azbil MIND vol. 26

Contributing to innovation in gas and water infrastructure by adding higher value to meters and the metering business

At a time when the electricity and gas markets in Japan are undergoing change due to deregulation and other factors, Azbil Kimmon Co., Ltd., a part of the azbil Group's Life Automation business, is pressing ahead with energy-saving solutions. Azbil Kimmon is making gas and water meters smarter and is providing customers with precise data on the amounts used. The company is determined to provide gas and water companies and end-users—such as private homes, factories, and buildings—with ever higher added value, and to contribute to society by meeting the need for cost reduction and energy conservation.

A century of support for businesses providing essential gas and water services

Life Automation(LA) is the third business pillar of the azbil Group, the other two being Building Automation and Advanced Automation. Azbil Kimmon plays an important role in the LA business, whose aim is to contribute to people's active lives. Since its founding in 1904, Azbil Kimmon has consistently developed its business as a manufacturer specializing in gas and water meters in Japan. It joined the azbil Group in December 2005 and has been working hand in hand with Azbil Corporation.

Masahiro Uenishi
President and CEO
Azbil Kimmon Co., Ltd.

Azbil Kimmon, whose business is largely based on the two areas of gas/water meters and solutions, has been making efforts to further improve the services it offers to customers. In the area of meters, the company provides its customers not only with products, but also with repair, maintenance, and inspection services. In the area of solutions, Azbil Kimmon has made it easier to obtain readings from meters by improving their output function, and it also provides regulator stations that reduce gas pressure to a safe level before it is provided to homes and factories. The regulator also plays an important role of preventing gas leaks by automatically shutting off the gas flow in the event of an earthquake of a certain size. In connection with automatic governor shutoff, Azbil Kimmon worked with gas suppliers to develop a system in which each governor can be individually controlled from a remote monitoring center, and can be reopened when safety is confirmed. This system is already in operation in Japan.

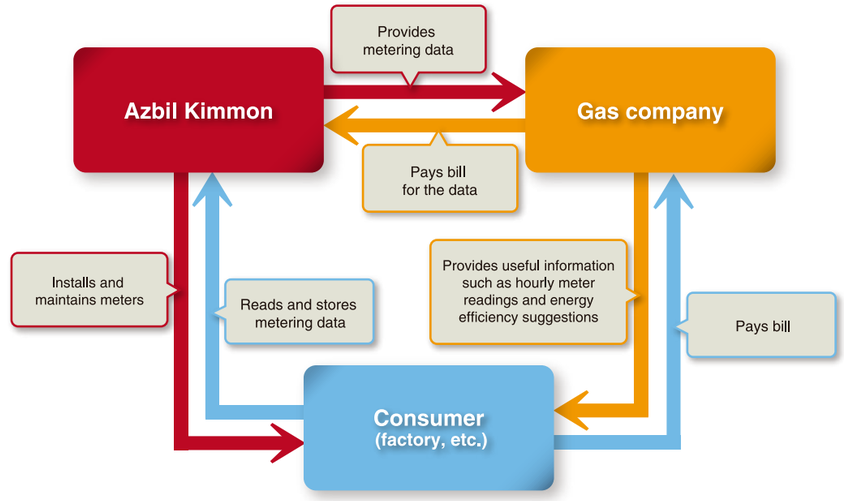
In these ways Azbil Kimmon is steadily advancing in pursuit of high added value in its product and service businesses.

Using the automatic meter reading system as a base, meter data services have been expanded

In recent years, the Japanese electricity and gas markets have come to a significant turning point, beginning with the deregulation of the retail electricity market in April 2016, and competition in the retail gas market is scheduled for April 2017. These changes mean that consumers will have a choice of which provider they use. Without a doubt, Japanese gas providers will need to provide their customers with services that are more convenient.

In the electricity market, providers have been quick to introduce smart meters with communication capabilities. Previously meters were read only once a month for billing, but with smart meters that can read and store data more frequently, providers can obtain more detailed data on the amount of power used. Consumers who receive this detailed data from suppliers can plan ways to save electricity. Since the same kind of trends may appear in the gas market, there is a prospect of a wider range of possibilities for service development than ever before.

■ **Meter Data Services**



Azbil Kimmon has already been providing customers with a load survey system.[*1] This system communicates with the meters installed at consumers' facilities to collect data on the amount of gas used every hour. This data is transmitted and stored on computers at the gas company through cell phone networks. This enables gas providers to calculate bills and create monthly reports that are sent to each consumer. Based on the know-how accumulated by providing meter maintenance and inspection services as well as the load survey system, Azbil Kimmon has begun to provide new services in the area of industrial-size gas meters for plants and large buildings.

What Azbil Kimmon has begun to provide is a whole service package including all the meter-related work, including installation, maintenance, and inspection of meters, collection of metering data, and provision of the collected data to gas providers. With this package, gas companies do not need to purchase meters or related equipment, and are freed from concern about the expiration dates of certification[*2] for each meters, or dates for maintenance or inspection, and can simply be informed of the amount of gas used. In addition, gas companies do not need to own either the meters installed at consumers' facilities or the extra meters needed as spares during inspection, so they can significantly lower their costs. Azbil Kimmon collects the meters whose certification has expired, repairs them to a "like-new" condition, and uses them as spares to replace old meters whose certification has expired. This procedure, which is based on the idea of shared services,[*3] is attracting much attention from gas companies since it is more efficient, enabling the gas industry as a whole to reduce the number of meters it owns. This new service enables Azbil Kimmon to collaborate closely with its client gas companies, and opportunities to make customers' operations more stable and further developed can be expected.

Global deployment of high value-added products and services in anticipation of an overseas meter market

In the field of gas metering, Azbil Kimmon will begin providing rotary gas meters (rotator flow meter) with a built-in temperature and pressure compensator in China. These rotary meters, despite their small size, are capable of compensating for temperature and pressure. In China, there is a large difference in elevation between coastal and inland areas, and also a large difference in temperature. So the temperature, air pressure, and gauge pressure must be calibrated according to where meters are installed, and temperature and pressure must be compensated separately for each device. Previously in China, a rotary meter needed a separate temperature and pressure compensator, so space for two devices was necessary, but the new rotary meter with built-in compensation is smaller, allowing customers to use space efficiently. Since the outer case of the rotary meter was designed for global use and not for China alone, sale of the product can be expanded to other nations including Japan. Anticipating the overseas meter market, Azbil Kimmon is determined to expand its systematic introduction of smart meters and development of systems that not only have sophisticated functions, but also incorporate a mechanism for remote meter reading.

Building on a foundation of smart meter solutions, Azbil Kimmon will intensify its efforts to provide innovative products and services with high added value in the field of gas and water infrastructure.

***1 Load survey system**
A system by which gas or electricity companies remotely monitor meters installed at consumers' facilities via a wired or wireless network.

***2 Expiration dates of certification**
The time period defined by Japan's Measurement Act during which the results of inspection are valid. For gas meters, this is 7 or 10 years, and for water meters, it is 8 years. After the expiration date, gas and water companies must collect expired meters and do the proper repair and maintenance before reinspection.

***3 Shared services**
A management method in which work common to multiple departments is done by one department to achieve greater efficiency. In many cases, these services are implemented to reduce the cost of indirect departments.