



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

The use of steam pumps for condensate recovery in the hot plates sections makes compatible condensate recovery in closed circuit with totally free pressure regulation in each Hot Plates Section.

The operation of an electro-pneumatic steam pump is very easy:

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

Just after the injection cycle (that lasts 10 seconds), the recipient or tank is totally emptied and the decompression valve (VD) opens during 5 seconds in order to decompress the tank and start again a new filling cycle, filling the tank 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.

Therefore, the condensate recovery system with electro-pneumatic steam pump works as per the following cycles (these times may change from plant to plant):

- Cycle n° 1: Filling of the recipient, lasting for 3 to 7 minutes.
- Cycle n° 2: Pumping with life steam, lasting for 5 to 10 seconds.
- Cycle n° 3: Decompression, lasting for 5 seconds.
- The complete cycle starts again.

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

The whole process is electrically and digitally controlled by a PLC. The materials used (check valves, VI, VD, spirals) are of good quality and with no need of maintenance, so that a system which is apparently complex - as it consists of several condensate recovery units - , is indeed a system free of maintenance and without erosion because of time.

You can find further information on Baviera SPP, in the following explanation video: <http://www.rbaviera.com/SPPmovie.pps>

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