

# Initiatives for Reducing Impacts on the Environment



## Basic Approach

Atmospheric emissions and wastewater from plants can be a source of water, air, and soil pollution that poses a threat to local communities. At the MinebeaMitumi Group, we believe that harmony with local communities is indispensable to our business activities, and as such, we are striving to reduce our impact on the environment.

## Results of FY2016 Initiatives

The MinebeaMitumi Group ensures compliance with the environmental laws and regulations of each country and locality. For plant wastewater and other types of waste, we have established in-house environmental standards exceeding the national and local regulations and monitor waste management on a daily basis. In FY2016, at all of our Group plants, we further strengthened daily monitoring and environmental patrols to ensure there are no leakages, foul odors, noise, vibration or other issues that could inconvenience surrounding communities.

## Plant Initiatives

### Plant Wastewater Purification

Prior to releasing wastewater into rivers, MinebeaMitumi Group plants use their own processing equipment to purify wastewater to within fixed environmental standards. These plants adhere to environmental laws of the countries and localities in which they operate, and independently monitor such wastewater discharges, including regular testing for such metrics as pH<sup>1</sup>, COD<sup>2</sup>, BOD<sup>3</sup>, SS<sup>4</sup>, and n-hexane extracts<sup>5</sup>.

1. pH: A scale indicating whether substances are acidic or alkaline. pH7 is neutral. pH values below 7 indicate increasing acidity, while values above 7 indicate increasing alkalinity.
2. COD (chemical oxygen demand): The amount of oxygen consumed to oxidize organic substances (pollution) in water. COD measurement takes less time than BOD measurement, but is less reliable. COD is generally used as a metric in wastewater management for sea, lake, and marsh waters.
3. BOD (biological oxygen demand): The amount of oxygen required for bacteria to consume and decompose organic matter (pollution) in water. Higher values indicate greater degrees of pollution. Measurement takes several days. BOD is generally used to observe effluent water in rivers.
4. SS (suspended solids): The volume of substances suspended in water. The higher the number, the greater the degree of water pollution.
5. n-Hexane extracts: Substances extracted from oils and detergents that are difficult to volatilize in water using a substance called n-hexane as solvent. In this report they signify mineral oils.



Fujisawa Plant's wastewater processing facility

### Implementation of Environmental Patrols at Overseas Plants (Thailand, China, Singapore, Cambodia)

Members of the Japanese Group Environment Management Department of the MinebeaMitumi Group regularly visit overseas plants to implement environmental patrols together with members of the local environment management departments.

In FY2016, we conducted joint patrols at all plants in Thailand, China, Singapore, and Cambodia.



Inspection of drainage at the Ayutthaya Plant, Thailand



Situation check at waste disposal site for the Cambodia Plant



Energy conservation patrol at the Shanghai Plant (facility inspection)



Plant vicinity patrol in Singapore

## Future Issues and Goals

The MinebeaMitumi Group conducts business operations in compliance with environmental laws in Japan and around the world, and is proceeding with cleanup work in areas where it has caused environmental contamination in the past.