

PATENT AWARD

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Industrial Microwave Systems

A Microwave Techniques Company



Tubular Waveguide Applicator

A microwave heating apparatus with a tubular waveguide applicator forming a heating chamber and with microwave-transparent centering elements to maintain product to be treated in proximity to the centerline axis of the chamber. Product is conveyed through the chamber in a direction in or opposite to the direction of propagation of microwaves. Cylindrical chokes at product entrance and exit openings into the chamber prevent microwave leakage and allow for large openings for large products. In some versions, a low-loss inner tube in the chamber coaxial with the tubular applicator is used to confine product to be heated in proximity to the centerline axis of the chamber to be heated effectively by microwaves with a TM₀₁ field pattern.