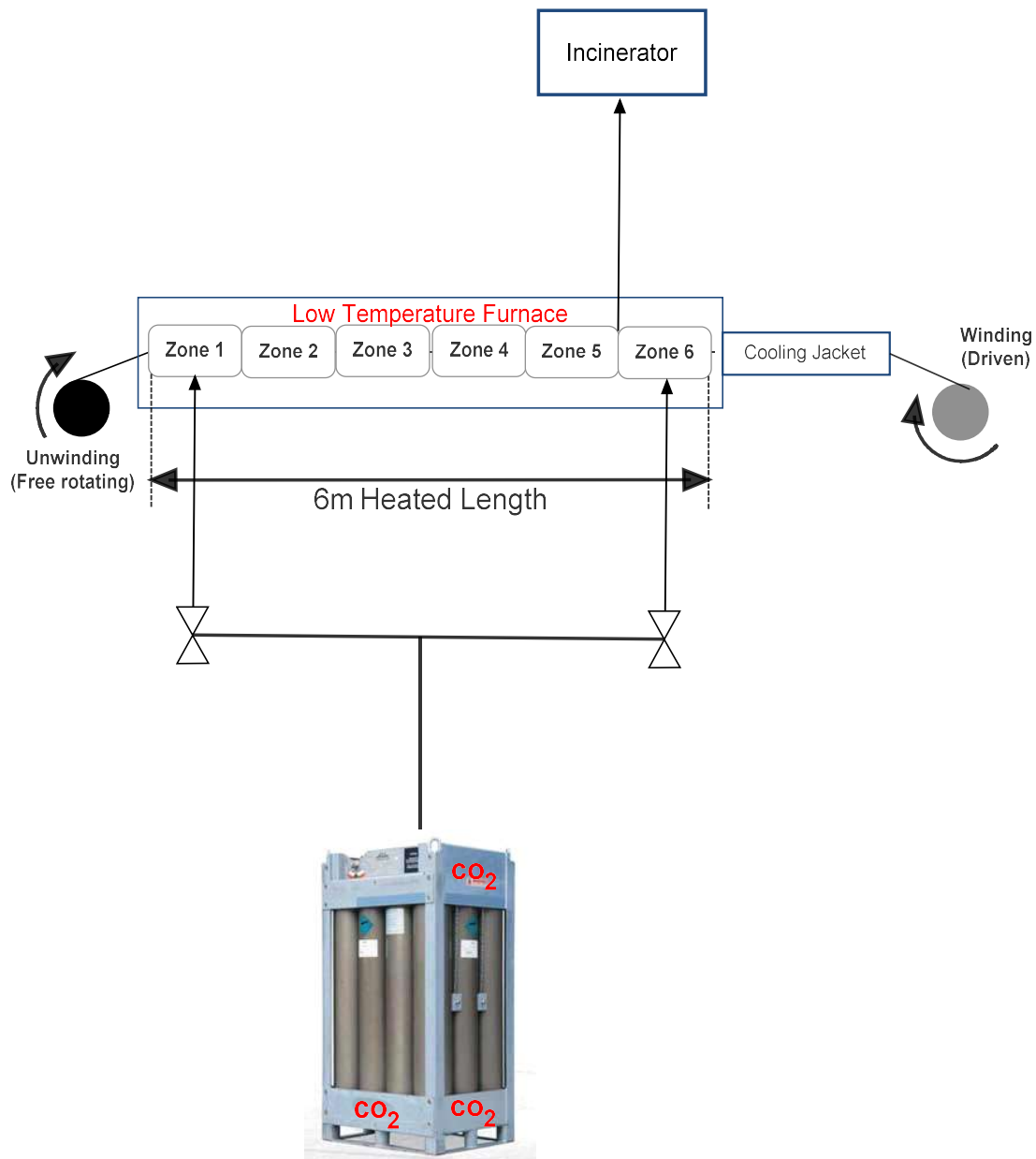


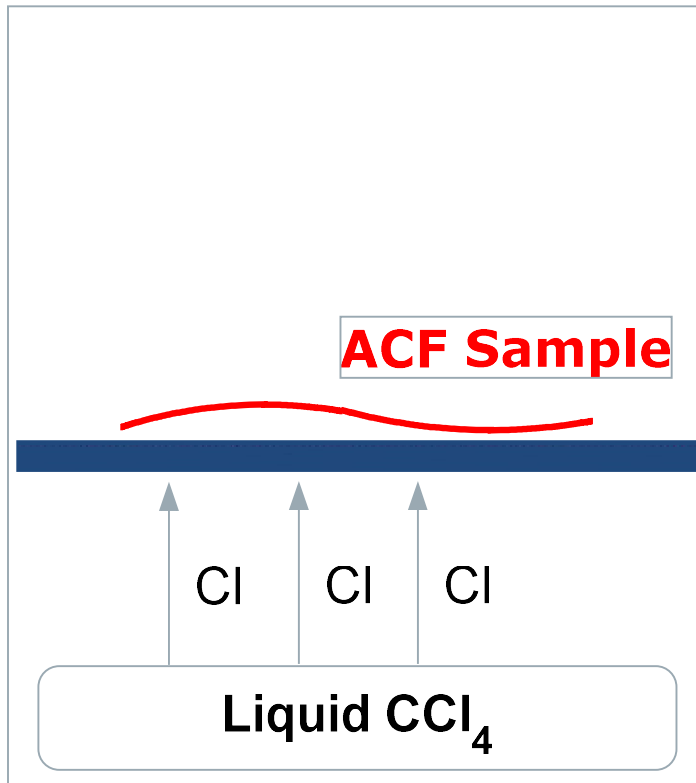
Activated Carbon Fiber


Trials were made using a woven Panox fabric (Oxidized textile precursor). The trials were conducted in a standard low temperature furnace (LT) with a steel muffle. The muffle has 6 heated zones of one meter length, maximum design temperature up to 1000 deg C. Speed of the trials was 2 m/min, a residence time in the muffle of 180 seconds.



Instead of using nitrogen, carbon-dioxide (CO_2) was used to provide the activating atmosphere. The temperature at which activation occurs was found to be 850 deg C. Trials were performed. The degree of activation was assessed using a carbon tetrachloride (CCl_4) pickup test.

Desiccator or Humidity Cupboard



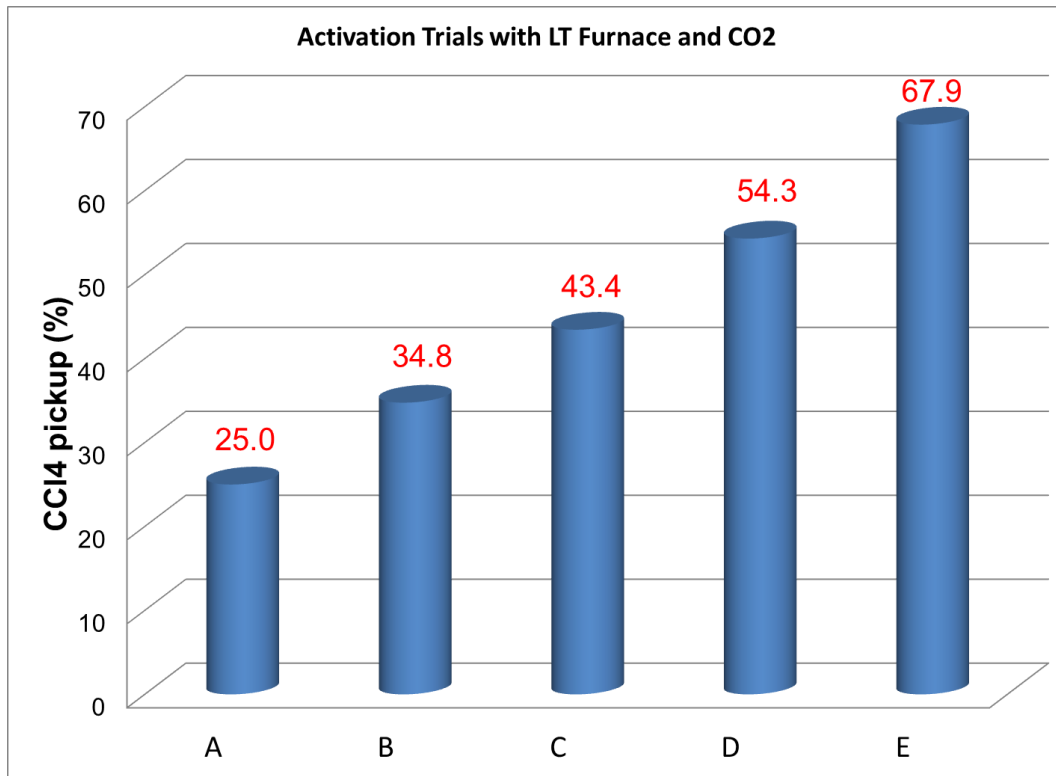
 Stainless steel grid
(to hold the sample)

- The sample is conditioned and weighed.
- The sample is placed in the desiccator or humidity cupboard in a CCl_4 atmosphere for 24 hours.
- The sample is removed and reweighed. The increase in weight is expressed as a % of the original weight.

The greater the degree of activation, the higher will be the transfer of chlorine from the liquid to the ACF sample.

The following trials were performed and evaluated :

Trial	Zone 1 (deg C)	Zone 2 (deg C)	Zone 3 (deg C)	Zone 4 (deg C)	Zone 5 (deg C)	Zone 6 (deg C)	CCl4 pickup %
A	450	525	600	675	750	850	25.0
B	450	525	600	675	850	850	34.8
C	450	525	600	850	850	850	43.4
D	450	525	850	850	850	850	54.3
E	450	850	850	850	850	850	67.9



The results show that the longer the residence time at 850 deg C, the more activated became the fiber.

Vince Kelly