

Q8 Oil Blending Plant, in Antwerpen-Kiel has been using High Efficiency Clayton Steam Generators since 2001.

Their current steam requirement is met by 2 Clayton Model SEOG-254 Steam Generators that supply high quality steam to essential heating processes for blending and storage in different areas of the complex.

The Antwerp Blending Plant is part of the Lubricants Division of Kuwait Petroleum International and supplies the world's industry with over 600 grades of finished lubricants, base oils, process oils, extracts and waxes.

Finished lubricants are mainly used for automotive and marine applications such as hydraulic, transmissions, gear boxes, turbines and for other industrial purposes. End users range from original manufacturers in the automotive sector to special applications in all parts of industry including paper mills and metal rolling mills.



Steam is a vital part of the manufacturing process and provides heating in various stages of blending and to maintain storing tanks at the correct temperature.

The Clayton Steam System supplies 7500 kg/h at a pressure of 7 barg.



The high powered Clayton Steam generator is the world's most compact, efficient, responsive and safest means of producing high quality steam.

The reason for the many advantages of the Clayton design is due to the once through, forced flow helical coil principle.

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 (or a combination of both as in the case of Q8). A mechanical separator at the exit of the coil then effectively separates the liquid and vapour to provide high quality steam which is at least 99.5% dry saturated.

The heating gasses from the burner pass upwards through the coil and the water being heated travels in the opposite direction in a counter flow 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 Q8 the Clayton Steam Generators operate fully automatic in an unmanned boilerhouse.

Eric Vindevogel who is Engineering Manager at Kuwait Petroleum Belgium Blending Plant Antwerp said *"we rely on the Clayton Steam Generator for the total production of the plant. The high efficiency, easy and safe operation and the rapid response are ideal for coping with our varying steam demand"*

