

COURTAULDS GREENFIELD 1935 - 1985

I went to work at Courtaulds in 1964 for £15 per week, my previous job was in Holywell Textile Mill where I was getting £10 per week. Courtaulds Greenfield Rayon Works was the largest employer in the area, at its peak there were 3000 employees, when it closed in 1985 there were 1000 employees

Below I explain the whole process of manufacturing at Greenfield, from pulp to artificial yarn, as we follow a batch through the system. The process used wood pulp which resembled thick course paper about the size of a 1/2 x 3/4 metre oblong, these came in bales of 200 kilos from Scandinavia, a cheaper product came from South Africa which was more extensively used for financial reasons.

STEEP FLOOR

When I started the pulp came in by rail, it was unloaded and stacked in the pulp shed which held 1000's of bales. It would then be taken by truck to the Steep Floor where it was weighed into batches of 250 kilos, they would then be taken by truck to the steep presses, the pulp was placed into a large container which was filled with caustic soda and the pulp was steeped in the caustic soda, it was then pressed between the plates to extract all the excess liquid, this part of the process took approximately one hour. The process would be repeated with another batch every hour.

PHLIEDERS

The pulp was then dropped into a grinding machine called the phlieders, which had large cutters inside. When the pulp came out of the phlieders it was called crumb as it resembled breadcrumbs, the crumbs were emptied into two large bins which would be moved by truck to the merserizer room and left in this temperature controlled room for 24 hours until the correct temperature was reached.

CHURNHOUSE

After 24 hours it was taken by truck to the top floor of a three storey building this was known as **running up**. The crumb was emptied into a chute in the floor, which fed into the churns on the middle floor where there were 63 churns altogether, two bins would fill each churn they would be injected with the chemical CS₂ (this is what gave Courtaulds its famous smell) this process took approximately 2 hours. The process would be repeated with another batch every two hours.

MIXING ROOM

The batch would be dropped from the churns into the mixing room down below. The mixers would have been pre charged with a measured amount of caustic soda and mixed with the batch. When mixed the batch would be known as viscose in its raw state. This process would be repeated with another batch every two hours.

CAVES

The viscose gets pumped into adjoining building which was called the caves as there was no natural light. This area is also where colour would be added, if the customer had requested it, black was the most popular colour, blue and white were other colours used.

FILTERS

The viscose would be pumped into tanks then would go through the filtration plant into separate tanks then filtered for a second time and then at the third filtration, a vacuum would remove all the air from the viscose, as this air would cause a problem in the spinning process and cause the yarn to break. The viscose now continues to move through a pipe system.

Cloths would be used in the filtration process to collect the impurities. Two of these cloths proved to be very useful to the housewife of the day (unused of course). One was called swansdown this was cream in colour and used for sheets as it was very soft like the yellow dusters we use today. The second was calico, a thin cotton cloth this was used for tea towels, both these cloths were used in the secondary filtration.

SPINNING

From the caves the viscose is pumped into one of the 10 spinning machines where it gets forced through a 40 mm jet, each jet has as many as 500 holes in them, as the viscose gets pumped through, the jets are immersed in a spinning acid where the viscose instantly turns into fibre, as the fibre moves along the machine, it becomes known as tow.

WASH

The tow drops through into a cutting machine which cuts it into 50 mm lengths known as staple, the staple drops into the wash where various chemicals are sprayed on the staple to neutralise the spinning acid, it now flows on a conveyor belt and leaves the wash.

DRYERS

The staple reaches the dryers where it goes through a 25 metre long heated machine where as the name implies the staple is dried and comes out the other end resembling a fleece from a sheep. The fleece is placed into a baling press, given a batch of 250 kilos of finished product.

DESPATCH

The product is trucked into the despatch and then distributed all over the world.

Looking at the site today the Pulp shed would be by the Greenfield dock then 200 yards towards Flint where Kingspan now stands would be the despatch.

INFORMATION

- The CS₂ was brought into site by the firm of Cowburne and Cowburne from Manchester in their large tankers, a local man Ken Smith drove these tankers.
- The acid used on site was made in No 4 plant. There was an acid recovery plant
- There was a soda farm on site where caustic soda was made.
- There was a CS₂ recovery plant.
- The last 5 years they did not use the recovery plants and all fumes were dispersed into the atmosphere, this would not be allowed today.
- During the process if mistakes were made the material lost would be dumped in the cob adjacent to the River Dee. Lots of toxic material has been dumped over the years, there was a CS₂ leak into the ground this was dug up and dumped on the cob, the council allowed sub soil to be

dumped on top of the waste and the sign which stated DO NOT ENTER DANGEROUS CHEMICALS was only removed off site at the end of 2017.

- There was a canteen, offices and a laboratory on site.
- There were 8 groups of men to cover the 24 hour process, 4 groups in number 1 and 4 groups in number 2 , which worked out to a 42 hour week. You would work a 3 shift system , morning 6am - 2pm, afternoon 2pm - 10pm and nights 10pm - 6am they were were 8 hours long, you would get a half hour food break and a 15 minute tea break.
- Number 1 is where the bulk of the south african pulp went and number 2 is where all the best quality pulp from scandinavia was used to make 'vincel' 'polyester', a better quality product.
- I left Courtaulds to start up my joinery business with the £2450.00 redundancy money I recieved at the end of 1980 after 16 years and one strike later. The strike was manipulated by courtaulds, as they had too much stock, the strike lasted 11 weeks which was a great hardship to us, as we owned our own house and did not owe any money therefore we were not entitled to any help.
- Outside the Steam bottling plant in Greenfield Valley are two examples of machinery a churn and a mixer