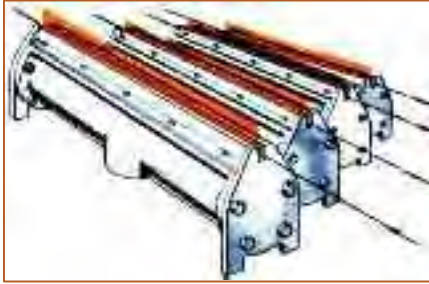


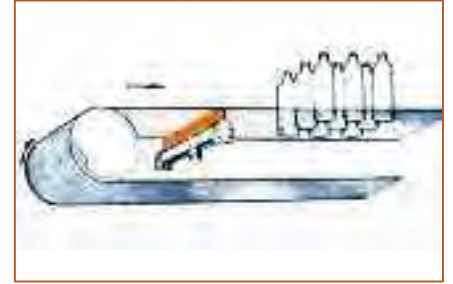
Heating Techniques



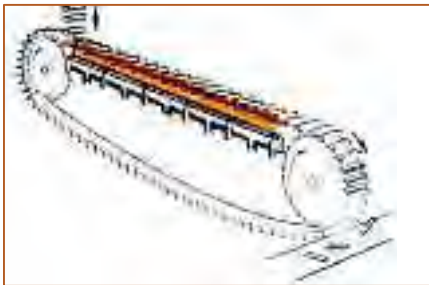
Filaments for lamps are preheated ahead of drawing dies, as shown here. Fine sewing threads are singed in multiple strands. Copper alloy wire is heated in this way for annealing.



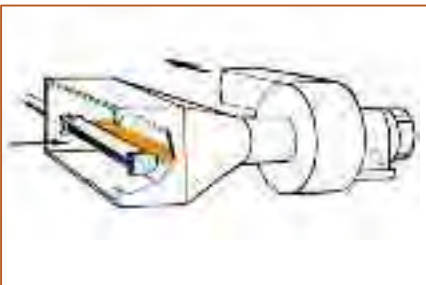
Webs are dried, cured or preheated by directing the burner flames against the passing material. Flames are sufficiently uniform to be successfully used for textile singeing. Electrical static is discharged by flame conduction.



Conveyors of ovens, furnaces, and lehrs are preheated to offset effects of cooling during return travel. This practice increases production and reduces thermal shock to previously heated ware.



Parts of many shapes and materials are handled on conveyors as shown. Fabricated pieces of steel, glass and nonferrous materials are heated for hardening, tempering, annealing or hot forming.



Air is heated for many purposes by inducing (or forcing) it over ribbon burners within insulated chambers. Applications include drying, enamel baking, food preparation, curing and similar uses.



Rolls for calendaring are frequently internally gas fired. The arrangement of ribbon burners provides a suitable means of obtaining uniform lateral heat distribution. Rolls without internal accessibility may be externally fired.



Wire is conveniently cured after coating, or otherwise treated, by conveying it vertically through special ribbon burners. Multiple strands are normally heated simultaneously. Burner manifolds are retractable for accessibility.



Glassware may be fire-polished or "glazed", to eliminate sharp molded edges that might injure the user. Glazing is frequently performed by fusing the sharp edges while the ware is continuously conveyed through ribbon flames.