



Crystallizer Questionnaire

General Process Questions:

- What is the product being crystallized?
- What is the product: heat of crystallization, specific gravity, heat of reaction if a reaction in crystallizer produces crystals, specific heat capacity?
- Is solubility data at various temperatures (solubility curve) available for the solute/solvent system?
- What is the feed: flowrate, temperature, composition, physical properties?
- What process produces the feed stream?
- What is the desired recovered water purity?
- What is the expected or necessary form of the product solids?
- What is the crystal shape? Product size required?
- Is a de-watering or drying process required?
- Other than water, are other volatile solids or liquid present (e.g., ammonia, H₂S, etc.)?
- Are there solid contents present that have value and should be recovered if possible?
- Are oils or other organic compounds present?
- What, if any, regulatory requirements to be met?
- If plant steam is used, what are the required condensate return temperature, pressure and quality?
- If the process is thought to be unique, complex, or otherwise technically difficult, laboratory or pilot work may be prescribed. Are samples available?

Installation Site Information:

- Is the system for an indoor or outdoor installation?
- Is it an existing or new facility?
- What is the location and elevation of the site?
- Are there space limitations? Especially, what is the height limitation?

Equipment Questions:

- What is the expected Whiting equipment supply scope? (Most often, we supply vessels, pumps, piping, control valves, manual valves, and instruments). We can provide major equipment only or skidded systems.
- What materials of construction are expected to be used? Is there materials selection experience with the intended feed stream, especially at boiling temperature and increased concentrations?
- Are standard suppliers' specifications acceptable or are more stringent or special specifications to be used for valves, pumps, vessels, instrumentation and painting?

Proposal Questions:

- Is this to be a budget quote or firm quote?
- When is order placement scheduled?
- What is the required delivery date?