

<Company Profile>

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URL	http://www.kmtl.co.jp/en/
No. of employees	390
Capital	50 million yen
Established	March 1950 (began operations in 1947)
Representative	Masaaki Tsurui, President

<Business overview>

Machining of various test specimens; design and manufacture of test specimens; design and manufacture of special testing equipment; execution and analysis of various strength tests; execution and analysis of various metallographic exams; evaluation of the soundness and residual life of structures and structural members; dispatching of engineers who can support R&D activities; execution of various kinds of chemical and instrumental analyses; analyses of the physical properties and morphologies of various materials; water quality control and corrosion testing for power plants; and environmental measurement.

<Technology>

Our company has achieved greater efficiency in materials evaluations conducted during plant equipment inspections!

With our Electric Discharge Sampling Equipment (EDSE), we can now extract samples without interrupting normal plant operations!



With EDSE, no need to stop plant operation.



Designing equipment using CAD is also our main job.

The machine that has been earning high marks from our clients in recent years is a special system called the Electric Discharge Sampling Equipment (EDSE). We at Kobe Material Testing Laboratory Co., Ltd. (KMTL) have developed the EDSE to remove samples from large plant components and to evaluate the residual life of the components and their conditions (including defects) with high accuracy.

The EDSE is not simply sold to our clients; it is also offered as part of our consignment service in which KMTL engineers carry this equipment to a plant where it is actually used and conduct sampling there. The equipment is highly praised by our clients in the electric-power and other industries, since with EDSE it is possible to extract samples in a short period of time from various locations and parts without interrupting normal plant operations. We strive to respond to our clients' demands by taking advantage of our one-stop service system—in which we machine the samples brought back from a client's plant into test specimens, conduct materials tests and analyses based on them, and perform residual life evaluation for the plant and/or inspect causes of damage the plant has suffered.

[History of Development]

In many industries, such as the electric power industry, evaluating the residual life of active plants and ensuring the soundness and reliability of plants in operation have become very important tasks. Traditionally, materials evaluation for plant equipment has been conducted, broadly, using two methods. One is non-destructive testing, which only inspects the surface textures of plant components in judging if the plant has any problems, and the other is destructive testing, which performs tests and evaluation using specimens made from plant pipes that are cut and removed while normal plant operations are stopped. However, both methods have experienced problems: the former has exhibited low accuracy, and the latter has involved enormously high cost.

[Originality]

By utilizing the EDSE developed by KMTL in a plant for which an inspection is actually performed, a minimal amount of sampling material required (sample thickness: 2.5 mm) can be extracted in a short period of time. (It normally takes 2 to 3 hours to extract a sample for a single part.) For the EDSE, no large-scale installation work is needed, and since it only requires cutting a small, thin sample from a component's surface, damage to equipment and machines actually used in the plant is minimized, making it possible to reduce the expenses required for inspections. After samples are removed, subsequent processes can be undertaken all in one place—from machining of test specimens, execution of tests and analyses, to evaluation. The EDSE is truly a groundbreaking piece of equipment that makes the best use of KMTL's expertise in testing techniques and brings the best out of its one-stop service system.

[Future Development]

Almost 10 years have passed since the EDSE was first developed, and the work method for sample removal where thin samples are taken directly from the surfaces of components such as plant pipes is gradually beginning to be understood and accepted. Since in recent years the EDSE is increasingly used for actual components of active plants, it is anticipated that more test data will be accumulated in the days to come. As we set our sights on establishing new evaluation methods with much higher accuracy and providing them at lower cost, we aim to further contribute to the advancement of materials testing.

<Topics>

We have formed a business partnership with Cetim, a leading government-supported research institution in France

With the aim of offering solutions to clients abroad, in July 2017 we began a collaboration with Cetim, a government-supported research institute in France, with which we signed a business partnership. Cetim—which is like a national research and development agency in Japan such as the National Institute for Materials Science (NIMS) or the National Institute of Advanced Industrial Science and Technology (AIST)—is France’s largest nonprofit research establishment. Cetim and KMTL have formed a relationship that complement each other: Cetim places focus on composites such as carbon fibers, while our company has an advantage in the field of metallic materials. The main objective of the partnership between Cetim and our company is to promote research support operations by serving as a business hub for the materials testing industry and as an effective bridge connecting manufacturing in Asia and Europe.

Making full-scale entry into the South Korean market! Showing off our advanced technological capabilities at exhibitions

Since 2015, KMTL has started making massive inroads into the South Korean market. In 2016, we participated in Korea Metal Week and Offshore Korea. In 2017, at JEC Asia, a signing ceremony for a partnership between Cetim and KMTL was conducted, and our company presented displays for KMTL at Cetim’s booth. We at KMTL are striving to create more business opportunities by promoting our advanced technological skills to the rapidly expanding South Korean market, especially to its automobile and heavy industry markets.

<Corporate History>

- 1947 Started operations as Tsurui-Shouten.
- 1950 Established Minatogawa Kinzoku as a limited liability company.
- 1961 Reorganized as Minatogawa Kinzoku Test Piece Manufacturing Co., Ltd.
- 1968 Established Kobe Material Testing Laboratory Co., Ltd.
- 1985 Established Tsurui Chemical Co., Ltd.
- 2006 Received Nadcap accreditation for materials testing laboratories (becoming the first materials testing lab in Japan to earn the accreditation).
- 2008 Established KMTL Edge Tech Co., Ltd.
- 2015 Kobe Material Testing Laboratory Co., Ltd., Minatogawa Test Piece Manufacturing Co., Ltd., and Tsurui Chemical Co., Ltd are united into one, and the new Kobe Material Testing Laboratory Co., Ltd. is launched.
- 2018 Selected as a “Driving Company for the Regional Future” by Japan’s Ministry of Economy, Trade and Industry.