TOMOEGAWA's "Flexible Planar Heater iCas MHE" Demonstrates Over 20% Energy Savings in Japan's ETV Program [1]

— Approx. 42% Reduction Observed Under Verification Test Conditions [2] —

TOMOEGAWA CORPORATION (Head Office: Chuo-ku, Tokyo; President and Representative Director: Yusuke Inoue) announces that its "Flexible Planar Heater iCas MHE" has been verified to demonstrate its over 20% energy savings compared with conventional mantle heaters under the Environmental Technology Verification (ETV) program implemented by the Ministry of the Environment, Japan.
In addition, under the conditions of the verification test, an approximately 42% reduction in power consumption was observed. [2]

環境技術実証事業 ETV 環境省
気候変動対策技術領域
第三者機関が実証した性能を公開しています
R7年度
「環境省、ETV」で検索
実証番号： 140-2504

Background of the Verification

In heating processes across the manufacturing industry and various facilities, reducing energy consumption and greenhouse gas emissions has become an increasingly critical challenge.
By closely conforming to the surface of the object being heated, the "Flexible Planar Heater iCas MHE" achieves highly efficient heat transfer compared with conventional heaters, contributing to reduced energy consumption and lower adverse environmental impact.
To objectively verify these features, this product was selected as a target technology under the Environmental Technology Verification (ETV) program and verified by an independent third-party organization.

iCas
Insulation/Conduction/Absorption/Solution

[Inquiry] **TOMOEGAWA CORPORATION**, Office of the President, Business Strategy Team
7th Floor, KYOBASHI TRUST TOWER 2-1-3 Kyobashi, Chuo-ku, Tokyo, Japan
Website: https://www.tomoegawa.co.jp/english/

■ Overview of the Target Technology

Technology Name: Flexible Planar Heater iCas MHE

Key Features:

- A proprietary planar heating element utilizing the Stainless Fiber Sheet
- Excellent flexibility that enables close-contact heating of target surfaces, including piping and curved structures
- Uniform heat generation across the entire heating surface

Main Intended Applications:

- Heating of factory piping and equipment piping
- Heating of curved sections and confined spaces in various types of equipment, including semiconductor manufacturing equipment

■ Outline of Verification Results

In this verification, measurements — including power consumption — were taken in an experiment conducted under conditions representative of actual operation.
The results showed that the “Flexible Planar Heater iCas MHE” efficiently transfers heat energy by closely conforming to the surface of the object being heated.
Furthermore, the evaluation demonstrated that uniform heat generation across the entire surface enables stable heating with minimal temperature variation along all sections of the piping.
These results indicate that the product provides energy savings of more than 20% compared with conventional mantle heaters.
In addition, under the conditions of the verification test, an approximately 42% reduction in power consumption was observed. [2]

■ Future Outlook

Leveraging the insights obtained through this verification, TOMOEGAWA will continue to propose additional applications for the “Flexible Planar Heater iCas MHE” and further expand its fields of use.
Through the development of products and technologies that improve energy efficiency and help reduce adverse environmental impact, TOMOEGAWA will continue to contribute to a sustainable society.

[1] Environmental Technology Verification (ETV) program
This program is the Japanese ministry of environment initiative that performances of advanced environmental technologies are verified by a third-party organization and verification reports and summaries are disclosed on the JMOE web site. The aim is enabling users to select appropriate technologies and to contribute environmental preservation and to develop environmental industries.
The ETV program in Japan is consistent with the ISO14034 (ETV).

[2] See the Ministry of the Environment’s ETV Program website, “List of Verified Technologies,” for the verification report and summary, which are available in Japanese only: https://www.env.go.jp/policy/etv/verified/index.html

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