

# STALAM RF DRIER - MAINTENANCE AND OPERATION

## Do's

## Don'ts

### Prior to operation

- ✓ Check all the emergency pushbuttons are pulled back and all the doors are closed. Main switch cannot be turned on if any door is kept open or any emergency pushbutton is kept in pressed condition
- ✓ Start external cooling water, maintain water temperature between 22°C to 26°C, with a minimum pressure of 1 kg/cm<sup>2</sup>
- ✓ Check the D.M. water level; if found low, top up with D.M. water having electrical conductivity lower than 5 μS/cm (microSiemens/centimeter)
- ✗ Do not lower the temperature of external cooling water below 22°C, which can cause condensation and spark inside the RF chamber
- ✗ Do not use any other water except the D.M. water having electrical conductivity <5 μS/cm

### Job setup

- ✓ Open the steam valves and start the anti condensing unit before loading the material for achieving optimum production efficiency
- ✓ Ensure that the package with dye spring is loaded on the conveyor only in horizontal position
- ✓ Ensure only hydro extracted package is loaded on the conveyor with the moisture uniformity
- ✗ Do not use the machine without steam as it can cause spark inside the drying tunnel while drying the material
- ✗ Do not load the package with dye spring in vertical position. Do not allow any other metal inside the drying chamber, which can cause fire
- ✗ Do not load un-hydro package/dried package/semi dried package, as this may cause fire

### During running

- ✓ After switching on the main switch, keep the machine in idle running for about 10 to 15 minutes and then start the radio frequency
- ✓ Start conveyor switch, set the conveyor speed as per the following calculation  
1.2 x RF power in kW
- ✗ Do not start the radio frequency immediately after switching on the main switch
- ✗ Do not run the machine without calculating the conveyor speed

$$\frac{\text{Number of package per running meter}}{\text{water weight in kg per package}}$$

## Do's

- ✓ For considering water weight in kg per package, always take 10 packages' average weight and subtract from the dry weight for calculating the conveyor speed
- ✓ In case of power failure during drying and the stoppage of the machine is for more than 5 minutes, then open the side door of drying tunnel, to avoid condensation
- ✓ For shutting down of the machine, use only the main switch
- ✓ Being a high voltage RF machine, the dried packages must be collected only after the drying chamber

## Don'ts

- ✗ Do not calculate conveyor speed by taking single package weight
- ✗ Do not keep the doors closed during prolonged power failure to avoid condensation
- ✗ Do not shut down the machine with emergency pushbutton. Frequently stopping the machine with emergency button can damage the machine's main switch
- ✗ Do not collect the packages from the drying tunnel, using hands /sticks/rods, etc., to avoid fatal accident

### In case of fire

- ✓ In case of a fire inside the drying tunnel, press max conveyor speed button to take out the burning packages as quick as possible and if still needed, use the fire extinguishing system to put off the fire
- ✗ Do not stop the machine unless and until the burnt packages are out of the machine

### Important notes

- ✓ Monitor the fire extinguisher CO<sub>2</sub> validity is meeting the standards and the safety water line is in order
- ✓ Keep the machine's surrounding obstacle free to ensure easy access to the machine at all times – during normal operation and in emergencies. Also, keep the machine and its surrounding dust free
- ✓ Provide stable voltage by controlling the voltage of each phase independently
- ✗ Do not remove the fire extinguisher and safety water system from the machine safety circuit
- ✗ Do not use a stabilizer which controls the voltage of 3 phases through a single servo motor control