when needed, low operation costs and reduction of CO$_2$ and NOx.

- Energy-saving
- Space-saving
- Labor-saving
- Low pollution
ZMP Contract

Online Maintenance

Maintaining high profitability with “IoT” for 29 years

Monitoring

Troubleshooting via Telephone (Data collection/analysis)

User

Approx. 64,000 units under contract
*Including equipment other than boiler
(As of October 2019)

Remote monitoring

Trouble factor grasped

Visit

Preparation in advance

Early recovery

Much more effective, easier maintenance work
Domestic Sales Strategy

What will we offer for the matured market in Japan?

Maximize efficiency in Boiler

Improve energy efficiency throughout the factory

Unutilized heat Recovery equipment
Steam driven air compressor
Exhaust gas boiler

Other than Boilers
Water treatment equipment
Food processing equipment
Medical equipment
Laundry equipment

Marine equipment
Marine boilers
Ballast water management system
Ballast water problem “A new market born”

“Ballast water” is the seawater taken into a ship’s tank to provide stability to the ship.

Ballast tank

Port of unloading

Water filled

No load

Aquatic organisms

Sailing

3 to 4 billion tons seawater transferred per annum

Port of loading

Full load

Water discharged

Aquatic organisms transferred from the port of unloading to that of loading

Environmental problems such as ecosystem destruction

Ecosystem destruction

The Ballast Water Management Convention (adopted in 2004) → Installation of ballast water treatment equipment is obliged

Obligatory since Sep. 2017

Newly built ships

Obligatory since Sep. 2019

Existing ships

Reference: document issued by the MLIT

Domestic Sales Strategy
What is a district heating and cooling (DHC) system?

A system to provide air conditioning and hot water to whole buildings such as commercial facilities and apartment houses in the district.
International Sales Strategy

MIURA's Network

**Russia**
- MIURA NETHERLANDS B.V.
  - Provides services to ship owners in Europe.

**China**
- MIURA INDUSTRIES (CHINA) CO., LTD.
  - Handles Chinese domestic market and exports to ASEAN.
- MIURA TAIWAN ENG CO., LTD.
  - Handles Taiwanese domestic market and exports to ASEAN.

**Taiwan**
- MIURA TAIWAN ENG CO., LTD.
  - Handles Taiwanese domestic market and exports.

**Turkey**
- MIURA TURKEY HEATING SYSTEMS INDUSTRY CO., LTD.
  - Looks toward the European and CIS country markets.

**Korea**
- KOREA MIURA CO., LTD.
  - Handles Korean domestic market and exports to Russia.

**Brazil**
- MIURA BOILER BRAZIL LTD.
  - Started manufacturing in 2016.

**Canada**
- MIURA CANADA CO., LTD.
  - Handles Canada domestic market and exports to USA.

**Indonesia**
- PT. MIURA INDONESIA
  - Handles exports to ASEAN.

**Mexico**
- MIURA BOILER MEXICO S.A. DE C.V.
  - Provides solutions for the Mexican domestic market.

**Sri Lanka**
- MIURA SINGAPORE CO PTE LTD.
  - An ASEAN hub office.

**Cambodia**
- Provides sales and maintenance services mainly in Phnom Penh.
- Provides sales and maintenance services through appointed dealers.

**Philippines**
- MIURA SINGAPORE CO PTE LTD.
  - Provides solutions for the Thai domestic market.

**Malaysia**
- MIURA SINGAPORE CO PTE LTD.
  - Provides solutions for the Thai domestic market.

**Vietnam**
- MARUSE ENGINEERING (V) CO., LTD.
  - Establishes offices in major cities.

**Bangladesh**
- Provides sales and maintenance services mainly in Dhaka.

**Cambodia**
- Provides sales and maintenance services through local dealers.

**Myanmar**
- Provides sales and maintenance services of boilers complying with ASME standards.

**Chile**
- MIURA BOILER MEXICO S.A. DE C.V.
  - Started manufacturing in 2016.

**Vietnam**
- MARUSE ENGINEERING (V) CO., LTD.
  - Establishes offices in major cities.

**Sri Lanka**
- Provides sales and maintenance services through appointed dealers.
Basic Capital Policy

Here is the basic capital policy of the Miura Group specified to improve our corporate value in the medium- and long-term over the ensured financial soundness.

**Capital efficiency improvement**
Regarding that steady profit increase regardless of the market environment leads to corporate value increase and shareholder’s interest improvement, MIURA aims to achieve Return on Equity (ROE) of 10% or more steadily.

**Sustainable and stable return to shareholders**
Not only the continuation of stable dividends but also the fair return of profit based on the company’s performance is ideal. We strive to increase the level of dividends, setting the consolidated dividend payout ratio of 30% as a benchmark and comprehensively taking our consolidated results and financial conditions into account.
**Domestic**

1. **Total solution**
   - Improving energy efficiency at factories and plants all equipped with MIURA products, achieving one-stop maintenance.

2. **BWMS**
   - Obtaining USCG type approval.
   - Taking full advantages of our technology, maintenance, and customers’ trust in MIURA.

**Overseas**

1. **Deployment of our Japanese business model**
   - Appealing advantages of MI system and suggesting energy-saving boiler system.
   - Globalizing MIURA boiler while increasing installation.

2. **Coal-fired boiler replacement in China**
   - Introducing gas-fired boiler technology in Japan to meet legal requirements, which have been tightened, on the fuel shift from coal to gas regarding serious air pollution in China.
   - Expanding maintenance network to provide maintenance as in Japan.
Basic Capital Policy

Improve the product lineup, and develop solutions for the major end-user markets. Aim to expand to the overseas markets.

Major end-user market
- Mechanical Chemical
- Food processing
- Hospital Hotel
- Linen

【MIURA’s total solution】
- Boiler
- Water treatment
- Food processing
- Medical
- Cleaning
- Marine boiler
- BWMS

Expand to the global market
- Japan
- Overseas
- China/Korea
- ASEAN
- Americas
The Best Partner of Energy, Water and Environment

Contact

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