Deployment and dissemination of the Kubota Production System

Kubota Production System

- **Kubota’s basic principle for manufacturing**
  Kubota aims to achieve manufacturing that impresses customers by offering products and services that exceed customers’ needs at a speed that exceeds their expectations.

- **Kubota Production System**
  Kubota Production System (KPS) is the fundamental concept and perspective of the Kubota Group’s manufacturing. While adhering to the basic philosophy, KPS is based on “just-in-time” and “Jidoka,” and continuously pursues thorough elimination of waste.

Activities during 2017 (SCM expansion, workstyle reform)

- Kubota launched a project to expand SCM activities from mainly plants to the entire supply chain, and to thereby establish a production system of “making only what has sold well.”
- Kubota introduced the concept of KPS into indirect departments, to promote Kubota’s workstyle reform. By eliminating waste in indirect operations and allocating the manpower and time created as a result to operations that may generate new added values, Kubota aims to strengthen its indirect departments and secure a work-life balance therein.

Structure of KPS

![Structure of KPS Diagram]

Maintaining and Improving Quality

**Quality control in design and development**

Kubota endeavors to prevent quality problems, and a representative activity in this effort is the initiative to strengthen design reviews (DR). Integrating the DRBFM*1 approach, we discuss, test and verify even the smallest item changed when developing new products, in order to prevent quality problems from arising therefrom.

*1 DRBFM is the abbreviation for “Design Review Based on Failure Mode,” a method of preventing potential problems from arising by focusing on changes in design and development.

A design review
Quality audits

The Kubota Group periodically conducts quality audits for the purpose of providing its customers with even better products and services, thereby ensuring the continuous improvement of its quality management system.

Raising awareness of the environment and quality

In November 2017, Kubota held the Environment and Quality Forum led by a visiting lecturer as an awareness-raising activity for improving the environment and quality.

Based on the theme “Konica Minolta’s environmental management and quality management,” the lecturer from Konica Minolta spoke about the concept and initiatives of Konica Minolta, a company that is constantly ranked at the top of the Nikkei Environmental Management/Quality Management Rankings, by presenting some cases. Around 300 people, mainly management, attended, and renewed their awareness of the importance of environmental management and quality management.

Recent recall status (as of December 20, 2017)

- Recall of ER combine harvesters: Total 848 units (began April 10, 2017)
- Recall of WR combine harvesters: Total 468 units (began April 10, 2017)
- Recall of wheel loaders: Total 311 units (began July 3, 2017)

We deeply apologize for the inconvenience caused to our users.

For details, click here. (Only in Japanese)
www.kubota.co.jp/important/

Small group activities

Starting from FY2017, subsidiaries and affiliated companies are included in the awarding target. The Small Group Activities Presentation Competition was held, participated in by 17 circles selected from approximately 670 Kubota circles.

At the same time, a circle from the Sakai Plant participated in the International QC Circle Competition 2017 held in Manila, the Philippines, and won the Gold Prize, the highest rank.
## ISO 9001 Certification Status

### Kubota [Farm & Industrial Machinery Division]

<table>
<thead>
<tr>
<th>Business divisions/Offices</th>
<th>Certification scope (excerpt)</th>
<th>Date of certification</th>
<th>Certifying body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Office</td>
<td>Business planning and marketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sakai (including Okajima) Rinkai</td>
<td>Engines, tractors, farm machinery, construction machinery</td>
<td>1994.06</td>
<td>LRQA</td>
</tr>
<tr>
<td>Tsukuba</td>
<td>Engines, tractors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utsunomiya</td>
<td>Rice transplanters, harvesters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hirakata</td>
<td>Construction machinery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kyuhoji</td>
<td>Agriculture-related machinery</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electronic weighing equipment and load cells</td>
<td>1994.08</td>
<td>DNV</td>
</tr>
</tbody>
</table>

Abbreviations of Certifying Bodies

- LRQA: Lloyd’s Register Quality Assurance Ltd.
- DNV: NV GL BUSINESS ASSURANCE JAPAN K.K.

### Kubota [Water & Environment Division]

<table>
<thead>
<tr>
<th>Business divisions/Offices</th>
<th>Certification scope (excerpt)</th>
<th>Date of certification</th>
<th>Certifying body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron pipes Hanshin Keiyo</td>
<td>Ductile iron pipes, fittings, accessories, other ductile iron products and related products</td>
<td>1999.01</td>
<td>JCQA</td>
</tr>
<tr>
<td>Pumps and valves Hirakata</td>
<td>Pumps, pump stations, sewage treatment and water purification plants, valves and gates</td>
<td>1997.10</td>
<td>LRQA</td>
</tr>
<tr>
<td>Waterworks and sewerage, membrane systems</td>
<td>Tokyo Hanshin Office Sewage and sludge treatment, water purification and wastewater treatment, membrane modules and anaerobic MBR technology</td>
<td>2014.07</td>
<td>Intertek</td>
</tr>
<tr>
<td>Purification tanks Shiga</td>
<td>Plastic water purification tanks</td>
<td>2003.04</td>
<td>JUSE</td>
</tr>
<tr>
<td>Materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials, rolls Hirakata Amagasaki</td>
<td>Rollers, tubes, piping, fittings, spools, steel columns, steel piles, sleeves and cylinders; basic cast steel, stainless steel and heat-resistant cast steel for general cast products; sintered materials (ceramics, metals, compounds); rolling mill rolls; and non-metal mineral products (titanic acid compounds)</td>
<td>1993.03</td>
<td>LRQA</td>
</tr>
<tr>
<td>Steel pipes Ichikawa</td>
<td>Spiral welded steel pipes</td>
<td>1998.07</td>
<td>JICQA</td>
</tr>
</tbody>
</table>

Abbreviations of Certifying Bodies

- JCQA: Japan Chemical Quality Assurance Ltd.
- LRQA: Lloyd’s Register Quality Assurance Ltd.
- Intertek: Intertek Certification Japan Ltd.
- JUSE: Union of Japanese Scientists and Engineers
- JICQA: JIC Quality Assurance Ltd.
## Affiliates in Japan

<table>
<thead>
<tr>
<th>Affiliates in Japan</th>
<th>Certification scope (excerpt)</th>
<th>Date of certification</th>
<th>Certifying body</th>
</tr>
</thead>
</table>
| Kubota Seiki Co., Ltd. | • Design, develop and manufacture hydraulic valves and hydraulic cylinders for agricultural and construction machinery  
• Manufacture transmissions and hydraulic pumps for off-road vehicles and agricultural machinery, and hydraulic motors for construction machinery                                                                                     | 2007.04               | LRQA               |
| Kubota ChemiX Co., Ltd. | Design, develop and manufacture plastic pipes, joints and accessories                                                                                                                                                           | 1998.04               | JUSE               |
| Nippon Plastic Industry Co., Ltd. | • Design, develop and manufacture hard vinyl pipes and secondary processed products  
• Design, develop and manufacture polyethylene and other plastic pipes  
• Design, develop and manufacture polystyrene/polyethylene and other plastic sheets/plates                                                                                                                                  | 1998.12               | JSA                |
| Kubota Pipe Tech Co. | • Construction and construction management of various pipelines  
• Investigation and diagnosis of pipelines and attached facilities  
• Installation training for fittings and pipe laying  
• Pipe-laying equipment rental                                                                                                                                                                                                       | 2002.03               | JCQA               |
| Kansouken Inc. | • Design and develop package software for supporting water-supply business  
• Support operation of package software for supporting water-supply business and provide data-input service  
• Provide survey and consulting services for water network                                                                                                                                                                               | 2004.04               | JCQA               |
| Kubota Environmental Service Co., Ltd. | Design, construction, maintenance and servicing of plant facilities for water supply, sewer drainage, solid waste processing, excreta disposal and garbage                                                                                                                                  | 2000.02               | MSA                |
| Kubota Kasui Corporation | Design and construction of environmental conservation plants                                                                                                                                                                      | 2000.01               | BCJ-SAR            |
| Kubota Air Conditioner, Ltd. | Design, develop, manufacture and ancillary services for large-scale air-conditioning equipment                                                                                                                                                                                                  | 2000.02               | JQA                |
| Kubota Systems Inc. | • Consigned development of software products and software packaging, design, develop and construct network structures, and maintenance services  
• Information system operation, and operation and maintenance of networks  
• Sales of purchased products                                                                                                                                                                                                             | 1997.05               | BSI-J              |
| Heiwa Kanzai Co., Ltd. | Design, develop and supply cleaning services for buildings and facilities                                                                                                                                                              | 2002.07               | JICQA              |
| Kubota Construction Co., Ltd. | Design and construct civil engineering structures and buildings                                                                                                                                                                       | 2011.12               | JQA                |

Abbreviations of Certifying Bodies
- LRQA: Lloyd's Register Quality Assurance Ltd.
- JUSE: Union of Japanese Scientists and Engineers
- JSA: Japanese Standards Association
- JCQA: Japan Chemical Quality Assurance Ltd.
- MSA: Management System Assessment Center Co., Ltd.
- BCJ-SAR: The Building Center of Japan
- JQA: Japan Quality Assurance Organization
- BSI-J: BSI Group Japan K.K.
- JICQA: JIC Quality Assurance Ltd.