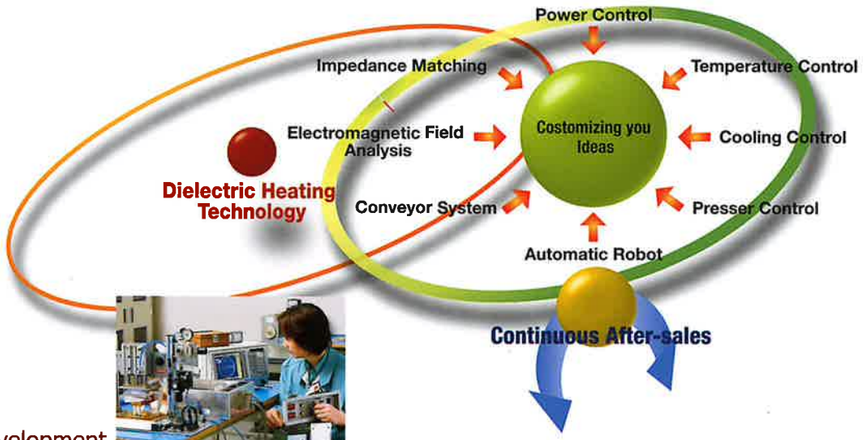


Development

Design

Production

Factory

Yamamoto Vinita's global activity from development to after-sales support

We at Yamamoto Vinita have developed a system in which our sales department, development department, technology department and manufacturing department are fully equipped to immediately respond to all customer needs.

Backed up with our world-class dielectric heating core technology, we believe that our mission is to do everything within our power to provide suggestions for automating manufacturing processes and saving energy resources, and well as suggestions for creating production lines and systemized process flows, starting with the provision of support for new products and new technologies, so that we are able to provide customized systems that match up perfectly with the needs of each and every one of our customers.

We have also been acclaimed as the industry's No.1 for providing complete aftercare services amid the current trend toward globalization.

http://www.vinita.co.jp

YAMAMOTO VINITA CO.,LTD.

Head Office :
6-3-12, Ueshio, Tennoji-ku, Osaka 543-0002, Japan.

Tel No. : +81-6-6771-0605
Fax No. : +81-6-6771-6898
E-mail:vinita@vinita.co.jp

Sales Office : Tokyo, Nagoya
Factory : Yao in Osaka

Dielectric Heating

Internal Heating Technology for Substances Achieved by Electromagnetic Waves

VINITA

JAPAN

YAMAMOTO VINITA CO.,LTD.

Yamamoto Vinita's Dielectric Heating Technology Leads the World
Our Internal Heating Technology for Substances Achieved by Electromagnetic Waves has been Expanded into and is Used in a Diverse Array of Fields

Dielectric heating is a technology that heats a wide range of different substances from the inside with the use of invisible forces.
Yamamoto Vinita has been involved in manufacturing in a variety of fields for sixty years relying on this dielectric heating technology.
In addition to putting high-frequency waves and microwaves to practical use in a wide range of fields, such as plastics, wood, food and ceramics, Yamamoto Vinita has also been highly-acclaimed throughout the world for using our dielectric heating technology in various types of devices, including being the first in the world to use this technology in a hyperthermia treatment system for cancer therapy in the field of medicine.
Yamamoto Vinita will continue to accept new challenges in the modern-day society that changes by the moment while contributing to a pleasant future for both humanity and the planet by concentrating on manufacturing through the medium of our clean and ecological dielectric heating so that we can meet our social responsibilities as a corporation.

ADVANTAGE OF DIELECTRIC HEATING

Dielectric heating using electromagnetic waves is a technology that generates heat from the inside of substances, and its many superior advantages not only helps in making drastic improvements to the issues that conventional external heating methods face, it also has limitless potential for being used in all fields of industry.

Advantage 1
Short heating time

Advantage 2
Uniform heating

Advantage 3
High thermal efficiency

Advantage 4
Heating under decompression / pressurization

Advantage 5
Selective heating

Advantage 6
Combination with other sources of heat

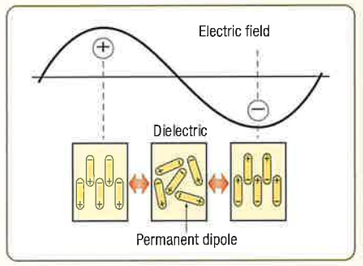
Advantage 7
Simple heating control

Advantage 8
Improvement of working surroundings / Rationalization of a factory

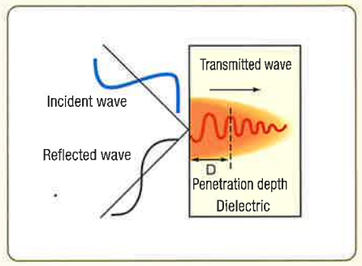
Principle of Dielectric Heating

Electrons do not flow (electric current) when conductors, or insulators, which possess electrons that flow freely when an electric field is applied, are placed within the electric field, but a polarization phenomenon occurs in which electrical load is separated when positive and negative charges are moved away from the point of equilibrium. The substances that contain this property are known as dielectric. The higher the frequency becomes, the more the electrons, which is what dielectrics are composed of, begin to rotate, collide, vibrate, generate friction and perform other intense movements. The changes in polarity that occur at this time are very intense, with them changing between several hundred-thousand times to several billion times per second. This energy becomes "heat", which is generated within the dielectrics.

■ Electrical Field and Movement of Molecules in Dielectric



■ Electromagnetic Waves Absorbed by Substances

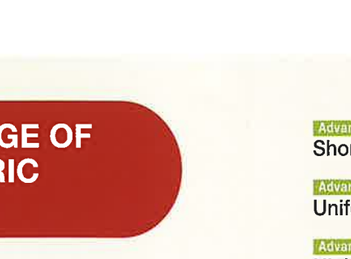


Main Products

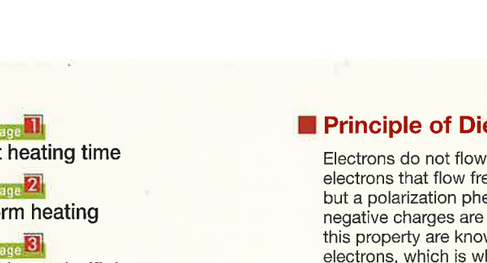
Wood

High-frequency Wooden box Machine

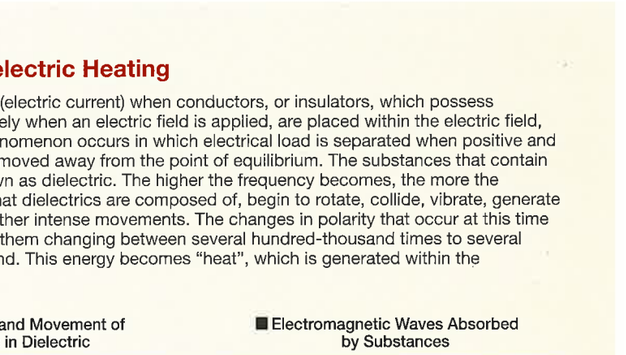
High-frequency Bonding Machine for Sandwich Panels



High-frequency Press Line for laminated beams


High-frequency Cross Laminated Timber Machine

Medicine



Hyperthermia Treatment System for Cancer Therapy

Plastics

Hybrid High-frequency Welder

Hybrid High-frequency Welder (Multi-lab type)


High-frequency Blood Bag Welding Machine

Ceramics/ Textile/Rubber, etc.


Microwave Continuous Dryer

Food

High-frequency Defroster

High-frequency Continuous Defroster


High-frequency Continuous Dryer