

Roundtable Opinion Exchange with TEL Representatives

Considering safety and environmental issues at the product development and design stages is key to the TEL's environment and safety activities.

For this special feature, we had those employees in charge of product safety and environment issues gather and discuss the current state of affairs and future challenges. We hope to parlay this discussion into an opportunity to continue with these cross-cutting discussions that transcend the boundaries of business units.



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(From left to right)

Safety has reached a fairly high level. We have taken our first step in assuring environmental quality, and now it's time to mount a full-scale effort to tackle this issue.

Kobayashi ▶ Our development engineers have always put the highest priority on the safety of our equipment when used by customers. At this point in time, I think we've achieved quite a high level. I believe this holds true for all equipment. In the case of the environment, we have also made certain gains in areas where customers clearly voice demands, such as in the realm of energy conservation, as well as in areas where there are clear-cut regulations, such as the lead-free movement, which makes it easy to set targets.

Ueno ▶ There needs to be a process where we can set and achieve qualitative targets for those things pertaining to the environment that have no concrete standard. We need to further promote product EHS road map* for the goal.

*Product EHS road map: A product EHS target. It includes the following items: input and output required for or generated by the product during use, LCA, green procurement, lead-free, recycling, etc.

Kazuno ▶ Not only the safety of customers, but occupational safety within TEL is also an important issue. A work environment where people can work comfortably raises productivity and improves quality. On the other hand, it's probably because of a lack of clear environmental standards for

equipment, unlike those we have for safety, that it is difficult to create a big increased in awareness or the view of it as something essential. I think the determining factor is the demands placed by the customers.

Soejima ▶ We are getting an increasing number of requests for our equipment's environmental burden data as well as inquiries related to the environment. We are really seeing a swell in the interest of customers in TEL equipment's environmental considerations.

Maeda ▶ What we spend the most time on in terms of safety for FPD production equipment is occupational safety. After all, we are dealing with production equipment that weighs 60 tons, so we pay a lot of attention to where we work. Compared to semiconductor production equipment, there seem to be fewer requests from FPD production equipment customers regarding the environment, but we believe these will grow in the future.

Our Environmental Approach Taking the Lead in the Environment

Inoue ▶ In making the shift to lead-free production equipment, we followed instructions from the top of our company and established a company-wide team to review the strategy and allocated a budget. With all of the company working toward one theme, it makes me think that the TEL has taken another step forward in environmental initiatives. As a company that

in Charge of Product Environment and Safety

■ Product EHS Road Map Reduction Targets for Inputs and Outputs During the use of Semiconductor Production Equipment

	FY 1998 Standards*1	FY 2000 Standards*2	FY 2006 Targets		FY2008 Targets
	200 mm equipment	300 mm equipment	200 mm equipment	300 mm equipment	300 mm equipment
Energy consumption	1*1	1*2	0.8	0.5	0.4
Water consumption (coolant water, etc.)	1*1	1*2	0.8	0.4	0.4
Water consumption (ultra-pure water)	1*1	1*2	0.65	0.7	0.6
HAPs*3 emissions	1*1	1*2	0.35	0.4	0.35
VOCs*4 emissions	1*1	1*2	0.35	0.4	0.35

*1 FY 1998 is the standard for consumption and emissions per unit area for 200mm equipment and equal to a value of one

*2 FY 2000 is the standard for consumption and emissions per unit area for 200mm equipment and equal to a value of one

*3 HAPs (Hazardous Air Pollutants)

*4 VOCs (Volatile Organic Compounds)

produces industrial equipment, I think our company is at the forefront of the lead-free movement.

Soejima ▶ The difficult aspect in the case of the environment is that the type of the environmental burden varies with each piece of equipment. Lead was easy to gain consensus on as it's common in all equipment, but I think it would be difficult to establish company-wide targets for other items.

Inoue ▶ I think it is important to set environmental targets for each piece of equipment and create an atmosphere throughout the company where each member of TEL is aware of this and has the attitude "I'm taking efforts to protect the environment" so that development engineers will be able to allot a maximum of energy to devising environmentally-conscious designs.

Furthermore, there is the message from our President calling on us to "Show leadership when it comes to the environment." I think it is important to spread this thinking throughout TEL.

Ueno ▶ In order to take leadership in terms of the environment, not just development engineers need to pay attention to the environment when it comes to equipment performance. Another idea is to create a specialized department for environmental technology, which would collaborate with development engineers to develop equipment.

Kobayashi ▶ Unlike equipment safety technology, with environmental technology you have to be familiar with elemental

technology or you can't do anything. I believe that it is important for employees in charge of environmental management to collaborate with development engineers in accruing elemental technology and providing that as feedback to design engineers.

Inoue ▶ For example, what do we address in terms of harmful substances after we have tackled lead? I suppose that it is probably most realistic to narrow down the substances to be targeted in phases. I would like to see us advance our environmental approach one step at a time.

Summary

Below is the summary of the discussion conducted. At TEL, we will continue concrete discussions on how we can resolve these issues.

- ① Environmental considerations in making equipment are of central concern for TEL in its approach to the environment and safety.
- ② It is necessary to spread awareness among each and every employee that this is an important topic.
- ③ We will continue to hold discussions on the merits and need to create a specialized department to deal with environmental technology.
- ④ We will continue to hold discussions on theme common in TEL companies, as with the movement to go lead-free.