



## **DOUBLE BACKER CONDENSATE RECOVERY. SPP**

Digital steam pumps, for condensate recovery, in the hot plates sections enable condensate recovery in closed circuit with free pressure regulation in each Hot Plates Section.

Electro-pneumatic steam pump operative is simple:

When maximum level of the tank is detected by the level control, the injection valve (VI) opens and pushes with life steam the condensate through a check valve to the high pressure condensate recovery unit. This injection cycle lasts around 5-10 seconds and the filling cycle 3-7 minutes (depending on the Hot Plates Section and the regulated pressure, production speed and other parameters).

Right after the injection cycle (which lasts 10 seconds), the recipient or tank is totally emptied, and then the decompression valve (VD) opens for 5 seconds in order to decompress the tank and start again a new filling cycle. The tank is filled with condensates coming from the corresponding hot plates sections.

Furthermore, there is a degasification spiral (spiral n° 25) that continuously allows the incondensable gases deaeration.

As described above, the cycles in the condensate recovery system with electro-pneumatic steam pump are as follows (estimated time may vary from plant to plant):

- First cycle: Filling of the recipient, lasting for 3 to 7 minutes.
- Second cycle: Pumping with life steam, lasting for 5 to 10 seconds.
- Third cycle: Decompression, lasting for 5 seconds.
- The complete cycle resets

The system has a VE valve to deviate the condensates from the hot plates sections towards the atmospheric condensate recovery, done at night when the steam supply to the corrugator is closed, or early morning during start ups, when the minimum pressure has not been reached yet.

The whole process is digitally controlled through a PLC. Components involved (check valves, VI, VD, spirals) are high-quality, free of maintenance, converting an apparently complex system - as it consists of several condensate recovery units - , in a user-friendly, free of maintenance system, erosion less in time.

Further details on Baviera SPP are explained in the following video:

<http://www.rbaviera.com/SPPmovie.pps>

