

Activities at Isuzu Engine Manufacturing Hokkaido Co., Ltd.

This report features Isuzu Engine Manufacturing Hokkaido Co., Ltd., which supplies diesel engine components to Isuzu's overseas plants in Europe and the United States.

(Isuzu's Hokkaido Plant became a subsidiary, Isuzu Engine Manufacturing Hokkaido Co., Ltd. in November 2002)



Kenzo Takami
President

Isuzu Engine Manufacturing Hokkaido Co., Ltd.

Appointed as General Manager, Tochigi Plant Manufacturing Dept.; Plant Manager, Tochigi Plant; Plant Manager, Hokkaido Plant; appointed to current position in October 2002.

● "Active Plant" to Achieve Good Results

Isuzu's Hokkaido Plant, the predecessor of our company, opened its operation in 1985 as the first of automotive manufacturers' plants to be based in Hokkaido. Currently, we have the initiative in the industrial sector in the Tomakomai district as we manufacture advanced diesel engines for the European and American markets with a large number of employees that have been increased with the growth of our production. This is also true for environmental initiatives. We were quick to be ISO 14001 certified in May 1998. I think these achievements owe everything to our attitude toward an "active plant" that is positive in all aspects of environmental conservation.

● Zero Emissions - Landmark of High Productivity

We started our zero emissions efforts in the summer of 2000 and met our initial goal in November 2001. We have also cleared a subsequent goal of waste reduction to one tonne or less (including incinerator ash) per month per plant. All of our employees realize that zero emissions represents a landmark of high productivity, and that efforts to achieve this goal are essential to us as a production base and should lead to business profits.

Some of our efforts for zero emissions are described below.

- Beverage vendors are required to bring back empty bottles and recovery operators are required to collect aluminum and steel cans as valuable resources.
- Electric wire waste, another valuable resource, is collected by recovery operators. The copper and coating are recycled into the bins for scrap metal and for materials to be recycled into signposts, respectively.
- Waste plastics and sludge from wastewater treatment are recycled into cement materials.
- Garbage from the cafeteria and kitchen is mechanically

processed into fertilizer, which is applied to plants in the plant area.

Additionally, we internally manufacture equipment that facilitates the recycling of industrial waste, based on our employees' original ideas. A typical example is a "dokan press". In our company, polishing dust have accounted for a significant percentage of the volume of industrial waste. For it to be recyclable, its moisture content must be reduced to less than 10%, a level that cannot be reached by conventional methods. We have built "dokan press" made of earthen pipe and cylinder which expels enough water to reach the 10% level. Currently, we are able to recycle polishing dust into steel rods for concrete. In addition to "dokan press", our zero emissions know-how is open to the local communities, since we think sharing such information contributes to the establishment of a recycling-based society. To accomplish our numerical targets, we conducted energy conservation efforts, from enhancement of routine management to improvements in production line efficiency, including integration of equipment and production lines. CO₂ emissions in fiscal 2002 decreased by 2.3% compared to the previous year as a result.

● Communications with Local Community

Our success in achieving the zero emissions goal resides not only in being an "active plant" but also in our efforts to maintain close communication with the concerned companies, including participation in the Tomakomai Zero Emissions Network. Joining this network, we exchanged environmental information, investigated recycling technologies, and cooperated in waste collection and transport. We have communicated closely with waste disposal operators who have business relationship with us for more than ten years. They understand our zero emission efforts and have signed a joint declaration of environmental conservation.



Our custom-built "dokan press"

■ DMAX, Ltd. – A Model Site Overseas

● Initiatives at DMAX, Ltd.

DMAX, Ltd., a joint corporation of General Motors and Isuzu based in Moraine, Ohio, The United States, produces 130,000 units annually of a 6.6-liter V8 diesel engine named Duramax 6600 and supplies them to General Motors for installation in full-size pickup trucks. The facilities obtained ISO 14001 certification in July 2002.

We have established our own environmental conservation policy, identified activities with a serious environmental impact in our business operation, and organized a team to grasp the issues of concern. We have made commitments to comply with relevant laws, prevent environmental pollution, and improve our environmental conservation systems, with specific goals and targets set to achieve improvements.

One of our initiatives is to reduce harmful waste. This has spurred us to conduct a broad range of activities and some of our equipment will be re-designed. These activities include uses for recycled lubricant, coolants, corrugated cardboards, rubber products, and plastics from production lines. We are also promoting the sorted collection and reuse of dust from cutting of raw materials. Regarding the use of harmful substances, we are working to begin controlling the use of hexavalent chromium in our 2004 models and achieve complete phasing-out in 2006 models.

ISO 14001 certification represents a result of cooperation of all employees and our proactive initiatives. We will conduct further efforts under the environmental management system, including the re-design of all manufacturing processes, in order to facilitate the reduction and reuse of industrial waste.

Meantime, we are conducting philanthropic activities, including visits to local ele-

mentary and middle schools. In these visits, we teach the children about the environmentally friendly nature of diesel engines and the mechanism by which the engine transmits its driving force.



ISO 14001 certificate



DMAX, Ltd.



Naotoshi Tsutsumi
President

DMAX, Ltd.

Primarily engaged in production technology and manufacturing. Appointed as manager of Manufacturing Dep. IV; manager, Kawasaki Plant; director, Isuzu Motors Ltd.; appointed as president of DMAX, Ltd. in June 2001.