Financial Summary and MIURA Growth Strategy

November 21th, 2017 (Tue)

Daisuke Miyauuchi
President & CEO
MIURA CO.,LTD.
Each value mentioned in this document is based on the information currently available and the actual results may be changed and differ from what is stated herein, due to forthcoming various factors. The utmost care has been taken to provide the information publicized in this document. However, MIURA shall not be held responsible for any damages resulting from the information publicized in this document.
1. Company Profile
1  Company Profile

Name: MIURA CO., LTD.
Location: 7 Horie, Matsuyama, Ehime
Established: May 1959

Group company (MIURA CO., LTD. Included):
- Japan: 13
- Overseas: 15
※ As of September 30th, 2017

Employees: Group total: 5,421
(1,443 employees overseas included)

Business: Manufacturing, sale, and maintenance of equipment

Rating: “A” maintained as of October 2017 (Publicized by Rating and Investment Information, Inc.)

【Consolidated Net Sales】

<table>
<thead>
<tr>
<th></th>
<th>Unit: Million yen</th>
<th>FY2016</th>
<th>FY2017 forecast (Revised)</th>
<th>FY2017 forecast (Before)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td></td>
<td>102,324</td>
<td>120,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Operating profit</td>
<td></td>
<td>12,401</td>
<td>14,000</td>
<td>11,800</td>
</tr>
<tr>
<td>Profit before income taxes</td>
<td></td>
<td>12,898</td>
<td>14,300</td>
<td>12,600</td>
</tr>
<tr>
<td>Profit attributable to owners of parent</td>
<td></td>
<td>9,012</td>
<td>9,700</td>
<td>8,700</td>
</tr>
<tr>
<td>Basic earnings per share</td>
<td></td>
<td>80.08</td>
<td>86.19</td>
<td>77.31</td>
</tr>
</tbody>
</table>

<Forecast>
2. FY2017 2\textsuperscript{nd} Quarter
Summary Overview
### FY2017 2nd Quarter Summary Overview

<table>
<thead>
<tr>
<th></th>
<th>FY2016 2nd</th>
<th>FY2017 2nd</th>
<th>FY2017 forecast (revised)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>46,793</td>
<td>55,156</td>
<td>120,000</td>
</tr>
<tr>
<td><strong>Cost of revenue</strong></td>
<td>27,236</td>
<td>32,569</td>
<td>71,200</td>
</tr>
<tr>
<td><strong>Selling, general and administrative expenses</strong></td>
<td>13,901</td>
<td>16,280</td>
<td>35,600</td>
</tr>
<tr>
<td><strong>Other income</strong></td>
<td>299</td>
<td>416</td>
<td>800</td>
</tr>
<tr>
<td><strong>Other expenses</strong></td>
<td>175</td>
<td>31</td>
<td>-</td>
</tr>
<tr>
<td><strong>Operating profit</strong></td>
<td>5,778</td>
<td>6,692</td>
<td>14,000</td>
</tr>
<tr>
<td><strong>Profit before income taxes</strong></td>
<td>5,664</td>
<td>6,909</td>
<td>14,300</td>
</tr>
<tr>
<td><strong>Profit attributable to owners of parent</strong></td>
<td>3,836</td>
<td>4,794</td>
<td>(Full year) 9,700</td>
</tr>
</tbody>
</table>

[Unit: Million yen]

### Overview of financial summary

**Japan**
- Boilers and related equipment and food processing equipment staying good
- Laundry business joined
  - Small once-through boiler & related equipment: Good in steel/chemical industries
  - Marine equipment: Decrease in income due to decrease in both medium/small shipbuilding and overseas order reception
  - Laundry: Good due to foreign tourist increase, etc.

**Overseas**
- Sale increased due to replacement with gas-fired boiler in China
  - China: Sale increased mainly in feed and corrugated cardboard industries
  - Sales keep good progress in Korea, Taiwan, & ASEAN regions.
## Analysis

<table>
<thead>
<tr>
<th></th>
<th>2Q plan</th>
<th>2Q result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>51,000</td>
<td>55,156</td>
</tr>
<tr>
<td>Operating profit</td>
<td>5,300</td>
<td>6,692</td>
</tr>
<tr>
<td>Profit before income taxes</td>
<td>5,700</td>
<td>6,909</td>
</tr>
<tr>
<td>Profit attributable to owners of parent</td>
<td>3,800</td>
<td>4,794</td>
</tr>
</tbody>
</table>

### Factors behind profit increase (pretax profit)

- **Income increase effect/SGA expenses reduction**: 57
- **Currency exchange, etc.**: 4
- **Total**: 69

**Unit:** 100 million yen
FY2017 2nd Quarter Summary Overview

Domestic sales

Unit: 100 million yen

- Water treatment
- Marine
- Food/Medical
- Laundry <For 3 months>
- Others (Exhaust gas boiler/Environmental analysis equipment, etc.)

<table>
<thead>
<tr>
<th>Category</th>
<th>15/9</th>
<th>16/9</th>
<th>17/9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water treatment</td>
<td>13</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Marine</td>
<td>34</td>
<td>46</td>
<td>40</td>
</tr>
<tr>
<td>Food/Medical</td>
<td>44</td>
<td>43</td>
<td>50</td>
</tr>
<tr>
<td>Laundry</td>
<td>22</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>Others</td>
<td>41</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sales increase in boiler business

In addition to currency exchange influences, income in local currency increased

Sale increase in boiler business

Domestic/overseas sales (IFRS)

Unit: 100 million yen

<table>
<thead>
<tr>
<th>Year</th>
<th>Japan</th>
<th>Overseas</th>
<th>Overseas sales ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016/9</td>
<td>384</td>
<td>82</td>
<td>17.7%</td>
</tr>
<tr>
<td>2017/9</td>
<td>448</td>
<td>102</td>
<td>18.7%</td>
</tr>
</tbody>
</table>
Factor analysis of overseas sales increase

Apart from currency exchange influence, overseas sale increasing actually increased by 15 yen from 2016/9 to 2017/9.

<table>
<thead>
<tr>
<th>Currency</th>
<th>FY2016 2Q</th>
<th>FY2017 2Q</th>
<th>Increase rate</th>
<th>FY2017 plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>105.20</td>
<td>111.04</td>
<td>5.6%</td>
<td>105.00</td>
</tr>
<tr>
<td>CAD</td>
<td>81.10</td>
<td>85.58</td>
<td>5.5%</td>
<td>78.00</td>
</tr>
<tr>
<td>CNY</td>
<td>15.92</td>
<td>16.42</td>
<td>3.1%</td>
<td>15.40</td>
</tr>
<tr>
<td>KRW (100 W)</td>
<td>9.22</td>
<td>9.83</td>
<td>6.6%</td>
<td>9.10</td>
</tr>
<tr>
<td>IDR (100 Rp)</td>
<td>0.80</td>
<td>0.84</td>
<td>5.0%</td>
<td>0.80</td>
</tr>
<tr>
<td>NTD</td>
<td>3.28</td>
<td>3.67</td>
<td>11.9%</td>
<td>3.30</td>
</tr>
<tr>
<td>BRL</td>
<td>31.18</td>
<td>34.83</td>
<td>11.7%</td>
<td>32.50</td>
</tr>
<tr>
<td>THB</td>
<td>3.00</td>
<td>3.28</td>
<td>9.3%</td>
<td>2.90</td>
</tr>
</tbody>
</table>
FY2017 2nd Quarter Summary Overview

Overseas sales

Unit: 100 million yen

<table>
<thead>
<tr>
<th>Region</th>
<th>15/9</th>
<th>16/9</th>
<th>17/9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>18</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Korea</td>
<td>35</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>China</td>
<td>32</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td>ASEAN &amp; Taiwan</td>
<td>12</td>
<td>10</td>
<td>16</td>
</tr>
</tbody>
</table>

Unit: 100 million yen
Main overseas sales (in local currency)

<table>
<thead>
<tr>
<th>Country</th>
<th>Unit</th>
<th>15/9</th>
<th>16/9</th>
<th>17/9</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>million USD</td>
<td>1,301</td>
<td>1,180</td>
<td>1,195</td>
</tr>
<tr>
<td>Korea</td>
<td>100 million KRW</td>
<td>328</td>
<td>330</td>
<td>350</td>
</tr>
<tr>
<td>China</td>
<td>million CNY</td>
<td>167</td>
<td>172</td>
<td>214</td>
</tr>
</tbody>
</table>
**Sale plan revision of BWMS**

**Ballast sale forecast**

- **As of May 2017**
- **As of November 2017 revision**

**BWMS installation timing changed**
- (In-service vessels) During regular inspection from September 2017
- 2 year postponement
- (In-service vessels) During regular inspection from September 2019

**USCG TA obtaining plan changed**
- By March 2018
- 1 year delay
- By March 2019
FY2017 2nd Quarter Summary Overview

FY2017 earnings forecast revised

Unit: 100 million yen

<table>
<thead>
<tr>
<th>Sales revenue</th>
<th>1,200</th>
<th>1,150</th>
<th>1,100</th>
<th>1,050</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine business</td>
<td>1,100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laundry business</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit: 100 million</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017/5 publicized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017/11 publicized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pretax profit

<table>
<thead>
<tr>
<th>Pretax profit</th>
<th>140</th>
<th>130</th>
<th>120</th>
<th>110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laundry business</td>
<td>126</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign exchange gains, etc.</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income increase effect/SGA expenses reduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit: 100 million yen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017/5 publicized</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017/11 publicized</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Profit Share and Stock
3 Profit Share and Stock

**Changes in dividend per share**

**Unit:** yen

<table>
<thead>
<tr>
<th>Year</th>
<th>Mid.</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2016</td>
<td>10 yen</td>
<td>12 yen</td>
</tr>
<tr>
<td>FY2017</td>
<td>11 yen (Revised)</td>
<td></td>
</tr>
</tbody>
</table>

*Reference*

- **Holdings of treasury stock**
  - As of September 30, 2017
  - Total number of issued shares (without treasury shares): 112,546,559 shares
  - Treasury share: 12,744,553 shares

**Dividend increase**: 4 yen (Forecast)
4. Domestic strategy

<District heating and cooling using once-through boiler>
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.

General air conditioning method in each building

DHC method

Integration of heat supply facilities

Energy saving encouragement
Future of DHC

BCP (Business Continuing Plan)-attentive “Cogeneration system”

Earthquake proof gas piping → Gas supply does not stop basically.

Emergency (when electricity supply is restricted) → Countermeasure against disaster by in-house power generation

Effective use of waste heat generated from power generation

Steam can carry much more heat.
4 Domestic strategy  
<District heating and cooling using once-through boiler>

DHC around Tokyo station
(from “省エネ新時代” broadcasted on December 2013 by BS Japan corporation)
Boiler installation in Tokyo 23 ku (special wards)

- **MIURA boiler installed**: 25 sites
- **Other than MIURA (including fire tube boiler and water tube boiler)*Inquiry in progress included**: 42 sites

**Chiyoda-ku**
- Kioi-cho
- Uchisaiwai-cho, Otemachi, Kasumigaseki 3 chome, Tokyo international forum, Nagatacho 2 chome, Marunouchi 1 chome, Marunouchi 2 chome, Yurakucho

**Sumida-ku**
- Kinshicho station north gate

**Chuo-ku**
- Ginza 4 chome, Yaesu, Nihonbashi
- Akashimavhi, Higashiginza

**Koto-ku**
- Toyosu new market
- Tokyo water front city

**Minato-ku**
- East gate, east gate east of Tamachi station, Roppongi hills
- Aoyama, Akasaka, Akasaka/Roppongi ark hills, Akasaka 5 chome, Kitaaoyma 2 chome, Shiodomekita, Shibaura, Takeshiba, Toranomon 4 chome, Shiroyama, Toranomon 2 chome

**Setagaya-ku**
- Yoga 4 chome

**Shinagawa-ku**
- Minami oi 6 chome

**Shinjuku-ku**
- Shinjuku shintoshin, Shinjuku south gate east, Nishishinjuku, Nishishinjuku 1 chome, Shinjuku kabukicho
- Shinjuku south gate west
- Shibuya-ku
- Ebisu, Shibuya dogenzaka, Hiroo 1 chome
- Hatsudai yodobashi

**Toshima-ku**
- Nishiikebukuro, Higashiikebukuro

**Nerima-ku**
- Hikarigaoka complex

**Shinjuku south gate west**

**Ota-ku**
- Kamata station east gate, Kamata 5 chome higashi

**Setagaya-ku**
- Yoga 4 chome

**Shinagawa-ku**
- Minami oi 6 chome

**Shinagawa station east gate, Shinagawa east gate south, Shinagawa yashio complex, Tennozu, Higashishinagawa 4 chome**
Boiler installation in Tama district (Tokyo) and Kanagawa pref.

District heating and cooling using once-through boiler.
4 Domestic strategy

District heating and cooling using once-through boiler

Boiler installation in Chiba, Saitama, and Ibaraki pref.

- **Inzai-city**
  - Chiba new town toshin

- **Chiba-city**
  - Tonya-cho (Chuo-ku)
  - Shinmachi (Chuo-ku)
  - Makuhari-shintoshin international business (Mihama-ku)

- **Saitama-city**
  - Saitama new urban center west

- **Tsukuba-city**
  - Tsukuba science city
DHC market  *Tokyo only; based on an internal investigation

Ratio of fire/water tube boiler to once-through boiler

Large market remained

Fire/water tube boiler  3,277 t  90.9%
Once-through boiler  327 t  9.1%

Share of once-through boiler

MIURA  259 t  79.2%
Competitor

Company N  46 t  14.1%
Company H  22 t  6.7%

Adoption of once-through boilers

DHC system using fire/water tube boilers

Tokyo renewal

DHC system using once-through boilers
## MIURA’s MI system

<table>
<thead>
<tr>
<th>Condition in the building</th>
<th>Small boiler (MI system)</th>
<th>Large boiler</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daytime load: High</strong></td>
<td>Once-through boiler</td>
<td>Fire tube boiler</td>
</tr>
<tr>
<td><strong>Nighttime load: Low</strong></td>
<td>Operates as required</td>
<td>Operates regardless of load</td>
</tr>
</tbody>
</table>

- **Efficient**
- **Inefficient**
MIURA’s MI system <Space saving>

Cogeneration system installation

A system where multiple energies such as electricity and heat are taken out from one energy source and utilized

- BCP after big earthquake
- CO₂ reduction

Cost saving

Disassembled when carrying-in

Fire tube boiler

Small once-through boilers

Fuel tank

Gas engine

Power generator

Electricity

Exhaust gas

Exhaust gas boiler (made by MIURA)

Heat

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5. Reference
History

1959 | Company established. Full scale production of the Z boiler begun.
1972 | Development of high efficiency boiler. ZMP Contract started.
1977 | Sale of Multiple Installation system begun.
1978 | Diversified business started.
1982 | Listed on the 2nd Section of the Osaka Stock Exchange.
1984 | Listed on the 2nd Section of the Tokyo Stock Exchange.
1986 | Patent received for MI (Multiple Installation) System.
1989 | Listed on the 1st Section of the Tokyo and Osaka Stock Exchange.
1991 | Development of AI controlled boiler ZIS Online Maintenance begun.
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.

Reference

1982 FY 2017 sales target: 120 billion yen!

FY2016 result

FY2016 sales target: 120 billion yen!
Mid-Term Management Planning

Ideal business model three years ahead

Business environment change

Plan for next FY

Mid-term management plan for coming years

Annual correction in response to economic fluctuations

Rolling plan

To respond to business environment change, MIURA updates its three-year mid-term management plan every year.

<table>
<thead>
<tr>
<th>Rolling plan</th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-term management plan 2016</td>
<td></td>
<td></td>
<td>2016–2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-term management plan 2017</td>
<td></td>
<td></td>
<td></td>
<td>2017–2019</td>
<td></td>
</tr>
<tr>
<td>Mid-term management plan 2018</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2018–2020</td>
</tr>
</tbody>
</table>
## Mid-Term Management Plan for FY2017
(May 2017 publicized)

<table>
<thead>
<tr>
<th></th>
<th>FY2016</th>
<th>FY2017 Plan</th>
<th>FY2018 Plan</th>
<th>FY2019 Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>1,025</td>
<td>1,100</td>
<td>1,200</td>
<td>1,300</td>
</tr>
<tr>
<td>Operating profit</td>
<td>105</td>
<td>118</td>
<td>130</td>
<td>145</td>
</tr>
<tr>
<td>Operating profit rate</td>
<td>10.2%</td>
<td>10.7%</td>
<td>10.8%</td>
<td>11.2%</td>
</tr>
</tbody>
</table>

**Unit:** Hundred million yen

<table>
<thead>
<tr>
<th>Year</th>
<th>Net sales</th>
<th>Operating Profit</th>
<th>Operating Profit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>833</td>
<td>192</td>
<td>18.7%</td>
</tr>
<tr>
<td>2017</td>
<td>880</td>
<td>220</td>
<td>20.0%</td>
</tr>
<tr>
<td>2018</td>
<td>925</td>
<td>275</td>
<td>22.9%</td>
</tr>
<tr>
<td>2019</td>
<td>975</td>
<td>325</td>
<td>25.0%</td>
</tr>
</tbody>
</table>

Overseas ratio

※ IFRS adopted for FY2017 plan and after
### Growth Strategy for Mid-Term Management Plan (May 2017 publicized)

<table>
<thead>
<tr>
<th></th>
<th>FY2016</th>
<th>FY2017 Plan</th>
<th>FY2018 Plan</th>
<th>FY2019 Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Japan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>833</td>
<td>880</td>
<td>925</td>
<td>975</td>
</tr>
<tr>
<td>Boiler</td>
<td>577</td>
<td>579</td>
<td>587</td>
<td>600</td>
</tr>
<tr>
<td>Water treatment equipment</td>
<td>28</td>
<td>34</td>
<td>36</td>
<td>44</td>
</tr>
<tr>
<td>Marine equipment</td>
<td>87</td>
<td>110</td>
<td>138</td>
<td>160</td>
</tr>
<tr>
<td>Food &amp; Medical equipment</td>
<td>91</td>
<td>98</td>
<td>103</td>
<td>104</td>
</tr>
<tr>
<td>Others (Special equipment, New business, Environmental business)</td>
<td>50</td>
<td>59</td>
<td>61</td>
<td>67</td>
</tr>
<tr>
<td><strong>Overseas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>192</td>
<td>220</td>
<td>275</td>
<td>325</td>
</tr>
<tr>
<td>Americas (US, Canada, Brazil)</td>
<td>37</td>
<td>39</td>
<td>46</td>
<td>48</td>
</tr>
<tr>
<td>Korea</td>
<td>65</td>
<td>66</td>
<td>68</td>
<td>70</td>
</tr>
<tr>
<td>China</td>
<td>67</td>
<td>90</td>
<td>135</td>
<td>177</td>
</tr>
<tr>
<td>ASEAN &amp; Taiwan</td>
<td>23</td>
<td>25</td>
<td>26</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,025</td>
<td>1,100</td>
<td>1,200</td>
<td>1,300</td>
</tr>
</tbody>
</table>
### Comparison with Figure released in FY2016

<table>
<thead>
<tr>
<th>Year of release</th>
<th>FY2016</th>
<th>FY2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overseas sales</td>
<td>830</td>
<td>104</td>
</tr>
<tr>
<td>Japan sales</td>
<td>115</td>
<td>118</td>
</tr>
<tr>
<td>Operating profit</td>
<td>220</td>
<td>275</td>
</tr>
</tbody>
</table>

**Japan:** No amendment made

**Overseas:** Currency exchange influence considered

---

**Continuous growth maintained**

- **FY2016:**
  - Release 2016: 1,040
  - Result: 210
  - Japan: 830
  - Overseas: 210
  - Operating profit: 104

- **FY2017:**
  - Release 2016: 1,025
  - Result: 192
  - Japan: 833
  - Overseas: 192
  - Operating profit: 105

- **FY2018:**
  - Release 2016: 250
  - Result: 880
  - Japan: 115
  - Overseas: 880
  - Operating profit: 118

- **FY2019:**
  - Release 2016: 1,130
  - Result: 220
  - Japan: 925
  - Overseas: 925
  - Operating profit: 128

- **Present plan:**
  - FY2016: 1,100
  - FY2017: 1,200
  - FY2018: 1,220
  - FY2019: 1,300

Unit: Hundred million yen
Types of boilers — Same capacity

Once-through boiler
Water tube boiler
Fire tube boiler
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?

- 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
What is ZMP Contract?

**Period**
- Update every 3 years
- 5 terms (15 years)

**Contents**
- 3 time inspections per year
  - Free replacement
- Remedy for sudden troubles
  - Free replacement parts

- Anomaly perception
- Trouble factor check in advance

- Water analysis
- Online maintenance

- Customers' safety & relief
- Early recovery
Online Maintenance

Maintaining high profitability with “IoT” for 27 years

Monitoring

User

Troubleshooting via Telephone (Data collection/analysis)

Approx. 59,000 units under contract
*Including equipment other than boiler
(As of October 2017)

Visit

Remote monitoring

Trouble factor grasped

Preparation in advance

Early recovery

Much more effective, easier maintenance work
Boiler Lifespan and MIURA Business Model

Not only the product sales, but maintenance & consumables sales

Assuming a boiler has a lifespan of 15 years,

Sales result

<table>
<thead>
<tr>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>...</th>
<th>15th</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Product sales + Maintenance and chemical sales

Continuous cash flow

Securing repeat customers

High quality product + Reliable maintenance

No effect of economic fluctuations

Additional sales of MIURA products other than boiler

Good relationship with customer
Maintenance Brings Profits

<table>
<thead>
<tr>
<th>Sales ratio</th>
<th>Product sales</th>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.1%</td>
<td>31.9%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Profit ratio</th>
<th>Product sales</th>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>36.7%</td>
<td>63.3%</td>
<td></td>
</tr>
</tbody>
</table>

*The whole MIURA group as of March, 2017

MIURA Maintenance Network

- Offices: Approx. 100 offices
- Service Engineers: Approx. 1,150 engineers

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## Mid & Long Term Management Strategy

### Domestic

1. **Total solution**
   - Improving energy efficiency all over the factory & plant 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. **Beer-company strategy**
   - 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 on the fuel shift from coal to gas regarding serious air pollution in China which have been tightened
   - Expanding maintenance network to provide maintenance as in Japan
Domestic share

*Boilers for power generation excluded
(Based on an in-house investigation, September 2017)

Domestic boiler market

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

Total amount of steam output of the market
Approx. 200K t/h
(* Estimated value)

Domestic once-through boiler market

- MIURA: Share No.1 57%
- Others

Total amount of steam output
Approx. 150K t/h
(* Estimated value)

“Once-through-ism” movement

Competitors

- NIPPON THERMOENER CO., LTD
- IHI PACKAGED BOILER CO., LTD
- Hirakawa Corporation
- SAMSON CO., LTD.
- Kawasaki Thermal Engineering Co., Ltd.
- YOSHIMINE CO., LTD.

(Note) The share of once-through boilers is based on MIURA’s investigation and the actual results may differ from that.
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

Marine equipment
- Marine boilers
- Ballast water management system
Ehime Prefectural Central Hotel
~Preparation for Emergencies regarding BCP (Business continuity planning)~

Fuel selectable boiler

Toughness against disaster

Improved efficiency in cure & care

Fully-equipped medical treatment

Steam sterilizer system

Vacuum-boiling washer

Filtration equipment

Vacuum cooler
Total solution in food factory

- Vacuum cooler
- Retort sterilizer
- Ice storage water cooler
- Vacuum defroster
- Steam kettle
- Saturated steam cooker
- Total solution for food processing equipment

- Cooling
- Sterilizing
- Water-cooling
- Cooking
- Defrosting
- Food

Hospital
School
Convenience store
Nursing home
Ballast water problem “A new market born”

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

3 to 4 billion tons of seawater transferred per annum.

Approx. 170 countries of IMO members adopted.

Ratification on September 8th, 2017 announced by IMO!
## Boiler market share

*Based on total amount of steam output (Based on an in-house investigation, September 2017)

- **China**
  - Approx. 800K t/h
  - 1.3%
  - 80% of the market is coal-fired boilers which is rapidly switching over to natural gas.

- **US**
  - Approx. 430K t/h
  - 1%
  - Mainly Large, Low-efficiency boilers

- **ASEAN**
  - Approx. 430K t/h
  - 2%

- **Japan**
  - Approx. 200K t/h
  - MIURA 42%

- **Korea**
  - Approx. 140K t/h
  - 8.5%

Reference

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Appropriate location, production, and sales to establish global network

15 companies, 7 factories, Sales and Maintenance in 19 countries

- **Netherlands**: Marine business development (2012)
- **Turkey**: Future sale in Europe and CIS* Countries (2014)
- **South Korea**: Sale in North America and export to Latin America (1982)
- **U.S.**: (2 companies) (1991)
- **Canada**: Sale in North America (1987)
- **Thailand**: Sale in Thailand (2012)
- **Singapore**: (2 companies) Hub in ASEAN (2008)
- **Indonesia**: Export to ASEAN (2009)
- **Vietnam**: Maintenance service started (2016)
- **Brazil**: New factory established in March 2016 (2012)
- **CHINA**: Sale in North America and export to Latin America (1983)
- **export to Turkey and Malaysia (1993)
- **ASEAN**: 10 locations (2008)
- **Taiwan**: Sale in Taiwan and export to ASEAN (1988)
- **Vietnam**: 4 locations (2009)
- **North America**: 11 locations (1993)
- **U.S.**: 4 locations (1991)
- **South Korea**: 113 locations (1982)
- **North America**: 32 locations (2012)

*CIS Countries The abbreviation of Commonwealth of Independent States: Republic of Azerbaijan, Republic of Armenia, Republic of Uzbekistan, Republic of Kazakhstan, Kirghiz Republic, Republic of Tadzhikistan, Republic of Turkmenistan, Republic of Belarus, Republic of Moldova, Russia (Turkmenistan and Moldova are associate countries).
As of the end of September 2017

- Factory: 1
- Branch: 9
- Sales offices: 104
- Offices: 113

Future plan

2017: 139
2018: 156

Gas network in China

Planning to open offices regarding gas network expansion

Needs and supply found
- Gas field development (Shale gas around Chengdu)
- Import enhanced (Pipeline, LNG terminal, long-term gas contract)
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Thank you.

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Contact
Management Planning Department
TEL 089-979-7045
FAX 089-979-7011
URL http://www.miuraz.co.jp