

Quality and Safety of Products

Achieving "Consistency and Improvement in Quality" at all the Plants and Factories Throughout the World

With the increasing overseas demand for construction machinery, 70 percent of the sales of the Hitachi Construction Machinery Group are now to foreign markets. Using the phrase, "Made by HITACHI" as a key word, Hitachi Construction Machinery has established a stringent quality assurance structure in order to secure a consistent quality level at all the production bases, both domestic and foreign.

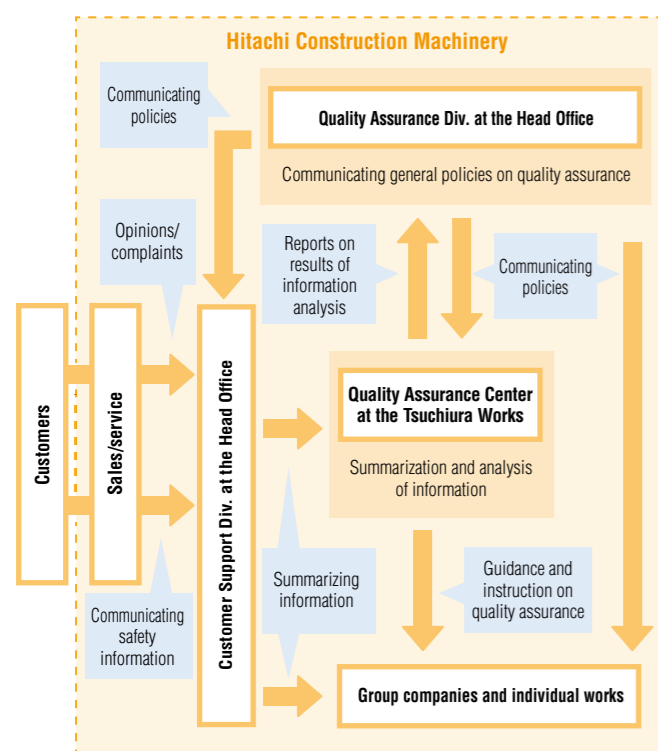
Quality Assurance Structure of Hitachi Construction Machinery

Ever since its inception, Hitachi Construction Machinery has maintained a customer-first quality assurance system based on the "quality gleaning"* concept of Hitachi, Ltd. Furthermore, in September 1995, the company obtained ISO 9001 certification to clarify its quality policies. As the core function of the Hitachi Construction Machinery Group, the Corporate Quality Assurance Div. was established and the Quality Assurance Center at the Tsuchiura Works leads actual guidance, instruction and enlightenment activities for the quality assurance divisions of each group company. In the structure, comments from customers and salespersons as well as information on trouble are all collected at the Quality Assurance Center via each quality assurance division and countermeasures to prevent recurrences are identified and taken for all the products through the pursuit of internal and other causes during product improvement meetings held in the presence of the President.

*"Quality Gleaning" Concept

In this process analogous to a picture drawn by Millet, "Gleaning," accidents, faults or errors for which countermeasures have already been taken are further reviewed to remove internal causes and thoroughly prevent their recurrences.

Quality Assurance Structure of the Hitachi Construction Machinery Group



Proactive Quality Assurance

The quality of products depends on their origins. Improvements of products already launched in the market take a lot of time and labor, which consequently leads to delays in solving problems and removing customers' inconvenience. Hitachi Construction Machinery emphasizes the structure to proactively assure quality in the development stage of products. The ZAXIS-3 Series of excellent quality released in 2006 offers further reliability by taking advantage of simulation technologies, introducing latest, high-performance load and vibration testing equipment and conducting advance durability tests held in actual operating environments for a long period time.

Toward the Establishment of a Global Quality Assurance Structure

In order to continuously offer low-cost, high-quality products, the degree of dependence on overseas production has become stronger every year. What is important in this regard is to maintain the quality suitable for "Made by HITACHI" at all the group factories in the world. Executives of Hitachi Construction Machinery have visited group companies with production bases to hold "Quality Gleaning" meetings where examples of actual quality problems that happened at the bases and appropriate guidance and instruction are given. Furthermore, in November 2005, the Global Quality Assurance Project was launched in order to establish a consistent certification structure of parts and components, conduct measurements and improvements of base-wise quality standards and to promote quality assurance education and training.



"Quality Gleaning" at Hitachi Construction Machinery (China)

Repetitive Inspections for Assured Safety

Hitachi Construction Machinery considers "PS" (Product Safety) as a first priority. In the design and development stage, implemented are such processes as PS checks, risk assessments, a wide range of safety tests and safety evaluations of key parts and components. Furthermore, each and every critical accident information concerned with our products in the market is reported to the Quality Assurance Center and consequently to management. The information at the same time is reviewed in the Critical Accident Committee and reported to corporate-wide PS Committees so that lessons learned from the experience should be fed back to all the products.

Procurement

Partnership Contributing to Mutual Progress and Development

Hitachi Construction Machinery has made efforts to build relationships of equality with more than 100 partners of parts, components and materials in order to contribute to mutual progress and development through information exchange and discussions. Taking advantage of these relationships, the company promotes CSR activities including the partners.

"Chikuhou-kai" and "Tokiwa-kai" Organized by Hitachi Construction Machinery and its Partners

In order to establish and maintain partnerships that contribute to mutual progress and development with partners, Hitachi Construction Machinery requests its partners with continued transactions to join either "Chikuhou-kai" (a total of 69 companies) or "Tokiwa-kai" (a total of 49 companies). These organizations host a wide range of activities to promote understanding of the policies of Hitachi Construction Machinery and efforts concerned with safety, quality and environment. The organizations have organized internal committees and subcommittees based on specific themes such as safety, quality and skills improvement and implemented initiatives for mutual improvements. The main line of activities hosted by "Chikuhou-kai" and "Tokiwa-kai" are as follows:

Joint Lecture Meetings (Chikuhou-kai and Tokiwa-kai)

Important figures from Japanese intellectual life have been invited for this annual meeting. Mr. Kazuma Yamane, a non-fiction writer, gave a lecture on the theme of "Metal Color: Important Mission for the Next Generation," at the meeting held in February 2006.

Presentations on Rationalization Case Studies (Chikuhou-kai and Tokiwa-kai)

These are opportunities to make reports on organization and methods from each subcommittee. The objective of this activity is to promote continuous improvements and horizontal development of lessons learned from favorable cases.

Skill Contests (Tokiwa-kai)

This is a competition of plate manufacturing and machining skills among representative employees from supplier companies. The goal is an improvement in skills at each company.



Skill Contest (October 2005)

Safety Patrol (Tokiwa-kai)

In order to improve work environments, member companies mutually send safety patrol teams who point out problems for improvement and correction.

Integrating CSR Efforts in Annual Policies of the Procurement Div.

At general meetings and budget explanatory meetings, member companies of "Chikuhou-kai" and "Tokiwa-kai" are informed of yearly policies for partners. One of these policies was the CSR activity for Fiscal 2005. Hitachi Construction Machinery explained what CSR is about and the company's efforts in this regard and requested the partners to promote CSR activities.

Toward 100% Green Supplier Rate by 2010

The Green Supplier Rate indicates the percentage of partners that have acquired an EMS* certification from among all total partners. One of the major targets of our CSR activities is to improve this rate. As a result of our promotion of EMS acquisition, 60% of partners have obtained EMS certification by 2005. Our final target is to have all the partners acquire EMS, making the Green Supplier Rate 100%.

*EMS (Environment Management System) including ISO 14001, HI-KES, EcoStage and EcoAction21

EMS Acquisition Results and Plans by Partners

FY	'04	'05	'06	'07	'08	'09	'10
Results and plans	58 companies (50%)	70 companies (60%)	83 companies (72%)	95 companies (82%)	100 companies (86%)	110 companies (95%)	116 companies (100%)

Training on the JIT (Just-In-Time) Production Methods

Based on the concept that improvement in the skills of partners leads to quality enhancements of Hitachi Construction Machinery, the company provides training opportunities on the JIT production system, one of the key production methods employed by Hitachi Construction Machinery for about five companies every year. Furthermore, technical training courses are provided by the "Koshi" (the title given for virtuoso technicians who have outstanding skills and have contributed to the development of the company.)