Principle

Operating Principle of Strayfield Industrial Radio Frequency Dryer

Entrapped water molecule is oscillated at 27 million times in a second
• Basics Radio Frequency

27.3 MHz
ELECTROMAGNETIC SPECTRUM

X-AND GAMMA RAYS
ULTRA VIOLET
VISIBLE
INFRA RED
MICROWAVE
RADIO FREQUENCY
AUDIO FREQUENCY

FREQUENCY (Hz)

2450 MHz: MICROWAVE INDUSTRIAL HEATING FREQUENCIES
896 MHz: RF INDUSTRIAL HEATING FREQUENCIES
27.12 MHz: RF INDUSTRIAL HEATING FREQUENCIES
13.56 MHz: RF INDUSTRIAL HEATING FREQUENCIES

CB Radio
Diathermy
RC Models
Conventional Heating by Impingement

- Convection
- Conduction
- Radiation
RF Heating is Volumetric Heating

Heat is Generated INTERNALLY

i.e. **within** the material to be heated
Polarization of Molecules
Polarized molecules oscillate in RF field and create heat due to friction
Savings

• Removal of end moisture consumes much more heat energy due to external heating
• When processed through RF the end moisture is removed without external heating and save energy
• Conveyor process ensure deployment of optimum manpower
• Product wastage minimized
Direct heating of water molecules leads to efficiency.

- 60% of Total Drying Energy
- RF Drying Curve
- Conventional Drying Curve
- 40% Additional Energy Required without using RF Dryer.