# **Environmental Report**

# 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 MinebeaMitsumi 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 FY2018 Initiatives**

The MinebeaMitsumi 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 that exceed national and local regulations and monitor waste management.

In addition, we conducted environmental patrols at all Group plants to ensure there are no leaks, foul odors, noise, vibration or other issues that could inconvenience surrounding communities.

#### **Plant Initiatives**

#### **Plant Wastewater Purification**

Prior to releasing wastewater into rivers, MinebeaMitsumi Group plants use their own processing equipment to purify it 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>.

- 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
- 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
- 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
- SS (suspended solids): The volume of substances suspended in water. The higher the number, the greater the degree of water pollution
- 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

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

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

In FY2018, we conducted joint patrols at all plants in Thailand and China.





Wastewater treatment facilities at the Lopburi Plant in Thailand

Resin drying equipment at the Xicen Plant in China

# Observation of Waste Disposal Sites (Japan, Thailand)

Some waste material generated at plants and offices can be difficult to reuse or recycle at the plant or office. This type of waste material is outsourced to waste treatment companies for processing.

The MinebeaMitsumi Group selects reliable treatment companies for outsourcing processing and periodically visits the processing sites to observe the status of processing and management. We will continue to cooperate with treatment companies and take measures to prevent environmental contamination including soil, water, and air pollution during waste processing.

Members of the Japanese Group Environment Management Department, Thai Environment and Energy Committee, and representatives from the Rojana Plant and Ban Wa Plant conducted onsite tours of an industrial waste processor and recycling company in Thailand on August 7, 2018. Commitment from the CEO

MinebeaMitsumi Products in Society

Special Feature 1

Special Feature 2

Hot Topics

Members of the Japanese Group Environment Management Department and Thai Environment and Energy Committee observe a waste processing site

### Future Issues and Goals

The MinebeaMitsumi Group will continue to conduct business operations in compliance with environmental laws in Japan and around the world and is implementing countermeasures in areas where it has caused environmental contamination in the past.