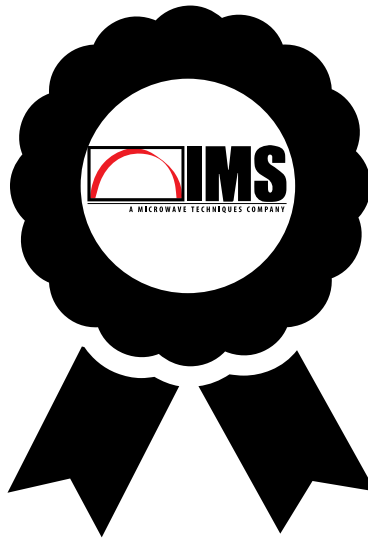


## PATENT AWARD

U.S. Patent # 9642194B2 | Issued: May 2, 2017

### Industrial Microwave Systems

A Microwave Techniques Company



### *Tubular Choked Waveguide Applicator*

A microwave heating apparatus with a tubular waveguide applicator and reactive and resistive chokes to decrease leakage. Microwave-transparent centering elements maintain articles to be treated centered in the applicator. Articles, such as individual cylindrical articles or continuous cylindrical strands, advance through the applicator in a direction in or opposite to the direction of propagation of microwaves. The resistive chokes have conductive vanes coated with a dielectric material that absorbs microwave energy that leaks through the reactive chokes to allow for large openings for large-diameter articles. The waveguide applicator is operated in the TE 01 mode to concentrate microwave heating energy along the outer circumferences of the articles.