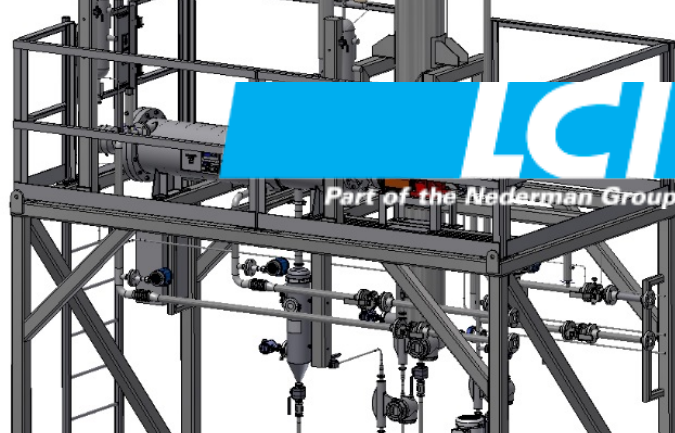


Pharmaceutical

COUNTRY: USA

PRODUCT: LCI Horizontal Thin-Film Evaporator

KEY BENEFIT: High concentration of heat sensitive product



Continuous API Concentration

Problem:

Client needed to scale-up from batch R&D lab equipment to production scale evaporation for a new facility. Upstream processing purified an active pharmaceutical ingredient (API) via a continuous chromatography system. Evaporation needs were two-fold: (1) concentration of the highly dilute, temperature and oxygen sensitive API, and (2) maximize solvent recovery for recycle.

LCI Solution:

Testing: Client tested at LCI's Charlotte, NC pilot facility. From test data LCI, was able to prove thermal history and concentration of the product and scale up to a production size evaporator.

Customer attended testing generates product qualification samples, commercial design scale up data, and confirmed operating conditions.

Process Design: LCI horizontal thin-film evaporator design allows for high overhead split. A specially designed condenser minimizes solvent losses to the vacuum system reducing raw material use.

Mechanical Design: A 3D image of the skid design was provided for incorporation into the entire facility 3D design ensuring proper fit of connections points and expediting the onsite the installation process.



1m² LCI Horizontal Thin-Film Evaporator Skid System – Evaporator Model LHSE-0100

Results and Comments:

Qualification trials were successful. Evaporators are able to distill more than 99.5% overhead. Customer is looking at other applications where thin-film or short-path evaporation may be a solution to their processing needs.