

## Application of Infrared in drying process

### Infrared:

Infrared is an electromagnetic radiation having a wavelength just greater than that of the visible light spectrum but less than that of microwaves. Infrared radiation has a wavelength from about 800 nm to 1 mm, and is emitted particularly by heated objects.

### Drying Process:

Drying is a process that consists of the subtraction of water or other solvents material by the process of heating the material and evaporating the content. This process is often used before packaging the final product. To be considered "dried", the final product must be solid, in the form of a continuous sheet (e.g., paper), long pieces (e.g., wood), particles (e.g., cereal grains or corn flakes) or powder (e.g., sand, salt, washing powder, milk powder).

### Infrared in Drying:

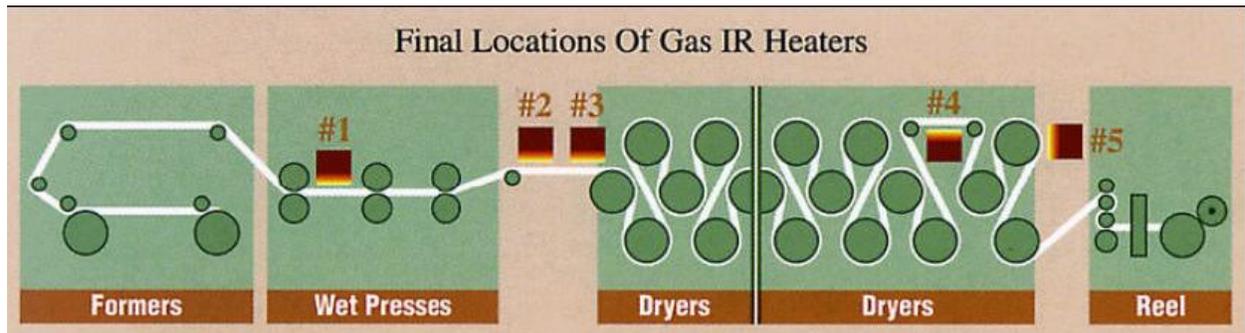
One approach to enhance drying operations is to include or use infrared energy. Infrared energy could be produced by electric or gas infrared heaters or emitters. Every energy source has preferences and disservices. Regularly, gas infrared frameworks are more lavish to purchase on the grounds that they oblige security controls and gas-taking care of gear, however they frequently are less costly to run in light of the fact that gas typically is less expensive than power. Gas infrared is regularly a decent decision for applications that oblige a considerable measure of energy. Items, for example, nonwoven and material networks are cases where gas frequently is a decent decision.

Gas IR heaters create an infrared wavelength that is promptly ingested by the water in the sheet. This prompts a higher temperature and a drying proficiency build that can't be copied by conduction and convection temperatures alone.

By difference, electric infrared is likely better for delicate substrates, for example, film and certain fabrics, where great control and consistency is needed. Electric infrared heaters might be separated into different, independently controlled temperature zones with tolerances as tight as  $\pm 1^{\circ}\text{f}$ .

Both electric and gas infrared typically are controlled by thermocouple feedback control loops that regulate the electrical power or fuel mixture going to the infrared heaters. For more precise control, temperature feedback from the product using an optical pyrometer is used.

The IR heating system for the process of drying is depicted in the below picture



### **Where to find help in selection of Best Infrared heater?**

The experts such as KERONE with the team of experts can help with the best suited Infrared heaters for your process need. For details visit [www.kerone.com](http://www.kerone.com) .