

Market Driven Systems (FRTN20)

Batch Control. Exercise 3

Last updated: March 2010

1. Explain what a batch system is. What are the typical characteristics of a batch system? Give two examples of batch systems.
2. Batch processes can be classified according to the number of products they can make and the structure of the plants. Explain.
3. How many units does the process cell in Figure 1 contain? What are the equipment modules and what type are they (stand-alone or not, exclusive-use or shared-use)?

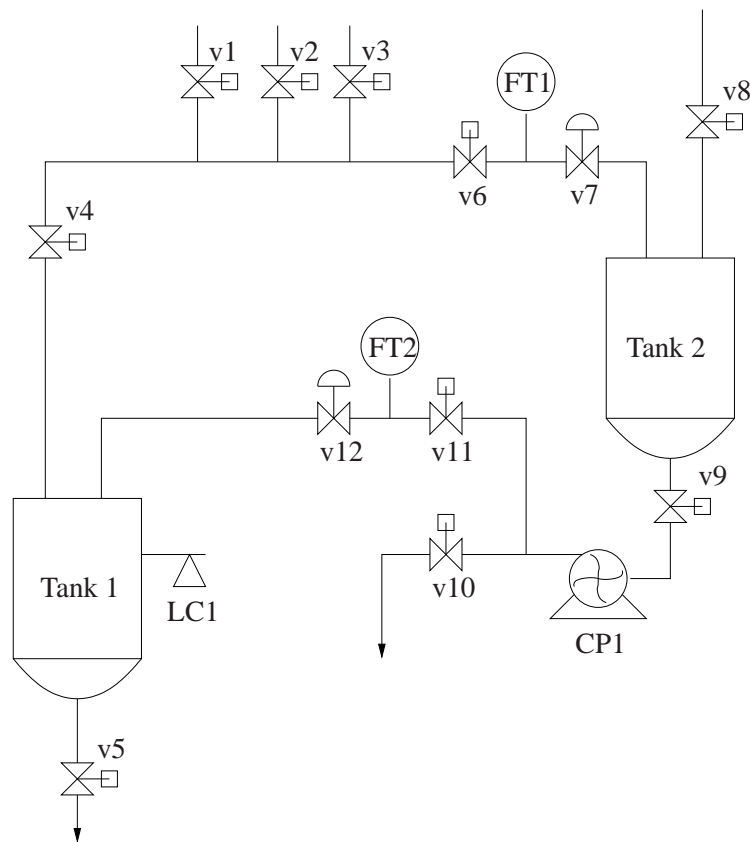


Figure 1

4. The batch recipe is fundamental in batch control.
 - a. What type of information does a recipe contain?
 - b. Explain what general, site, master and control recipes are.

Control Recipe Procedure

Equipment Control

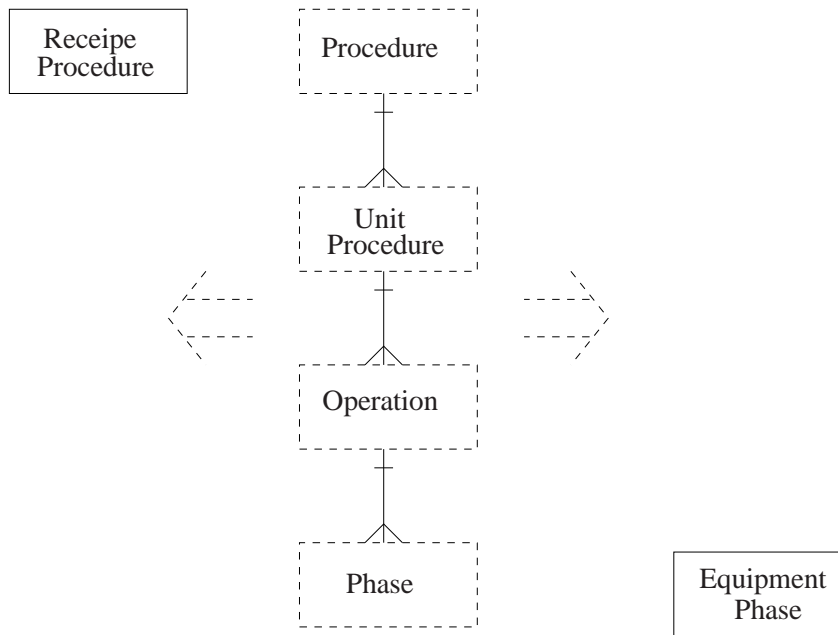


Figure 2

5. ISA 88 offers large flexibility with respect to at which level the control recipe should reference the equipment control. This is illustrated in Figure 2. Explain what Figure 2 shows. What is the most common configuration used in industry?
6. Get started on the preparations for lab 1. Consider especially preparatory exercises 5.4 and 5.5, which will get you familiar with grafchets and the JGrafchart language.