Measuring Level of Condensed Milk in Evaporator

The Application
Milk, in the final stage of a multiple effect evaporator, has reached about 48% solids. The condensed milk runs down the walls of the last evaporator and is emptied through outlet piping in the bottom of the vessel.

The Problem
It is important to control the level of the milk in order to keep a constant head pressure and avoid pump cavitation. The vessel is under a varying vacuum, making reliable readings from pressure or sonic level measurement technologies difficult to achieve.

The Solution
AMETEK Drexelbrook installed an RF continuous transmitter in the outlet piping of the evaporator. The transmitter continuously monitors the level of milk in the pipe and controls the pump speed to avoid running dry causing cavitation and possibly damaging the pump. Also, if the pump cavitates, air pockets form in the milk upsetting the downstream density measurement, which is used to control the evaporator temperature and product quality.

Benefits
• Eliminate Pump cavitation.
• Ensure constant milk supply to density meter.
• No routine maintenance required. Install it and forget it.

*Consult factory for higher temperature of pressure.

Typical Uses:
- Continuous Level
- Inventory Management
- Point Level
- Overfill Protection
- Waste Management
- Regulatory Compliance