One-Stop Services for Facility Maintenance

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Abstract

We have a nationwide service network in inspection and repair services for our products and we provide services focusing on "the needs of each specific region."

Although our business performance has been stable, our supply records of heavy electrical products shows the relative decline. This trend concerns us as it is the basis for our maintenance business.

Meanwhile, we received various maintenance-related requests, queries, and requests for advice from our customers.

To respond such customer requests, we upgraded our technical level with four policy key words: "other firms' products," "energy-saving," "facilities of other industries," and "operation and maintenance." In this connection, we initiated a program called "one-stop services" to increase our service offerings to customers.

1 Preface

Our "one-stop services" means our initiative to offer a comprehensive solution to maintenance-related customer issues. We provide maintenance services for a wide-type of facilities like other firms' products and facilities of other industries which reaches beyond our own products. We established a business unit called Strategic Planning and Administration Office in October 2013. We started "one-stop services" to the customers to meet their various requests in a precise and timely manner.

Based on our maintenance services for electrical facilities conducted as a core competence, we are reinforcing our engineering power and our service systems. We accomplished this through the development of our human resources, deep collaborations among our related business units, or business alliances with other firms. From our "customer-driven" policy, we are providing comprehensive services for electrical facilities manufactured by other firms and the facilities of other industrial fields.

As a total maintenance service company, we provide comprehensive wide-ranging services. We aim to become a good business partner of our customers. This paper introduces some examples of our "one-stop services."

2 Our Initiatives for Facilities in Other Fields

There was an engineering related request for advice from a customer on their factory expansion project regarding a pipe-making business. We have an established business relationship with the customer on their electrical facility maintenance. We provided comprehensive services starting from initial consulting, system design, and production of new factory. We modified the existing facility, on-site commissioning test, and provided subsequent maintenance services. Fig. 1 shows an outline of our one-stop services for a new plant project. In cooperation with the customer, we also upgraded the existing facility for energy-saving and improvements on production lines (see Fig. 2.). Fig. 3 shows a view of installation work for the product (pipes) conveying overhead traveling crane.

3 Our Action for Better System Reliability for Business Continuity Plan (BCP)

Emergency power generating facilities are important as a disaster prevention measure against a power outage by a disaster and also as a BCP. At the time of the Great East Japan Earthquake in 2011, however, many generators were forced to shut

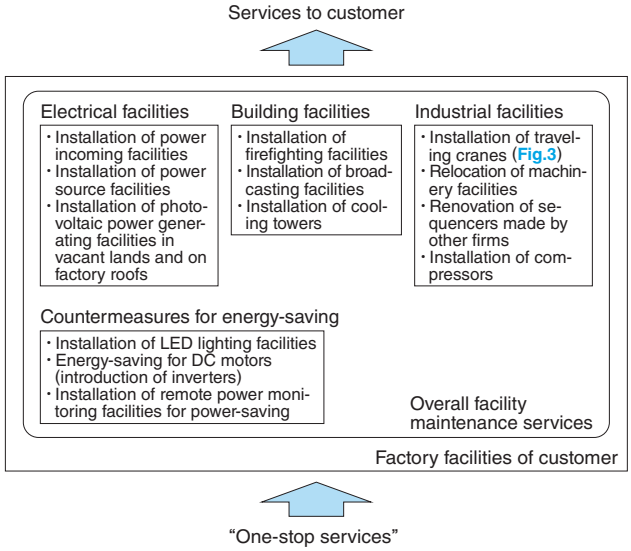

Fig. 1 Outline of Our "One-Stop Services" for a New Plant Project

Outlined of overall project work is shown. It covers the facilities of other fields.

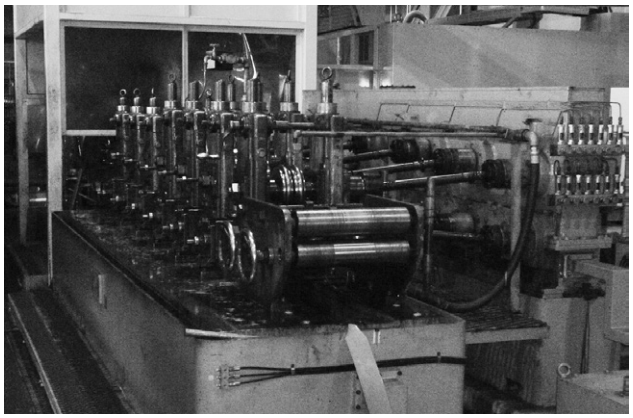

Fig. 2 Facility before Relocation

Existing production line is shown.

Fig. 3 Installation Work for the Product (Pipes) Conveying Overhead Traveling Crane

A view of crane lifting work at the Factory No.2 is shown.

down due to insufficient supply of fuel although very much fuel was still left in each fuel tank. The insufficient fuel supply was caused by floating sludge from the shaking of the earthquake. It gave rise to the clogging of filters at the fuel service tanks. As a countermeasure taken to this challenge, we recommended our customers check the underground fuel tanks periodically and such periodic checks showed good results. Here is a typical example.

The facilities to be checked were a 6.5kL fuel service tank and a 100kL underground fuel tank. During a period of two days of service, we tentatively removed residual fuels to five tank lorries. The tank insides were cleaned, and leakage test (pressure test) was carried out. During these processes, a large volume of muddy sludge accumulated inside the tanks and attached to the tank walls was removed. This work improved the reliability for the emergency power generating facility. **Fig. 4** shows a view of tank inside before cleaning. **Fig. 5** shows a view of tank inside after cleaning, and **Fig.6** shows the situation of oil analysis after treatments.

Fig. 4 Tank Inside before Cleaning

We can identify a large amount of muddy sludge accumulated over the bottom surface of the tank.

Fig. 5 Tank Inside after Cleaning

A large amount of muddy sludge accumulated in the tank has been removed and the tank inside appears clean.

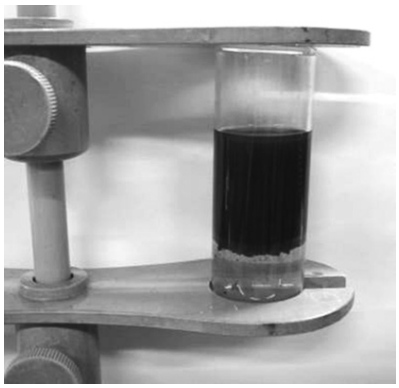

Fig. 6 Situation of Oil Analysis

Water component and sludge contained in oil are being analyzed.

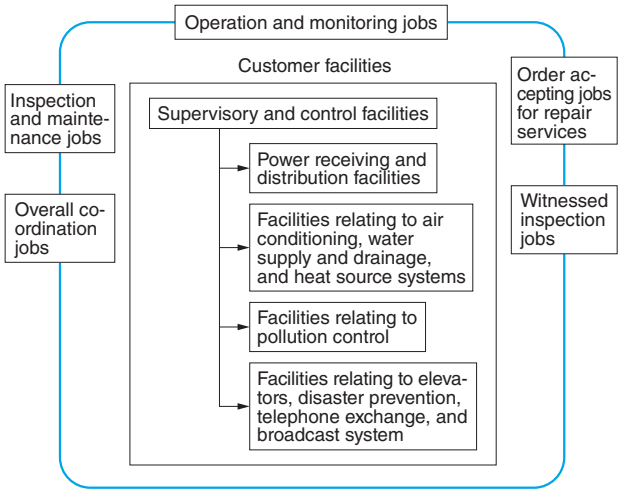

Fig. 7 General Summary View of Our Maintenance and Management Services

Outline of facilities and services are shown.

As mentioned above, by looking at a facility from the viewpoint of our "one-stop services," we can promote the effective maintenance of the overall facilities including the ancillary facilities.

4 Operation and Maintenance Services

We have long been engaged in a wide range of electrical facility inspection and facility management for public research facilities in Japan. An example is shown below regarding the facilities where we conducted operation management services for the overall facilities for 18 years since April 2000.

It covers a total of 14 research buildings. Our service team consists of 16 staff members. We worked night and day for maintenance services. We dispatched a licensed electric chief engineer to serve as a safety inspector and supervisor: we conducted the overall electrical facilities. Fig. 7 shows the general summary view of our maintenance and management services. Fig. 8 shows the view of our operation and management. Fig. 9 shows a view of facility operation check.

Fig. 8 View of Our Operation Management

A view of operation monitoring is shown. It supervises overall facilities.

(a) Routine inspection for an air-conditioning facility

(b) Routine inspection for a heat source facility

Fig. 9 View of Facility Operation Check

A view of on-site facility operation check is shown.

5 Postscript

This paper introduced our “one-stop services” activities in Japan. Going forward, we are planning to develop overseas service activities for Japanese subsidiary companies mainly in the ASEAN Region.

We intend to expand and increase the above-mentioned actions. We will further improve our business through the business alliance with other expert firms concerning air conditioning facilities, machinery facilities, and heat source facilities, etc. We will also work on improving our “one-stop services” ability, and value the feedback from our customers. Along the way, we will improve our service quality.