

EPM steam application

Steam injectors are placed in correspondence of the lowest part of the side of the mixer basically for the following reasons:

- 1) Improved thermal efficiency. The heating process takes place as steam comes in contact with the materials at a lower temperature. Most of the energy involved in the heating process is represented by the steam enthalpy of condensation (latent heat of condensation), which is released by steam as it turns into condensate. Steam is directly injected inside the bulk of the materials during the mixing phase, thus increasing the percentage of steam transformed into condensate before escaping from the ceiling of the mixer. This way the energy carried by steam is exploited in a quite ideal manner and heat losses and waste of steam are minimized.
- 2) Temperature uniformity of the batch. Promoting an intimate contact between condensing steam and materials to be heated during the mixing phase allows a more consistent and uniform temperature of the whole batch.
- 3) Injectors placed under the level of the material being mixed limits incrustations and material being spattered around.

External steam pneumatic injectors (example application)



Internal steam ports at the mixers base

