



Environmental conservation activities

We work on environmental conservation by saving energy, and reducing the discharge amount of wastes and chemical substances.

Energy saving by introducing the electric motor for tests

The centrifugal compressor performance test motor, which is a feature product of Elliot Ebara Turbomachinery Corporation, accounts for about 60 percent of the total energy consumption of Sodegaura District. The driving machine of the compressor mainly uses a steam turbine and the steam turbine has been used for the performance test. It is very easy to operate a steam turbine and the reliability is very good; on the other hand, a large boiler is necessary to produce the steam and it consumes a large amount of energy.

Because of the improved reliability of the large electric motor and the improved overseas power generation situation, motors have come to be frequently used for compressors and we have prepared an environment for using motors for compressors. Therefore, Sodegaura District introduced four types of motors with 1,000 kW - 10,000 kW for tests in 2006 and used those motors for about one-third of performance tests in 2007. As a result, we reduced about 30 percent of the total power for tests compared with the situation before the motors were introduced. We are trying to save energy further and



Electric motors and compressors at test facility

reduce the amount of greenhouse gases released by increasingly using electric motors for the tests.

Reducing the discharge of waste copper solution by a copper-ion separation and concentration system

EBARA had increased the number of copper-bump plating apparatuses in the Fujisawa District along with an expansion in the semiconductor manufacturing equipment business. The Fujisawa District disposes wastewater, whose quality exceeds the acceptable waste quality criteria of final wastewater treatment facilities, as industrial waste. When full-scale operations began using this equipment, there was anticipation that there would be a drastic increase in the amount of discharged waste

copper solution. Reduction measures were swiftly worked out accordingly.

In December 2007, we introduced a copper separation and concentration system featuring an electro-dialytic method, exclusively developed by EBARA. This system also uses a newly developed ion exchanger which enhances the copper separation performance. We managed to reduce the amount of waste copper solution to less than 1 percent of the figure before the introduction of the system. The quality of treated water, after copper had been removed by the system, was found to meet the legal limit. We intend to further reduce the amount of waste copper solution in wastewater by using this system.

At present, treated water is purified by a terminal



Copper separation and concentration system

wastewater treatment system located downstream. We are now considering to effectively reuse this treated water in the plant as a water resource.

Reduce chemicals discharged

EBARA uses a chemical cleaner containing a VOC (volatile organic compound) such as xylene*1 in the removal of oil and dust from a product during a plating operation. In 2007, in an effort to reduce the amount of VOC, the Haneda District introduced a steam cleaner which eliminates dust and oil on the surface of products by spraying them with steam.

Since steam cleaning takes a longer time and removes less oil than chemical cleaning, this method is not applicable to all cleaning processes. However we are attempting to use it to clean small components to minimize VOC discharge.

*1 Xylene is a chemical substance controlled by the PRTR law.



Steam cleaning