

## MAKING WAVES IN THE RECYCLING WORLD



### About the Customer

The customer is an international supplier of advanced solutions for heat treatments in recycling applications. In operation for nearly two decades, the company develops process solutions for a variety of applications for the plant and mineral recycling industries, employing microwave heating technologies to provide unique advantages. Applications include heating and drying, plant extraction, and recycled mineral sludge calcination.



### THE CHALLENGE

The customer supplies microwave-based calcination systems to the mineral industry. These systems are used in the heat treatment of mineral sludge and clay (a process called calcination) to create lightweight aggregate products not obtainable by any other heating method. The customer has patented a system that uses microwave energy to convert mineral sludge into expanded clay balls that have large, airy macro-pores that can facilitate the transport of oxygen and moisture to growing plants. This makes the product ideal as a growth medium in hydroponics. In particular, the customer's technology converts washing quarry sludge, both siliceous and calcareous, into expanded clay balls.

The customer needed a cost-effective and reliable microwave generator capable of producing homogeneous heating in their calcination system. Key characteristics required in the generator included continuous power control and energy-efficient operation.



## MAKING WAVES IN THE RECYCLING WORLD

### THE SOLUTION

The customer selected the MKS Alter® GS Series 915 MHz industrial microwave generator with a remote Magnetron head. The GS Series industrial microwave generator is a proven reliable power system that provides up to 75kW of continuous microwave power. It includes a shielded cabinet with continuous power line control and safety interlocks. Critical to the selection was the MKS switch mode power supply with continuous power control. The system is low weight, compact, and modular, allowing flexible integration within different microwave heating systems. The GS Series 915 MHz microwave power generator is also consistent with the new EU RT2012 regulation on energy efficiency performance.

### THE BENEFITS:

The customer obtained a proven reliable microwave generator that can supply homogeneous heating in their calcination application along with the continued assurance of expert technical support from MKS.

### LEARN MORE

To learn more about how MKS Microwave Generators can help you improve productivity in your testing/research operations, go to: [www.mksinst.com/c/microwave-generators](http://www.mksinst.com/c/microwave-generators)

