HOW TO USE THE SYSTEM (1)
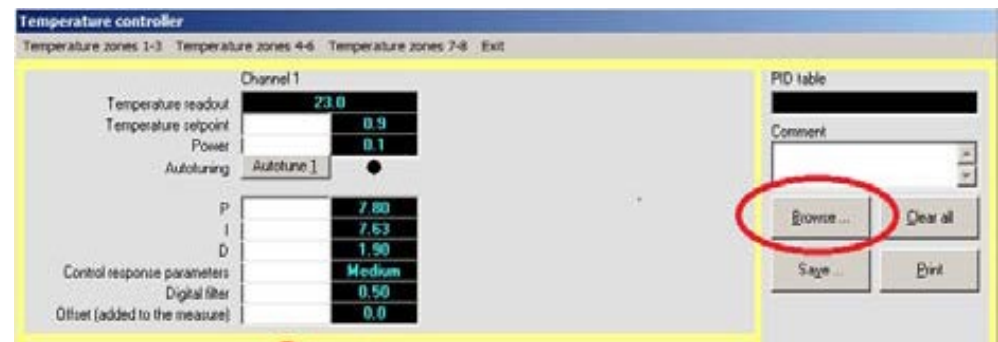
I. PID selection

1) Login on the PC zone 3

2) Double click on the shortcut "JETFIRST200" to open the PIMS software (Process Image Management Station) and press "**yes**".

3) The **Main Menu** is now open. Before starting any recipe, you have to linked the recipe with a PID_Table. To have access to the PID_tables directory click on **PID temperature controller** (Top left on the window Main Menu) and then click on **Browse**. **PID controller** is a control loop mechanism employing feedback also called three-term controller or Proportional–Integral–Derivative controller.

4) For the Pre_Heating recipe, the PID file name is **600_TC.REC** in Qualiflow Therm / User_lab / User_examples / PID_Tables. For your recipes, you have to replace User_Examples by Your_Lab.

5) Select it and press "**open**"

HOW TO USE THE SYSTEM (2)

II. PID downloading

Each table is composed of 8 maximum temperature zones for 8 different temperatures in your process. Each temperature has to be enter in the ascending order. The last one will be 1300 °C. If your process is an one temperature process, fill the other zones with 1300 °C. For each zone, you have 3 parameters P (Proportional), I (Integral) and D (Derivative) + the temperature.

Once the PID file is open, the different zones are filled with number in a yellow background. You can modify the value as you wish and save them in your directory.

To link the PID to the recipe, you have to click on **Apply to yellow setpoint**. The data are transferred from the computer to the automate of the system and from the yellow column to the black column Please double check that the number in the yellow/white column and in the black column are the same, if not reselect de number in white column and click on **Apply to yellow setpoint** a second time.

Then click on **Exit** to come back to the **Main Menu.**
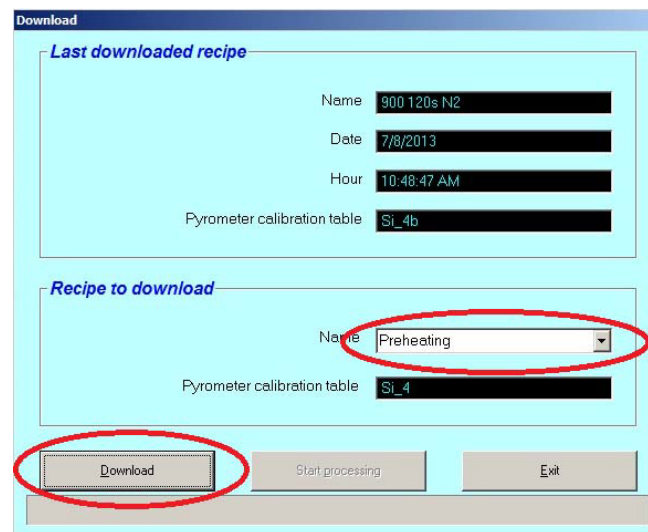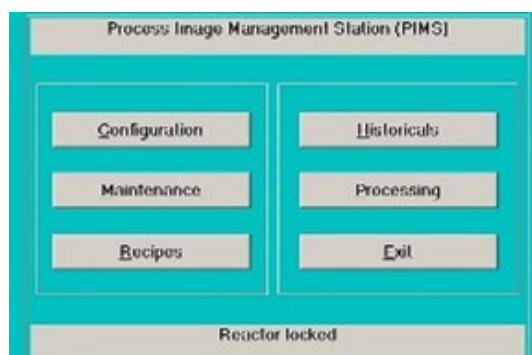
HOW TO USE THE SYSTEM (3)

III. Start a recipe

1) First, if it's not already done, you have to switch on the system (green button on the front face) and load your sample in the chamber.

2) In the **Main Menu** window, click on the **Processing** tab.

3) In the window **Download**, you select your recipe or **600_TC.REC** in this example (Qualiflow Therm / User_Examples / Recipes / 600_TC.REC) and click on **Download** and then on **Start Processing** and wait for the message **Load sample** and at last click on **OK** to times.
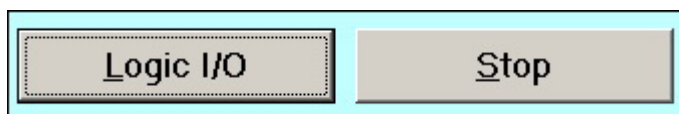

At the end of the run, a window is automatically open to save the temperature profile and other process data. You can save them in your directory **Historicals**. there is also an automatic cooling down routine during 6 min.

Then, you can either load and run a new sample or logout in the PC zone 3 to switch off the system.

HOW TO USE THE SYSTEM (4)

IV. TC issue

The contact between the TC and the sample is very critical. Due to the handling of the samples or due the normal aging the TC, the quality of the contact can be insufficient and in this case, you get lots of oscillation in the power applied on the lamps (yellow curve) as you can see on the figure on the left (on the right a normal behavior). In this case, click on **Stop** to abort the recipe.

Reposition the TC and restart the run. If the problem is not solved, please contact CMI staff for a TC change.