The principle of microwave sintering

Material of traditional heating mode is must be in the environment of the heating, heat transfer by convection, conduction, or radiation to table and material, again by the table is transmitted into the material, until thermal equilibrium is reached. During this period, the adiabatic heated environment can't completely closed, and in order to make the material of the core status and table and same, achieve the purpose of well burned, heating time usually is long, a large amount of heat is easily lost to the environment, resulting in great loss of energy.

Unlike traditional microwave heating. Microwave sintering is the use of the dielectric loss of microwave electromagnetic field in the ceramic material make heating material as a whole to sintering temperature and sintering and densification. Dielectric materials under the action of microwave electromagnetic field will produce polarization of medium, such as electronic polarization, atomic polarization, dipole steering and boundary and polarization. Polar molecules in the process of polarization state from random distribution to aligned according to the polarity of the electric field orientation, while under the effect of high frequency electromagnetic field, the molecular orientation changes according to the frequency of the alternating electromagnetic minor fault. But the interior of the material dielectric polarization process of an electric field can't follow the rapid change, polarization vector will lag behind a electric field intensity vector Angle, cause the electric polarization shows that electric hysteresis phenomenon in the process, the process the energy exchange between the microscopic particles on the macro performance for energy loss. In the microwave band, mainly dipole steering absorption current polarization and world constitute a material of power dissipation.The Key point of microwave sintering depends on the characteristics of the material itself, such as dielectric properties, magnetic and conductive properties.

Stay tuned for detailed product information company official websitehttp://www.langfengmetallic.com/