1st Assignment. Tubular Manuf. without Transportation

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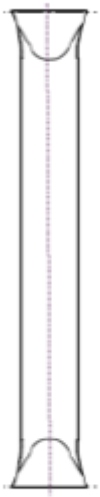
1. VSM and explanation

We start with an storage of the tubular element.

Raw

Then we do the first process that consist of pressing the endings of the tubular element. That it is done on a first workstation.

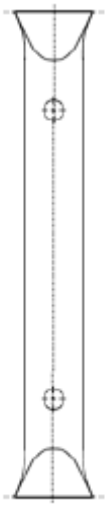


Phase1

At the end of the first action, we storage the modification on a new storage section. In the instructions it says that this storage is moved from workstation one to two, that are separated 2 meters. For the FlexSim model, for this first assignment the teacher specified

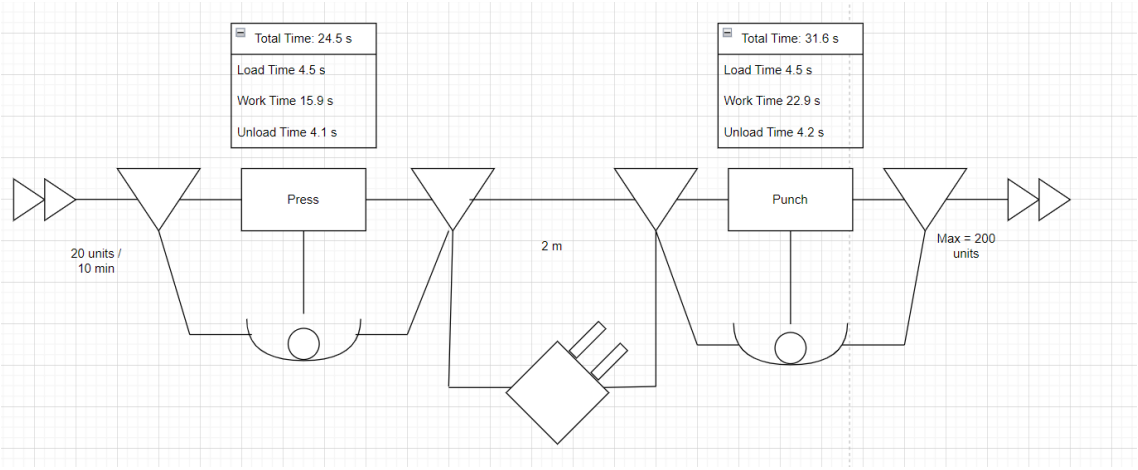
not to used transportation, so we put a storage between the two workstations, without a forklift to move it.

Then we do the second process, on a new workstation, which consist of punching the same endings of the element.



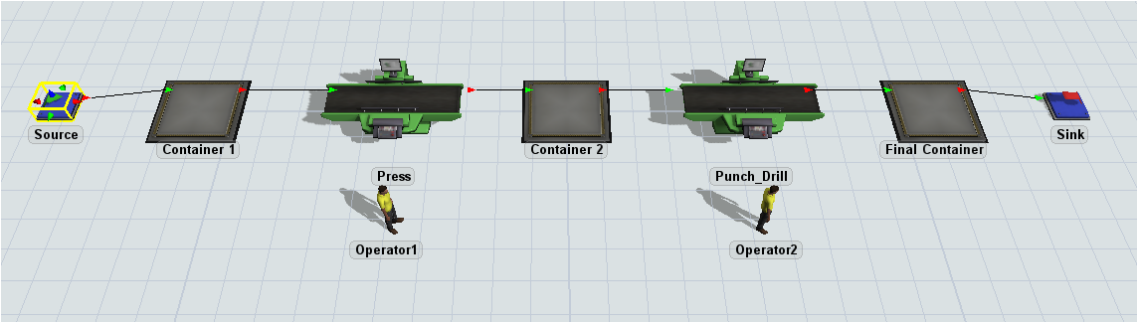
Phase2

When finishing that process, the final product is unloaded on a new container. When the container is filled, it is moved to the next section.



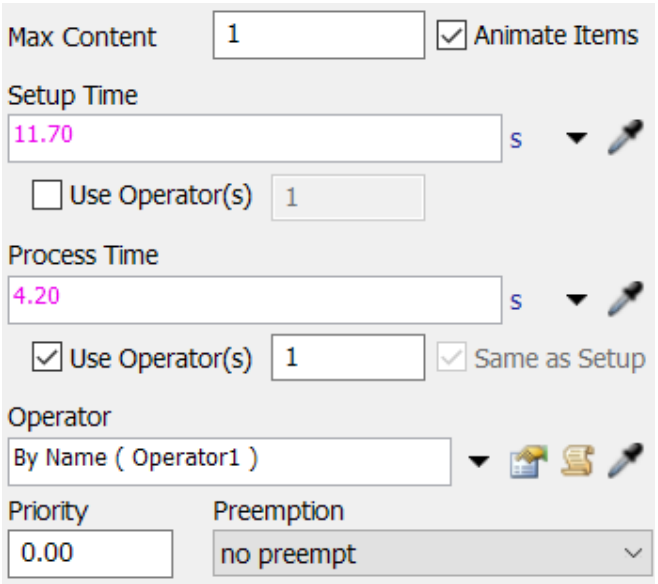
2. Explanation of the FlexSim Model

We use the VSM above to create the FlexSim model.

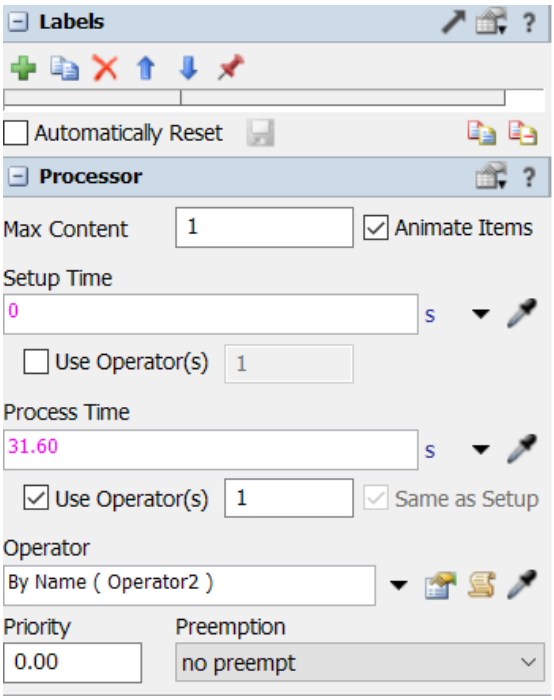


On the different process we put a process time that is the result of the added times on the statements, or we can separate the operator time (both are correct for this case). And we engage the operator to the process.

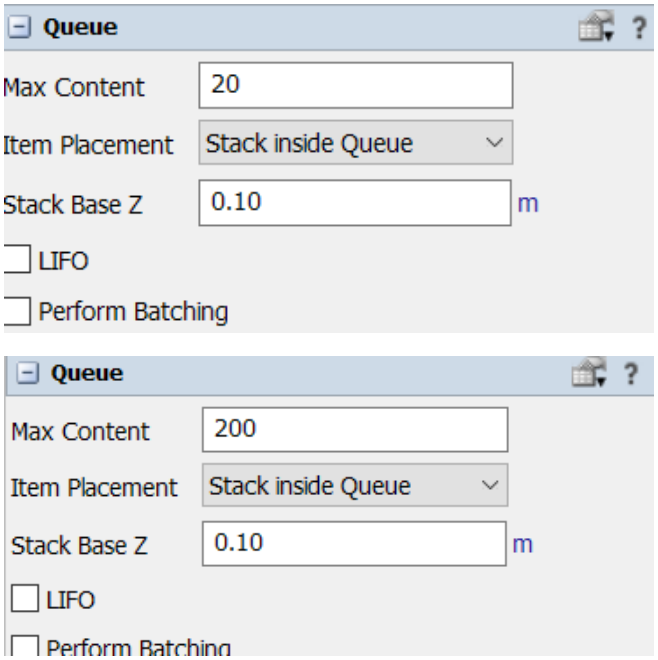
For the first process, pressing:



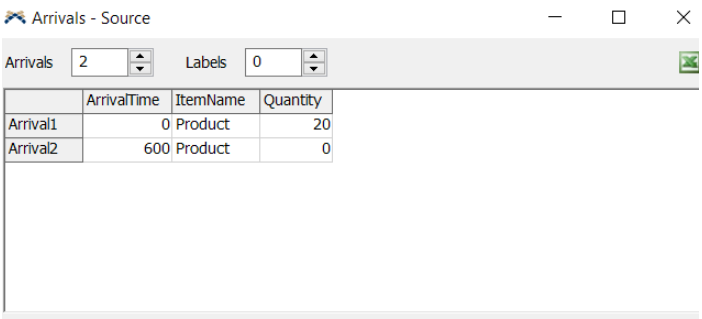
For the second, the punching:



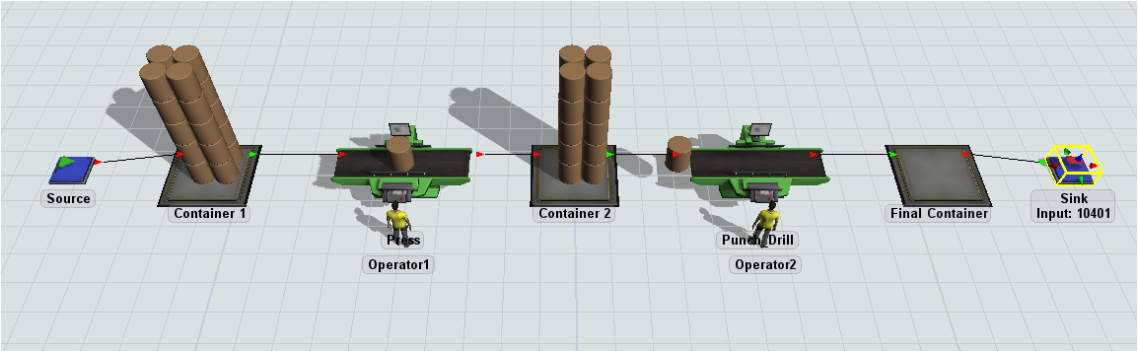
Also, on the storage containers we set a maximum of 20 and 200 on the last one.



To follow the 20 units each 10 minutes we need to schedule the arrivals:



If we simulate the process, we can see the following result:



For the model with transportation, we have no add an additional container between the two process.