Case study 228

Water company's digester kept functional

The average annual electricity bill for a water treatment site is around £1million, representing one of the largest outlays for companies operating in this field. They are therefore naturally interested in offsetting this cost and can do this by generating their own electricity via anaerobic digestion. This process involves heating sludge to encourage bacteria consumption before creating a biogas that converts heat into electricity.

So when one of the UK's most prominent water firms encountered a problem with one of their boilers, a replacement was required immediately to ensure the digester's continued functionality. Without this, the system could not work at full capacity and this meant that sludge was too cold to produce gas. This in turn led to a backlog of sludge that could not be processed, but there was no scope for storing additional quantities or transporting it to other sites.

An Andrews technician visited the site to help propose a solution which involved recommending the hire of a 500kW boiler and finding a suitable place to position it. This was then connected to the client's flow and return via PN16 flanges and heated the sludge at temperatures beyond 32°C.

By delivering substitute equipment within a few hours of the initial enquiry, we helped a major customer sustain an electricity conversion process without any lengthy delays. This temporary solution afforded them the time to source a permanent unit in its place, with our boiler remaining on site for two months in total.

Nominal heating duty 500kW
Power supply 415V 3ph 50Hz Run 10A
Plug type BS4343 5 pin 32A
Noise level 45dBA @ 10 metres
Weight 3,500kg
Dimensions (mm) 3000 x 2400 x 2600
Fuel type Gas oil/natural gas
Max fuel consumption 60l/h
LPHW connections 75mm (3") storz coupling
DHW connections 50mm (2") storz coupling
DHW recirculation connections 25mm (1") storz coupling
Natural gas connections 2" BSP coupling

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