Company History
Linn High Thm was founded by Hans Linn in 1969 and specializes in electrically heated laboratory and high temperature furnaces, inductive sintering and casting plants for industry and laboratories. In 1979 the production range was expanded to include induction-heating equipment, microwaves and vacuum furnaces. The special production capacity for the construction of medium steel industrial furnaces was increased in 1985 with the acquisition of a company in Bad Frankenhausen, which then began to trade under the name of Linn Elektro Thm GmbH.

Linn High Thm GmbH, today Linn High Thm, has 110 employees and the export ratio is at approximately 60%, foreign operations being concentrated on Eastern Europe (Poland, Russia, Ukraine, Bulgaria, South Korea, Malaysia, Vietnam and the Middle East).

Product Philosophy
The strengths of Linn High Thm GmbH lies in designing special systems according to customer's specifications. Naturally, the company relies on the utilization of basic modules for the design of these systems, in order to be able to keep the construction costs to a minimum. The choice of each module and specially tailored construction project lies:

- Special economic design taking into account all environmental aspects.
- Lowest operating costs and long working life due to the utilization of state-of-the-art technologies.
- Frequent design changes made through the use of modern high temperature resistant materials produced at their own factory.
- Fully and continuity based on years of practical experience in the construction of high temperature systems.

Microwave Technology for the Ceramics Industry
For industrial microwave sintering, there are many kinds of equipment. For continuous processes with short and medium drying times, the continuously moving conveyor belt dryers of type MDS are best used. This type is constructed according to standardised modules, but can be adapted to the individual process requirements. The MDS dryer (Fig. 3) is offered in a broad range of power, ranging from 8...150 kW and heights ranging from 0.5...39 m. Applications are the drying of ceramic cups and plates, ceramic honeycombs, insulation materials, building materials, ceramic raw materials and many others.

For batch processes with medium to long drying times of also large pieces, chamber dryers of the MK type (Fig. 3) can be used. This type is available with powers ranging from 2.4...50 kW and volumes ranging from 1...100 m³. Microwave power and chamber volume can be adjusted to customer demands.

An easy way to operate sliding door dryers under the fast leading by hand or lift truck and saves production space or building height in comparison to a swivelling door application. Dryers are the drying of protective figures, quartz rods, grinding wheels, high voltage insulators, and among others.

Both types of equipment can be designed as hybrid systems, pre-heating the hot air of the dryer by electric heaters, or oil- and gas-burner.

This can reduce the required microwave power and improve the temperature homogeneity of the product.

The microwave frequency applied is usually 2.45 GHz. Beside this frequency Linn High Thm offers, at the moment exclusively, equipment with the new microwave frequency 3.8 GHz. Due to the special design, older units can be reinstalled with new frequency. Microwave frequency is especially suitable for the drying of thin materials and low water contents or not coupling materials.

Other Products Included in the Range
The product portfolio is versatile on the one hand yet able to meet the highest technical requirements on the other. In addition to 1100...1 800°C laboratory furnaces for universal thermal treatment there are protective gas muffle furnaces that operate at 1100°C, high temperature furnaces for vacuum and protective gas operations that operate at 2 800°C, vacuum furnaces with high pressure gas quenching up to 1 bar and 800°C, wet walls furnaces that operate at 2 800°C for vacuum and protective gas operations with the inside of 0.3% airflow and circulating air furnaces that operate at 2 000°C. Furthermore chamber and shuttle kilns of 5 m³, rotary tube furnaces of 4 m and roller kilns of 8 m.

There are also inducive re-melting and treatment plants for preparing samples of oxidic and metallic materials for spectroscopy, high and medium frequency generators, induction centrifugal casting machines for precision casting, jewellery, dental, macrolith technology and magnesia industry, special furnaces for research and development, the nuclear industry and pot melting furnaces for alumina, variegated and precious metals as well as glass and special systems for the treatment of precious stones and the growing of crystals and all integral items in the range of products.