alue Creation

We will use our integrated technological expertise to create values that point the way to the future.

The KHI Group Mission-"Kawasaki, working as one for the good of the planet"-indicates that we are committed to achieving sustainability and resolving issues in society through our business operations. At the same time, we are taking action to further improve our activities to ensure product safety and enhance quality and customer satisfaction.

Categories

Product development Product liability

Customer satisfaction

Overview of Activities during the Medium-term Business Plan 2010 (FY2011-2013)

Initiatives to improve product safety, product quality, customer satisfaction and other areas of our operations have been a focus of energies since our establishment as a manufacturer. To visualize this process as a way to promote further improvement, in 2011 all internal companies carried out a product safety self-assessment based on product quality and activity level, in which the degree of development of the quality management system was used as an evaluation index. In the field of customer satisfaction, the evaluation methods used vary due to the

differing nature of the products handled by our business segments. We therefore carried out an internal survey to determine which structures each of our internal companies has in place and how these operate, and shared the survey results as part of Group-wide activities.

As a task for the future, we aim to create links across a broader front between our business operations and action to resolve issues in society. This action will include identifying social issues and undertaking dialogue with new stakeholders.

Category	Action	Annual self-assessment (average)		
		FY2011	FY2012	FY2013
Product development	Efforts to create new markets and develop new customer value	****	****	****
Product liability	Clearly delineated product safety assurance system involving senior management	****	****	****
	Clearly delineated product quality assurance system involving senior management	****	****	****
	Clearly stated quality policy and quality assurance activity in line with the policy	****	****	****
Customer satisfaction	Initiatives to improve customer satisfaction reflecting customer satisfaction surveys	****	****	****
	System for reporting customer suggestions and complaints to senior management of business divisions and achieving relevant improvement	****	****	****

Self-Assessment of Activities

🖈 Will take action going forward 🛛 🖈 🖈 Some action taken 🛛 🛧 ★ 🖈 Robust action taken 🔹 🛧 🛧 🛧 Sufficient action taken but further improvement targeted

Measures during the Medium-term Business Plan 2013 (FY2014-2016)

Target profile	Measures				
We are aiming to contribute to a sustainable society through our business operations and products	Each internal company is formulating its own plan to achieve "value creation through business".				
We are working to further improve quality and product safety so as to make products that customers trust					
We are monitoring customer satisfaction to achieve further improvement					

Topic

Initiatives for Product Safety

Rolling Stock Company

Rolling Stock Crash Safety



Rail is a public transit system that offers excellent punctuality and safety and is also friendly to the global environment.

Atsushi Sano Manager, Carbody Structure Engineering Section, Development Engineering Department, Engineering Division, Rolling Stock Company The Rolling Stock Company delivers rolling stock that meets the full range of needs to customers around the world, playing an important role in the provision of public transit services.

Improvement of rolling stock safety is a responsibility of this role. Specifically, further enhancement of safety in the event of a crash is a priority for our customers in the rail industry and society as a whole. Based on the scenario of a collision with an automobile at a railroad crossing, or a collision between two trains, the task is to control the way each rail car body "crushes" at the time of impact to protect the passenger compartment and enhance customer and driver safety.

With automobiles, the usual approach is to carry out a crash test using an actual vehicle, but since rolling stock is much larger in size and weight, a crash test using an actual rail car would be a major undertaking and is therefore impractical in terms of cost and time. Accordingly, numerical simulation is the main method used when verifying the crash safety of the many different types of rail car. This makes it essential to develop the relevant technology and ensure its accuracy.

To evaluate safety during a crash, we start with the impact-absorbing elements at the level of the individual

parts and materials and continue through to the elements that affect the behavior of the entire rail car as well as the entire train, building upon component technologies step by step to assess the safety of the entire rail car.

Numerical simulations along with verification tests that use an actual physical unit of each component are the drivers of improvement in crash safety verification technology. Numerical simulations backed up by verification tests make it possible to assess the crash safety of rail cars. In 1999, the Rolling Stock Company carried out a test in which an actual rail car designed for overseas export was crashed into a wall. The simulation and the test results showed a very high degree of consistency. As a result, we received the Best Paper Award in the Rail Transportation Division from the American Society of Mechanical Engineers. The Rolling Stock Company was the first Japanese rail car manufacturer to tackle the issue of crash safety, and is proud of having steadily built up the relevant technologies through tireless efforts in R&D.

In the development of high-speed rolling stock for Japan and overseas markets, we supplement the crash safety technologies and the knowledge and experience of the Rolling Stock Company through application of crash safety technologies developed by other companies. These are used, for instance, to design the obstacle deflector for the front car of a train or to create car body structures that enhance operability for the driver while providing protection from potential dangers such as bird strikes.

Going forward, we are committed to continuing with our dedicated efforts that will rapidly achieve the improvement in rolling stock safety that society wishes to see.



Verification of Safety in the Event of a Crash

TOPIC 2 Initiatives for Product Quality Improvement Motorcycle & Engine Company

Continuous and Horizontal Quality Assurance Activity



Manager, Quality Control Section, QA Admistration Departme Quality Assurance Division, Motorcycle & Engine Company

Our company is the only division within KHI that delivers goods directly to consumers.

We manufacture and deliver to world markets a wide range of products including motorcycles, all-terrain vehicles (ATVs), recreation utility vehicles (RUVs), utility vehicles, Jet Ski personal watercraft, and general-purpose gasoline engines. Of these products, the Ninja series and Z series in particular are loved by riders around the world and have become a byword for Kawasaki motorcycles. In 2013, we released new models for 2013, the Ninja ZX-6R, Ninja 300, and Ninja 250 and the Z800 and Z250, assembling a wide-ranging product lineup that has enjoyed popular acclaim.

To continuously raise brand strength by delivering attractive products and services that inspire customer confidence and satisfaction, we need to not only assemble a comprehensive product lineup but also manufacture all products to an excellent level of quality. In the development process, comprehensive quality checks are carried out at intermediate stages by relevant divisions. If a set quality level is not reached at internal design review meetings, the product is not allowed to proceed to the next stage. This system guarantees quality in the models we develop.

Meanwhile, our manufacturing divisions continue to work hard maintaining and improving quality through continuous quality improvement activity and carry out a stringent quality inspection of each unit on final inspection area at mass production lines, ensuring the quality of the products we deliver to customers.

Quality assurance activity is not a task limited to our company, however, but also needs to embrace our suppliers. Of the parts used in our products, the essential items are manufactured in-house, but a large number of other component parts are sourced from suppliers. Cooperation by both parties in activities to maintain and improve product quality is therefore another important aspect of quality assurance activity.

In addition, after a sale is completed, we continue to constantly gather information and suggestions from sales bases at the market frontline and from customers. We use the information we obtain in product development and quality improvement.

Today, our procurement and production activity is rapidly globalizing, and we therefore need to approach related quality assurance activities from a global angle. The quality assurance activity that has underpinned Japanese manufacturing is evolving to a still higher level.



Final Inspection at the Akashi Works



Final Inspection at the Thailand Works (Kawasaki Motors Enterprise (Thailand) Co.,Ltd.)



Initiatives to Improve Customer Satisfaction Levels Kawasaki Machine Systems, Ltd.

Human Resources Development to Improve Customer Satisfaction



Deputy Section Manager, Engineering Control Section, Administration Department, Gas Turbine Service Coordination Division, Kawasaki Machine Systems, Ltd.

Kawasaki Machine Systems, Ltd. (KMS) is a company that carries out sales and after-service for gas turbine emergency generator sets, mobile gas turbine generator sets, and gas turbine pump driven units; and servicing for gas turbine co-generation systems. All of the above are manufactured and/or engineered by Kawasaki Heavy Industries, Ltd. (KHI).

Especially in the market for emergency gas turbine generators, KMS and KHI have kept the top share of the domestic market for the 34 years since market studies began in 1979, delivering high satisfaction to customers. The achievement of the top share is due not only to advantages in product performance and quality, but also to sales service and attentive after-sales performance.

The KMS Service Coordination Division operates a unique licensing system to cover its maintenance operations. KMS has created its own licensing system under which the company gives licenses to both its own technical staff as well as to the staff of its 32 service dealers following training and education. Currently, around 400 service experts are active in providing maintenance services.

The KMS Service Coordination Division provides practical training and a lecture and examination program leading to issue of the maintenance expert certificate in four levels from first grade to fourth grade. For each grade, trainees undertake a fixed period of practical exercise combined with regular classroom lectures and examinations, allowing them to progress to the next certificate grade. KMS puts great effort into this program to produce staff with more advanced work skills and responsibilities. In this way, KMS and all service dealers are concentrating on education and human resources development.

At the time of the Great East Japan Earthquake in 2011, the operating rate of KMS gas turbine emergency generator facilities located in the main disaster area reached a value of 99.9%, which indicates the very high degree of reliability of our product. We believe this high performance was achieved thanks to the underpinning of high-quality service provided by our well-trained technicians and staff.

The goal of KMS is to achieve the No. 1 level of customer satisfaction in the market by maintaining close relationships with customers through speedy, reliable, and honest sales and service activities.

