



Wet (blue) behind the ears— the culture shock of joining the leather industry

Most tanners seem to have been lured into the leather industry in their formative years—those that stay the course have little inkling of just how strange it can seem to a newcomer. Most tannery engineers, however, will like myself have learnt their trade elsewhere, and the peculiar blend of chemistry, production engineering and handicraft that is leather manufacture can be disturbingly strange to those brought up in the certainties and logic of mechanical engineering.

My initiation into the leather industry, some two decades ago, was in a sheepskin tannery in the heart of the English countryside. There had been a tannery there for centuries, and it showed. The factory buildings ranged from some modern, modular concrete buildings to ancient weather-boarded constructions that would have graced a film set for a Dickens novel. The production followed a vague flow line through the site, but with several detours and back-doubles along the way. My predecessor as tannery engineer had retired after forty years of service, and appeared to have conducted all engineering business from a wooden desk in the corner of the engineer's

workshop, which was a lean-to on the side of an ancient barn. The workshop resembled a cross between a smithy, a gardener's shed and a junk shop, but the suggestion that it might be cleared out was met with horrified apprehension by my trusty workforce; apparently, there was a specific place for each and every tool and spare part—under the benches.

When I ventured out into the tannery to see exactly what I had let myself in for, the first thing that struck me was the rich, varied and pungent selection of aromas that hung about the place. Having come from building materials manufacture I was used to messy processes, but the smell of a tannery was one of the first shocks to the system. A quick look around the tanyard also showed what this malodorous atmosphere did to steel and concrete, with all structural steelwork thickly furred with rust and the etched floors resembling a relief map of the Thames Estuary. Clearly, corrosion was the tannery engineer's principal opponent in the trench warfare of maintenance. There was a wide and varied assortment of strange process vessels, in wood, fibreglass and even stainless steel, and some fearsome looking ➤



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Sloccomb machines (above) and staker (below)



devices that I was told were “fleshing machines”. I could hardly believe that these devices could be tolerated by a factory inspector—their whirling blades and trap-like mechanism seemed custom-built for the removal of fingers. Lubrication was by thick, tarry grease that seemed to be on virtually every part of the machine except those actually needing it, while the operators seemed to be kitted out for fish-gutting on the deck of an Arctic trawler, which would have been an altogether more wholesome pursuit. Clearly not a lot of tender loving care was lavished on these machines, since the first requirements for maintenance appeared to be a high-pressure hose and a strong stomach.

Moving on, I made the acquaintance of the sammy machines. Who was Sammy? the inventor, perhaps? Like the fleshers, these too appeared specifically designed to damage the operator’s hands, but at least they were a bit cleaner, and I could see that they were built with cast frames that would have warmed the heart of Brunel. I began to realise that the ancient, tattered

Turner manuals on the shelf in the workshop were working documents, not museum relics. This was pre-war engineering with a vengeance—massive frames, ponderous shafts and rollers, bronze bearing bushes—but surviving, as I was later to realise, because it was simple, fit for purpose, and incredibly rugged.

More engineering delights soon revealed themselves. Degreasing machines for woolskins—commercial dry cleaning units adapted to run on flammable white spirit, and with a vacuum distillation plant to recover it that surely must have been designed before 1900. The degreasers ran to a programmed sequence from a punched card, like a pianola, and were the principal cause of the tannery electrician’s grey hair and bad temper.

The ‘dry end’ of the tannery, thankfully, contained some machinery that was positively modern, but museum pieces still lurked here and there. When shown the Sloccomb stakers, or ‘crocodile’ stakers as they were commonly known, I honestly could not understand how people could be persuaded to operate them—I later concluded that the essential requirements were good hand/eye co-ordination and a complete lack of imagination. I still have the cast brass maker’s plate from one of those fearsome devices, proclaiming it to have been built by F.F.Sloccomb & Co. Inc. of Wilmington, Delaware, to their US patent of August 4th 1891.

In the finishing department, I began to realise the demands made of my small engineering workforce. The woolskin shearing machines, which cut the wool of the ‘double face’ sheepskins to an even nap, were machines of great precision despite their antiquated design. The slightest imperfection in the cutting edges of the spiral bladed cylinder, or the ledger blade against which it was ground, would produce a line in the wool surface and a rejected skin. They were razor-sharp, and tested by cleanly cutting a single ply of tissue paper. Adjusting and setting these shearers was a work of art, yet

the same mechanics who maintained them would also have to be prepared to work on their hands and knees in the muck and wet of the tanyard.

A final visit to the finished warehouse epitomised the contrasts I had seen in my first tour of inspection. In the centre of the floor was an electronic area measuring machine, while against the wall stood a Turner ‘pin-wheel’, an ancient mechanical computer for measuring area, of such fearsome complexity that even the famous cartoonist W. Heath Robinson, (who was known for his ability to ‘event’ and complicate mechanical devices) on visiting the Connolly leather works, was moved to say “I can’t improve on that, Mr. Connolly”. Both these machines were in daily use, side by side. Clearly, engineering in the leather industry was going to be an interesting business, and I had not yet begun to learn what some of these machines were supposed to actually do to the leather. That, of course, was another whole new ball game.....

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