

Impressions of Life as a Colliery Fitter

A Short History of My Own and My Colleagues' Achievements

I was born in Bridgwater, Somerset in 1943 and moved to Radcliffe in 1947 when my father was demobbed from the Second World War. I had always wanted to make things and I acquired the necessary academic qualifications to become a fitter at Nottingham Regional College of Technology. So I started work at the Cotgrave colliery as an apprentice fitter on the 1 of September 1960. [This was three years before coal production actually started.] Having lived in Radcliffe for 28 years, I moved to Cotgrave in 1975, when I got married.

Initial training for all apprentices took place at Hucknall Training Centre, a colliery next to Rolls Royce Airfield, where aircraft testing took place. During our breaks we were able to watch Lightnings doing test flights. If I remember correctly, Hucknall had a steam winder —not a deep shaft. We all had basic training in underground safety which consisted of testing the roof and setting and withdrawing old type pit props. We also did coal cutting the old fashioned way with a pick to undercut and then lever off lumps of coal. Mining trainees also whitewashed jumps of rock round the pathways on the pit head. However, one thing we didn't have to do was learn how to harness the wooden horse — they still used horses at Hucknall. [A wooden horse was just a model horse which was loaded with all the harness bits and pieces needed for the horses used to pull coal tubs underground. It served as a learning source for those who needed to know. Horses were not used at Cotgrave, being replaced by diesel-powered locomotives.]

It was a strange, dusty beginning to a fitter's life, having to bus in the early hours from Radcliffe to Nottingham, then Nottingham to Hucknall — then return in the evening. However, after basic training, life did become more interesting as we had the workshop to ourselves to learn the skills required of a fitter. What, you may ask, are these skills? They involved the use of both machinery and hand tools. We had Myford Super 7 lathes and learned about speeds, feeds and change wheels. These latter are what control the feed rate along and across the bed of the lathe. We machined a steel disc which was counter-bored to a set depth and diameter. A mating part was then machined so that the spigot was such a tight fit that it would not drop out when the structure was inverted.

Our hand tools consisted of files, hammer and chisel, hacksaw and marking out tools — ruler scribe, divider and calipers. A test piece, consisting of two plates, in one of which we had to mark out a six-sided (or whatever the instructor asked for) hole then make a second piece to fit exactly in the hole — and I do mean “exactly”! I had previously learnt all this, by the way, at Secondary Technical School in Nottingham so there was nothing new for me there. Anyhow, all this done, I moved on to the colliery itself.

At that time, it consisted of large tin huts, the sinking engines and the towers, which were a feature of the Cotgrave pit throughout its life. There was also a concrete-mixing plant (‘the batching plant’ we called it), a tin compressor house and the permanent buildings, then under construction. There was also a large quantity of cast-iron “tubbing” to line the shafts due to the water problem. The electricians had one tin hut and we fitters shared another with the blacksmiths, both huts being about the same size. I can't remember all the names but I do remember that Jack (bomber) Brown was the foreman blacksmith. In later years an amusing incident occurred with Jack — the blacksmiths used to heat a kettle for making tea in the hearth. For some reason (perhaps they had taken too long a break?) they upset Jack and he put the kettle under the pneumatic hammer and completely flattened it! In those days,

the shop had a pet cat that took a fancy to me and made a habit of jumping onto my knee during tea break.

And so to my first jobs. The tubbing used to keep water out of the shafts had to be sealed with lead sheets and these needed holes punching through them, using a hole punch and hammer. It was then that I discovered what happens when you miss the punch with the hammer — yes, you hit your thumb and it hurts like hell. You don't do it again in a hurry, believe me. Next, I was involved with fitting new steel pipework for all the various services required. 'Steam Leak' Radford was my fitter-in-charge, so-called because, at various places round the site, he had installed pipes with joints that leaked steam. His other nickname, by the way, was 'sweety'. I then spent three shifts working underground. My first job was to bolt up all the junction girders in the South Loco Road. The colliery had North and South connecting roads to Number 1 shaft and the main loco roads were being headed out beyond the loop roads, essentially parallel roads that cut back to the junctions. In those days we had to crawl between the roof which hung down like a female breast and the floor which came up. Needless to say, it all had to be reworked. Various methods were tried to hold the floor down. Where conventional arch rings were used, a lot of boring rods were lost while drilling holes, then cables that were supposed to be put in them. Close-spaced circular rings latterly then held up and solved the problem. Girders at the junctions were bent into 'S' shapes because of the extreme weight that they had to support. Following this, work consisted of repairs to broken-down machinery and making extensions to air and water pipes, as necessary, plus maintenance of the ventilation fan pipes for the headings.

In fact, a lot of time underground was spent doing nothing, once specific jobs were completed. It was boring to the nth degree — there was nowhere to go and we were not supposed to sleep (though we did!). During the last two hours of a shift we were desperate to sleep and we slept in all sorts of odd places, hidden from view.

Back on top, in the workshop, life changed considerably — there was so much that we needed to design and make for both underground and surface use. It was vital for us to master the use of all our machines; i.e. lathes, radial drills, slotters, shapers, milling machines, etc. These may not have been gigantic, like the variety that existed in places like Markhams but they were certainly not toys. The different Departments worked together — for example, we had to make and fit keys, essentially pieces of metal that held things in place, couplings to motors and gears to shafts. We would measure up the size of key required, then the blacksmiths would forge it to an accuracy of about 1/16" of an inch, then we machined it to an accuracy of 1-2 thousandths of an inch. Finally, the key had to be bedded so it could be hammered into place and locked in position. Structural fabrication or pipework would be taken to the welding bay for the arc-welding of the various parts that needed to be welded together.

It is strange how grown men coping with the often brutal lifestyle of coal mining can have odd weaknesses. One mate of mine was frightened of spiders, another of frogs. This latter I could hardly believe so, when I found out about it, I tested it. On this particular day I had to turn off the water supply valve that fed cooling water to the No 1 compressor. It was in a square brick manhole, the usual thing but at the bottom there happened to be a huge frog. I have no idea how it got there but I scooped it up and took him back to the workshop, as I knew my mate had been working near my bench. I kept the frog behind my back until I was close to B (?) and then showed it to him. I could not believe it, he was terrified and shot back, away from me with a look of horror. "Get it away, get it away" he shouted. The frog went back to a safe habitat and I learned a lesson about the strange things people can be afraid of.

On several occasions I was involved with accidents, two being particularly nasty, when serious injury had occurred. My own 'nasty' experiences were when I broke my left big toe and when I knocked the nail clean off my left thumb with a hammer (which I also broke in the process!).

We got up to lots of pranks with new apprentices. The blacksmith's bosh (?) was one of them, when they got too cheeky. The other one was the muscle-shooting gun.

Working Conditions

Generally speaking, working conditions varied from bad to tolerable! Underground working was bedevilled by dust, trip hazards, cramped conditions, danger from machinery and from strata falls. It was also sometimes extremely smelly! On the surface, conditions depended on where you happened to be working and on the time of year. The preparation plant (coal) was considered to be the punishment centre — if we temporarily fell out of favour with management, we might find ourselves doing overtime in the prep. plant on some filthy, awkward, though necessary job. It might be nearly acceptable in the summer time but it was bloody awful in winter. There was no heating whatsoever. The place was full of dust and sometimes swimming with slurry, if the plant machinery broke down. The surface workshops were alright, except, again, in winter because there was very little heating. The principle problem was with untidiness, the floor often being littered with materials or machines being stripped or the manufacturing of structures, girders, plate, pipework, etc. all over the place.

Work could be interesting during the design and manufacture of equipment for both surface and underground but might be boring when, for example, nothing could be done after the statutory examination on the winder had been done and the engines were at work. The latter part of my career involved looking after the winders and the setting of safety equipment. This involved signing the Mining and Quarries Book, a mandatory requirement, as also was N.D.T. (None-Destructive Testing) of drumshafts, brake gear, main gearboxes, and overwind gear train and shafting. There was, of course, periodic testing of the engines, brakes and safety equipment. This was done by the area testing engineers with their equipment for plotting speed and distance graphs. The test itself consisted of resetting the overwind trips to an artificial level. The engine would then be allowed to go into uncorrected overspeed at mid-shaft level, whereby the brakes would automatically be applied by the safety equipment. The braking of the engine would be plotted while the drum was brought to a halt and this had to be within the statutory limit for that particular engine.

There had, at all times to be two means of exit from the mine, in case of emergency. If this was not possible - if, for example, the winders became inoperative at one or other shaft - men would have to be withdrawn from the mine. This was also true if the fan stopped working.

Any major jobs which were my responsibility had to be done at weekends or during the holiday fortnight and twelve hour shifts were not uncommon. On one occasion when the brake anchor pedestals were renewed (in the holiday fortnight) on all the engines (that was twelve pedestals, four to each engine) two fourteen hour shifts were necessary to finish and re-set all the overwind trips. On the other hand, a new set of brakes could be changed during a weekend, knowing the easy way to release the brake rod nuts being the key to this (they were big nuts under a lot of tension!) The main drumshaft bearings were large split-roller bearings and I had to re-fit No 1 engine bearings on two occasions. They had to be gapped to an accuracy of two thousandths of an inch. Coopers of Kings Lynn manufactured them, though, so far as I know, the company doesn't exist any more. I can't remember the speed of the drums themselves but the maximum speed of the cages or skips (up or down the shaft) was 35 ft/sec (approximately 25 mph).

Overall, some of the work had to be done on the basis of expediency — it was important to keep things going until the opportunity arose to do a better job. A great deal of the work was exacting, some being to very tight specifications and one always had to bear in mind that safety was paramount — lives were at stake. On the winders' braking systems, for example, I worked with hydraulic systems that operated at 4,500 psi. If a pinhole on the pressure gauge pipework developed, the oil bounced off the ceiling, some ten feet above and soon made a pool on the floor, before it was noticed — just one snippet of the kind of work we had to undertake.

Working relationships were, for the most part, good, though, as in most walks of life, they could, on the odd occasion, get a trifle frayed. However, the important thing about it was that any disagreements

were quickly settled, then forgotten about. There were no vendettas such as I experienced in my later work with a private enterprise company. None of us would tolerate pettiness and this was a characteristic common to colliery workers in other pits, as I later discovered. I rarely socialised with the rest of the miners after work because I preferred to keep work and personal life completely separate but there were mostly no problems at work between the Durham miners and the locals, such as myself. Some of the fitters came from other Nottinghamshire pits, while some came from Durham but we all got along well enough.

Relations with Management were generally good — we were treated like grown-ups — though there was inevitably the occasional fall-out.

There were two miners' strikes during my time at the Cotgrave Pit, the first one (1974) during the Heath Government, the second (1984/5) during the Thatcher Government. In 1974 strike action was supported throughout most of the country's coalfields and it led to the three-day week and the downfall of Edward Heath's Government. During this strike, I did a paper round to keep myself active. In the case of the second strike, we worked through, though, if the rules for strike action had been adhered to, we might all have been out on strike again, with what consequences we shall never know. There was a certain antagonism from the police (whether or not justified) against pickets or other -provocation.

Appendix

As an aid to the reader's understanding of my work, it may be helpful to describe something of the general functioning of the mine. There were two shafts connecting the mining areas with the surface, up and down which both men and coal (and, of course, spoil) had to be carried. No 1 shaft had two winding engines, load being transported in two separate skips, each with a deck for men and a skip for coal and spoil above. Forty men could be wound up or down in each cage. Each cage was raised or lowered on a rope which was wound round a large drum with a counter-balancing weight at the other end of the rope. This rope was arranged to be in contact with the drum over an extra arc by means of a sheev wheel. This provided an increased driving friction. No 2 shaft had only one winding drum but employed two cages, one on each end of the rope. The cages had two decks, one above the other, each deck carrying forty men — thus allowing eighty men to be transported at each wind.

Miners' shifts were seven and a quarter hours long, while surface workers had eight hour shifts. It was normal practice for the miners to take food and drink with them down the mine.

Because Cotgrave was a new pit, showers were available for the use of all staff, including surface workers and were well used.

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