

EKA Chemicals Ltd, in Blackburn, Lancashire, has used High Efficiency Clayton Steam Generators since 1984.

The Blackburn factory is part of the Paper Chemicals Division of EKA Chemicals Ltd and supplies the world's paper industry with chemicals, used mainly in the wet end section of paper manufacturing, such as sizing agents, drainage aids, retention aids or tissue softeners.

Sizing agents improve paper quality and performance on printing machines and are manufactured from rosin or synthetic wax which is treated in a number of different ways.

Steam is a vital part of the manufacturing process. It is used at the front end of the operation to melt solid rosin and wax so that it can be pumped to treatment vessels and machinery. Steam is also used in various stages of the process to maintain correct



treatment temperatures.

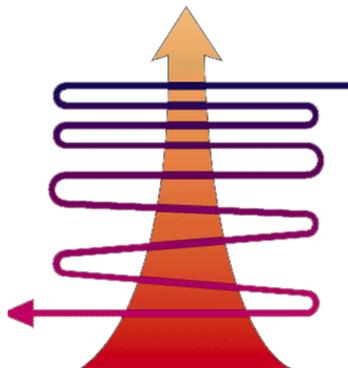
Terry Pike who is Company Engineer at EKA Chemical Ltd said *“we rely on the Clayton Steam Generator for the total production of the plant and the rapid response is ideal for coping with our varying steam demand.”*

The reason for the rapid response time of the Clayton



Steam Generator as well as the high efficiency is due to the once through, forced flow helical coil design.

To produce steam in a Clayton Steam Generator a positive displacement diaphragm pump forces water through a single



continuous coil which is heated by means of a gas or oil fired burner. A mechanical separator at the exit of the coil is then used to effectively separate the liquid and vapour to provide high quality steam which is at least 99.5% dry saturated.

The gasses from the burner pass upwards through the coil and the water being heated travels in the opposite direction in a counterflow pattern which leads to optimum heat transfer.

Safety has also been a major factor that has contributed to the success of the Clayton Steam Generator.

Due to the relatively small amount of water contained in the steam generator it is not possible to have a steam explosion. At EKA Chemicals the Clayton Steam Generator operates fully automatically in an unmanned boilerhouse and is started by means of a time switch at around 4 am. The Clayton Steam Generator can supply 4500 kg/h at a pressure of up to 16 barg.

EKA Chemicals is part of the Akzo Nobel group and one of the world's leading manufacturers of bleaching and performance chemicals for the pulp and paper industry. EKA has 2.700 employees worldwide and production at 36 locations in 19 countries

Akzo Nobel is the largest global paints and coatings company and a major producer of specialty chemicals.