**Patrick’s Story**

**Summery:** In this interview Patrick gives an insight into the life of an apprentice engineer. He speaks of training at Mills and Knight Wharf in Rotherhithe and competitions with the carpenter apprentices. He gives his views on the shipping industry and describes the piece of equipment he made for hospitals.

I was born the 14th of May 1947 at 24 Bryan house, which is along Rotherhithe Street.

**Can you tell me your first job, when you started, how old you were.**

Okay, I left school in Croydon road which is just off of Ilderton road, partially deaf. School was hard for me because I couldn't hear, but I got a job with my father working in Steel Erection, which was looking back was nothing more really than a bit of a labouring job. One evening he came home from work, well from the pub and he said as he often did in those days, he said I may have a chance for you to get an apprenticeship. Which I said, Fine Ok. And thinking back; my fear of mathematics and that sort of thing - which I wasn't very good at - I said, " Ok, I'll go through". And I did and I went for the interview and I got the job. Might be worth mentioning, the poor chap before me, why he lost his job was he had a shooting accident and blew the bottom of one leg off with a shotgun. And that said, I was able to start my apprenticeship, and if you refer to my indentures, it will show you what the terms laid down on that apprenticeship were all about. They were very strict and the starting salary was about 25 shillings a week so I suppose it would be 1 pound and 30p, something like that. And this micrometer was a week’s wages, in fact it was 2 weeks wages - it was 2 pounds 16 and thruppence, I think it was in them days. So the job started in the machine shop at Mills and Knights which is now the entrance steps to the hotel.

**Which Hotel?**

The Hilton hotel. along Nielsen house there. So I started there and did struggle at first but once I went to Poplar tech, good lecturers and I started to overcome my fear of mathematics, in fact today I'm maths crazy - I love maths. So the job was involved around ship repair.

**So you started as an apprentice and they sent you to college around the same time, when you were?**

15. Well I was just coming up to my 16th birthday. So they sent me there. So I'd go to Poplar tech, I'd get on the 82 bus, and then I'd go down to Poplar and then I'd get one of the buses round there, the 5 or whatever it was, and I'd go down to Salt street and I'd walk through salt street through the lovely gardens and in to the college itself which was a fantastic college and responsible for many marvellous engineers over the time. So I'd go there one day a week and two nights a week at night school at Stepney Green so I had walk from Poplar to Stepney Green to attend. So that got me to try some of the Chinese restaurants on West India Dock road and some of the cafes and that. So that was how that came, that was how it worked. I come back into work the next day and I put in one of these cards.

**What’s that card called, that card?**

It's a job card. You get like very similar to that - expenses. Might be on there somewhere And you put in 7 and 6pence as it was for a day, that was a bus fare there and back, for a meal and that would get you home again. So you brought that in the next day and that was a nice little bonus because you get paid the next day, you got wages - 1pound 2 and 6 or whatever it was and plus your expenses. So the laid I worked on was a real throw back to the 1800's, the shape of it, single handle, belt driven, the sound of the belts flapping as the line shaft started. And just about 2 years before I started there they actually ripped out the old gas engine and put in an electric motor. Strange thing, all these years later, they're actually reusing gas engines now. Its environmentally more friendly than motors strange. So all the stuff in there was belt driven I would say most of it was over 100 years old but in the next 18 months they started to actually buy in newer plant, not brand new, but newer plant. So the jobs we worked on were initially you get repair work, now as were talking about the 60s we're not too far after the 2nd world war so alot of the ships that survived were now coming up for massive repairs and this was quite lucrative for london docks but the bigger yards like Sarley Weirs and Blundells and Gravesend Dock, they would all get most of the big ones but we had an advantage over em where by our dock was dug to take the old paddle steamers so we could get wider ones in so we were the only yard that could take the new woolwich ferries. So just in them 60s the new woolwich ferries were coming in and we could dock em and work on em, so that was good aswell. So the initial job would be that I would be say right go to the I don’t know West India Dock go to a certain ship, let me give you an example - one of I can remember called the Volta River. This volta river was something out I always say of a Humphrey Bogart film it was that old and I tried my first curry never tried it before, first curry and the meat was hanging in the galley for weeks, sailed from East Africa, and I tried this and it nearly blew my head off! But I loved it, I was hooked on curries ever since. So I’d go round there and see the chief engineer, he'd take me to the job and say i want one of these I want or two of them and I'd measure it and take it back -

**Parts of the ship**

Parts of the ship like Gilbo’s like this. And you'd make the thing and youd take it back and you fitted it and you ran it and the chief engineer would signed it off and said good job, job done. The thing about it was it made you really, really careful about what you did. We had a saying - I won't tell you exactly how we word it but this is how I word it: you can measure it a thousand times, you muck it up once. Because when you took that back on the shop it couldn't be wrong because he probably wanted to catch the next tide in a couple of hours and if that was delayed for another tide that was thousands and thousands of pounds in lost cargo. So actually as a young guy that responsibility sat quite well with me and i worked my way up through the machine shop and i was .. i was moaning one day to the boss, i never got any interesting jobs making flanges or small things and that and he said to me ok ok then we'll stop that so the next day a lorry turned up and they brought in this gigantic fly wheel it was about, about 6 foot in diameter and he said good you wanted something interesting that goes in the ... a machine you want to keep it cut he said theres the tolerances so you could be 2 thou up but nothing down or 1 thou down

**What does that mean?**

one thousandth of an inch. an inch divided in them days you divided one inch up in a thousand parts and you could be down there once it was heated up the shaft contract onto the shaft solid. If you muck it up he said not only will you lose the contract you'll lose the job. you have a nice day. and he left me to it. so i did that and i went and saw a fly wheel fitted and when they slid it onto the shaft it went DONG like a bell sounding where it’d griped the shaft, the cold shaft and he said to me - yeah, wasn't a bad job at all that. And i did things like renovation small steam engines and I also, I also made a laithe and I made it out of ships parts and I had them all recorded it all in an excercise book. but i lost the exercise book. I’ve still got the laithe in my garage and ill photograph it and send you the photograph even the tiny bearings were made out of scrap, i use to go begging for it.

**So you made that alone?**

On my own, yeah completley on my own. worked out the gear ratios and the pulley drives and the turn spindles and it goes quite well. So as you see I was interested and my college reports were coming back positive and i was then gven more responsibility and i took on things like making rudder posts for a sun tow, Alexander tow the owner actually served his time at an apprenticeship at Mills and Knight as well. And it was a great affinity between the two businesses. He always brought his tugs here and we always made sure that we always got the jobs done properly. So the jobs were really varied and some of them were very interesting. There was this paddle steamer in Browns yard in Bristol being re built, called the Medway Queen. medway queen was a veteran at dunkirk. She came into the dock, i had a picture of it but i lent it to a reporter in the local paper and he hasn't given it me back so it can get it back, I’ll send that to you aswell and i made pins for it and we worked on it but it was really in a bad state of repair because it never had any money spent on it. And it was actually condemned because the boiler wasn’t hold pressure...and it was really taken away and it went off for a terrible lot of various jobs, it did restaurants and finally it just sank in the mud at gravesend somewhere and then rebuilt it and hopefully in the next year or so it will be back at Gillingham. So it will be worthwhile going to that, which I will do. So i worked on that alot and it’s in my notes there as well. i worked on an ex trawler called the Sir Glen Strathallen not sure whether, you can Google him, he was an admiral or someone but he bought this and had it converted for training merchant navy guys or .. guys merchant navy in particular. That came into the dock and we all rubbed our hands in glee coz we could see it needed a lot work around but it was so bad that the ship was actually - they said it needed to be scrapped but in Glen Strathallan's will it said that, that ship would not be scrapped but it would be ceremoniously sunk by the royal navy which it did - pumped all the toxic fuels out of it and coal and everything else that could have done harm to the environment, even in them days so be conscious of it then they took it off and sunk it and it became a coral, and sea life and things and it was a diving bank. So that was a shame but it was lovely, lovely thing. it was a grimsby trawler, it started life as . so then there was other ships, there was the Baltic line. Where the Tesco’s is right there that was the not sure if it was the Greenland dock could have been the Greenland Dock, the first one. thats where the baltic line used to come in and the russians used to come in, the Scandinavians - the Baltic line which you used to have about 8 or 9 ships of between 7 8 10 thousand tonnes. They would come in there and take away machine tools and that, but they would bring salmon, meats, hardwood, some fruits, mostly from up the Baltic countries. so they were lovely and they fed well, we got good steak sandwiches on there. So you'd go in there and it was one job one day from a Norwegian - they were lovely people. and the skipper said to me I want no the chief engineer, I beg your pardon. He said I was all these push rods. This ship was built just before the Second World War, so it was very hard to get the spares. So I had to make the push rods for the engine and had to make them out of special steel and they gave me exactly the right amount of steel. Coundn't muck one up! so i made these 12 push rods, 6 for either side. and took em back and he checked, with one of these my micrometer and he said, you're a very talented guy, wish i was but you fit em in the engine and they start the engine and the engine runs. John alive was the name of the ship, the name of the vessel John alive, and she went back to sea. Never knew what become of her she was quite old then, but lovely ship. There were interesting things as well there were this thing went around called one man one job. it ruined everything, but you know boilermaker, shipwrights were the strong element of the ship repair industry, coupled with the dockers at the time. all wanted their own, wanted regular work, but the thing was it become too costly to bring the ships back here

**Because its union related or**

Absolutely union related, yeah, very strong union, and if someone was doing something that somebody else could be for instance we used to say one bloke makes the centre punch, another bloke comes and drills it, somebody else sweeps the stuff away, somebody else puts the bolt in. I know if I was to do it i'd drill, done, done, finished. so that sort of thing ruined the business, i think.

**When did that start taking effect?**

well that really it was always there and that must have dated back to i suppose the 30s when industrial turbulence and unions and that started fighting for a decent living, and i suppose being fair you can say that for em. But it was two things; on the one hand there was tradesmen, dockers, labourers and all them sort of people wanting a better living. There was owners, ships, wharves and plants and all the rest of it that were really short sighted thus wanted a quick profit, like it always has been. whereas our counterparts in holland, in germany at the time and later on taiwan and that could see wealth in the distant and so they were invested in a plunt invested in skills and things like that, so as we were struggling with our old 18th century processes and procedures, gradually sinking under the weight of all this, these people were taking all the work that we should have been doing and prospering and building ships. and then of course than it was a direct fight between europe and us then, because we were the biggest ship building nation, to the pacific rim where Taiwan, Japan now, China India could build ships alot cheaper. even poland, but what we found was in alot of these things where the workmanship was so poor, sometimes had to come to england to be put right which was kind of ironic, seeing as we lost them through bad practices and now they're bringing them back to repair. So there was this strange thing happening, and as a young man, you struggle to get your head around it, you knew something was going but you couldn’t quite put your finger on it; I couldn’t quite put my finger on it. And then I started to realise what was happening. And it came to me in the form of maths again. I got a job came to me one day, it was a Dutch ship and it was all in metric. i got, all this is like another language!

**When was that?**

This was just before i did this so i would have been about 16 and a half so I thought..that smells like the future to me! so i got a book and they started to read, and when i spoke to the lecturer about they said, yeah we're going to be doing only did it about half a day, because they didnt seem to think it was going to do what it did. so i read about it and i practiced it, and i didnt have a metric micrometer, but i gave it to a young apprentice when i left the health service as a gift, and he was over the moon wth it because it was his first one, so...

**Since you're mentioning the micrometer, tell us what this does?**

This micrometer is made by a company called Moore and Wright, Moore and Wright, i don't think are in existence anymore but Moore and Wright Sheffield , says clearly on here: sheffield. what this does, it measures thicknesses and diameters, and it can measure from one thousandth of an inch. it can measure the thickness of your hair, up to one inch. and then ive got others, a set of em, a family of em goes from this is 0 to 1 inch, other would be 1 to 2, 2 to 3 and so on and so forth and they come huge. So um what this would do you’d rough machine with a pair of calipers and you say about 50 thousandths of an inch then you’d use the micrometer on it, and you could with the dials of the machine you could bring it down to the tolerances you want. When you really bring it down to the fine pieces I was asked to machine some parts one day for a diesel engine. Now they’re just fantastic type tolerances. And our machine with this on this old laithe, and when i finished it the boss stood there and he said to me: try it. and when i pushed it into the brass bush that I'd made it went sssssssss. it was so nice. and i just collapsed because again, it had to go out again. so this was my tool, my great tool. What happens here, is when you tighten on something, that is to tell you it’s the right tension so, because people tend to overdo it

**Very precise**

Yeah and it also gives you on the side there like 1 16th of an inch is .0625. do you see already its starting to edge towards to metric way. So thats what that is.

so theres a range of stuff. calipers: internal, external.

**So callipers measure**

diameter and I or external. So there was that and then there was other tools were like scrapers.

W**hat’s this?**

This is a scraper file, and what i think this is been madefrom is an old file because if you look closely you can see the ridges from the old file on it. and what they would do is.

**When would that have been made?**

Way before I was there because i found it tucked behind a machine that could have been a hundered years old. i dont know, i really dont know. I’m sorry to say. But as you can see it’s nicely made and i still use it from time to time. and when you machine a bronze bearing you machine it to a tolerance of whatever they have , whatever the design is. And then there would be shins that would either packet out. Shin is a very thin piece of brass sheet. so that would open the bearing a bit but the important thing was you would to lay leads in it, lead in the bearing half and you would clamp it and measure it with your micrometer and that would tell you how much clearance there is between your german face and the bearing face. So you would say i want 1 thousandth of an inch so what you had to do is you’d squeeze them to gether and if it was one thousandth of an inch fine it’s if it wasn’t you cant machine it any more but you'd scrape the bearing. But you blew it you put blue, like a boot polish - engineers blue. Just a tiny little bit on the bearing and you go like that it it show you all the high spots and you scrape it until you got it perfect. And when you measure all your leads and laid your leads out, chief engineer would come and check em, to make sure it’s all right. So, And the same thing for grinding a bearing or a valve, he'd put 4 pencil lines on it like that and you'd lap it in and he'd come along and look at it and if there was any of the pencil still visible he could go keep going. When you lapped it all out, then that would be steam type or water type go like that, similar to this, or there do that and measure inside like that, so you know, it was working between trades aswell. Blacksmiths which is as you know trap blacksmiths boiler makers shipwrights. very old trades. Boilermakers not so much but blacksmiths go back probably to about Anglo, Anglo Saxon, probably roman times were doing it they were probably doing it, but them two trades were really important and Id get things come to me like..they call it a gooseneck? Big part of the lifting gear. It would have been forged at one end, it would have to been machined and put a thread on it but you had to make sure it was dead in line with the hook so when it hung on the crane, it wouldnt, well itd hang like that. hanging straight otherwise itd be dangerous. then you work with as i say other trades and they would be doing something. You would have to machine something for them to fit into it like ornate finishes for handrails on cabin cruisers and nice, the ships captains cabin. And there’s some funny, can I put a funny, there’s a fruit bowl in my late mothers house about 10 inches in diameter and it was made from good timber, it was a pine, i think it was a pine or cedar, one of the two. but its actually started life as the rubbing timber round the edge of a ship! so you know when a ship comes in to a, so it would rub against it rather than rub the steel plates on it.

**On the outside of the ship?**

Yeah outside the ship. It would go around the outside the ship so as the ships bows like that it would come round like that so as it came in it would be like that

**So it’s a strip of wood along the outside of the ship.**

Like a bumper. I wanted to make this fruit bowl for my mum, so i had 10 inches cut off the end of it. thinking, ah yeah i got plenty there. When they fitted that one the ship, it was 10 inches short! there was hell to pay there was the very hell to pay and, and things like that. So there were other ways we could gave ourselves enjoyment. If I could talk about my wine, my goblet

**Yeah, please. this is a wooden goblet.**

Wooden goblet, yes. so, we as apprentices would get together and show off what we did and

**How many apprentices were there?**

Ok there was me, machine shop. fitters, two of them. so that'd be three. plumber, 4. shipwright, 5. joiner, 6, draughtsman - my brother in law, 7. itd be probably about 10 altogether. because there was other ones coming in and others coming out at the time. So we got together one day and we talked about the trades and all the rest of that and my friend Albert was a wonderful cabinet maker. and he made me a lovely toolbox and he said, see you cant do things like that. and i said i can, i can. So we had a little bit of banter and he said, I said, tell you what I said, I’ll make a piece of wood into a goblet. alright he said. i said ill take it out of the thames, ill cure it, cut it..he said, but, he said. and i said ill bet you 5 shillings, 5 bob, itll hold water, or itll hold wine. but we couldnt afford wine so it was like ale. so he did something else and we, it was a great day we were in the pub so we filled this to the top on a night out and we waited for 30 minutes before hed pay me the 5 shillings, and ive kept that ever since.

**Beautiful, so he made one too?**

No, no, no, I only made that. Beautiful once I could do it, i threw all the everything away, all the guides and jigs and things like that cos even now my daughter says to me aw would you make me something? I might do, i keep thinking about getting a wood, I might do, in the garage. but that, so thats how that came.

**So there was a friendship between all the apprentices?**

oh yes. oh yeah yeah. i was quite competitive at times, i mean, you know, everybody thought that their trade was the best trade. And i was really pleased one day, cos i saw some boilermakers trying to out an angle and he couldnt do it! they couldnt get the angle right. so i went over and got my piece of chalk out of my pocket and went: do that and do that, and then the angle is 30 degrees. he went no. so i said try it. make one out of wood and try it. and he tried it, it fitted. oh, i got some stick off of that. but it was just, there was some wonderful people there. and you know they, what it was was their love of their trade. and i knew that the yard by this time was sort of slowing down and we were scrounging for work. i did alot of glc work, did alot of pla work. and theres some fantastic names - some of the characters were great. like we had a bloke called tunnell jack, you want to know why he was called tunnel jack? he lived at rotherhithe tunnel. thats why he was called tunnel jack. And this was common, and its in my notes aswell. so there was one called nobby the owl because he actually looked a bit like an owl but we didnt call him that. and there was another one called doer, short for do as you like - who was eccentric, crazy, but such a brilliant engineer. really off the scale this guy, eccentric. and his name with cliff skits and he used to drive round on a giant motorbike, and i think this is where i got the flair for motorbikes. and so we had the sparrow family , he use to look after the chloride lamps. because when, this shows you how bad this place was when you're thinking about it, there was no electric light for down under the ships, in the dock, they had old chloride gas lamps. when you dropped it into the water and the gas came, it reacted with the water, it came out and you light it and you get a nice bright flame..not much of it. And they were part of the welding equipment. Once, but the trouble is with that if you pressurise that with more than a 1/4 of a pound per square inch itd blow up. And that’s where (setlean?) came in, to being and dissolved in acetone which is what you girls use on your nails and that did, and they could pump more than 1/4 pound per square inch. he looked after all the lights, so he - and there was another guy, we called him calliper legs, poor man, because he fell down the turret of a world war 2 submarine when she was going in to dive in the navy, and he used to look after the wages, so he was - i never rubbed him up the wrong way. so there were people like that and there were guys with this, so much passion for what they did. they made a plate to go on this ship and they got a template but this guys was standing with his pointer and going there, hit that. there, hit that. and said alright thatd fit, and they lift it up, put it onto the ship, all the bolts pop in and you hear them go prrrrrrr prrrrrrr, see you'd find the rivets across the dock, and they hold it in a bucket and in - tap tap. and there was some nastiest as well, there was - there was the brothers, and there were 5 brothers, and 2 of them used to always pair up with the riveting gun and youd hear the one inside, i can't remember their names now but the one inside'd say where are ya? im here! yeah i know youre there, but whereabouts? put your finger for us there put your finger, and he would screw a steel nut onto his finger, aww it was sharp, it would cut him, and you could hear im screaming on the inside! i mean today if you did it, you’d be up in the court under the health and safety at work act. and you know there were things like this and youd hear him running up the street screaming when he got this nut off and you knew there was gonna be, and there was a fight. nobody'd go near em, just let em fight it out, cos theyd turn on you and give you a whack if you try and stop them.

**So you're working along the length of a ship, and you're all together in like, teams or groups?**

Teams, disciplines, trades, sometimes one following another, sometimes a trade would open something up, like if it was a barge, in actual fact went off to the far east to dredge for the new docks. They would open all the communication places up in the cargo holds and we'd go down and service valves and take valves out, fit pumps and things like that. and then there were some sad things aswell, because once you could see the end in the distance there, there was

**Sorry but how old were you? then when you..**

I'm coming up to about 18, about 19 and a half, 20 I should think. there was fewer contracts around. I think I haven’t glossed over too much here, because...

**No we'll go back if you want to go back**

Ok. you could see there was tugs coming in. beverley. and i looked the beverley up and it was a big un, a big tug and it was built in 1870, still going in the 60s, but it was too old. You know and there was one called dollar bay, why was it called dollar bay? because it serviced all the american ships, when they came in. and of course there was all this lack of work, coupled with even more industrial unrest, even more with the government of the day trying to modernise the country

**In the, what decade is that?**

we're still talking about the 60's, the late 60's. I'm talking about, well thats a special year, thats 1966. When england won the world cup. So after this it started to sort of run down and i could see the definite running down of work and everything else. so there was whole loads of tugs and small ships. there was one ship came in from the general steamer navigation who were at Greenwich, greenwich creek there. now they were brought up by p&o. this heron was a beautiful ship they always looked after the ships it was absolutley immaculate. but it had a tail shaft that was worn. and the brought the tap shaft it was probably about that diameter

**About 2 foot**

About 12, maybe inches in diameter. single screw so it did alot of power. all the propulsion come from that part of the generator. so this gland had to come into the machine shop. so i got the job, machine it off so its nice and so when I did a test on it and one of these, a bigger one of these on, it was way under its tolerance, it was worn out. and when you flicked it like, you could have gone ping, ping, it was really upright

W**hat’s this made of?**

bronze. all bronze. Gunmetal and bronze were the main two lidnum vitae used to be some of the stern, that grows under water, that’s wood, and that, we're not allowed to use that anymore. you mustn’t use that.

**What’s that called?**

Lidnum Vitae. its a wood, its got a natural oils in it which were perfect for machines, for ships because when the water seeped in, it just mixed with the wood and the oils and lubricants and it run beautiful for years. and everyone would scrounge for a bit of it, and machine it into little bookends or things like that when they came out. so all that sort of stuff was really really sought after. so you know this seal - i reported back to the boss and i said, i can't machine that, there's nothing to machine. He said, you machine it, and I went, no. and so he said, are you saying youre not going to machine it? and under these indentures, you can be sacked. For disobedience.

T**ell me what is the indenture.**

Anyway what I said to him was, I’m not machining it because it’s condemned. and if that blew when she was going to the great lakes and being sold to the canadian pacific, so across the atlantic. if that blew ,they got no chance. so its not on my head master. not on my watch. Anyway so Lloyds came down and they said it’s alright I don't know how that got in there now this, this is why I had to get I tried to get this copied but find couldn’t anyone who could do one but if you want to keep hold of it then

**I think we should copy it for you. You need to hang on to your ..**

ok. so - you see here, look. these are the terms and conditions by which we were employed.

**So it’s like a contract?**

oh yes it is...something i forgot to say - part way through the apprenticeship i was getting itchy feet, i was wanting to go to sea, i wasnt getting enough challenge, you know now i got skills in maths and other stuff under my belt, ... not enough for me. So i applied for a junior engineer’s job at bp. and there were 3 ships there was the British Sergeant, there was the British major and British something else. and i would have gone on the british sargeant, she was a steam turbine operating in the red sea. My father wouldn’t let me transfer

**Cos this is like a contract, you cant turn...**

you can't get out. they'll sack ya, if you get caught for thieving, you're out - finished, visa torn up so you havent got indentures. or if you walked out, say do you know what - stuff it. like my brother in law did - so he hasn't got one of these. but i stuck to my guns. see how nervous i used to be, look (laughs)

**You're writing. So this - does this mean, did it give you any rights? i know it gives you obligations towards your employer - but at the same time did you have any rights?**

What? no! the only right is to be there on time and work to a standstill. which is what you normally did. no, no rights.

**And what if somebody had an accident?**

Ah..you better go to hospital. so there was no, yes - there was rumour that the factory inspector was going to come there but in all the, don't know how many years it was, 6, 8 years or whatever it was i never saw a factory inspector

**So this is a 5 year contract.**

A 5 year contract

**Indenture, right, right. 1963 for 5 years**.

So that was the starting salary. 75 and 3 shillings and thruppence. so its 20 shillings to a pound, weren’t there the old money so that'd be about £3.60. but i don't think i got that much. anyway.

**And it goes up to 100 and...**

64 pounds and 11 pence.

**And did you get that?**

Eh, dunno. i think i did but I couldn’t swear to it because what happened was they were being naughty as well, they put me on a turbine in Brunswick power station - it’s gone now. retubing condensers, and they were gonna pay me 16 pounds a week. 16 pounds a week! and I was only my 3rd year and they - i did most of the work, with all the other guys, not only me - never paid me.

S**o they sort of sub contracted you out.**

Yeah. See the things they refer to here. look. the master manager of the works in which the apprentice is serving at the time. master manager! (laughs)

**So what were they like, the master managers?**

Well some of them were really good. i mean, it was only a - it was always, three piece suit, he's watch a chucker i used to call it, he's fob watch, you know - some of them were freemasons, you could see the square and all that

**The square, what do you mean?**

The masonic thing, you know.

**Right, like a medal, a pendant.**

Yeah, and some of them were ok, some of em werent very good at all. i mean their management was like do it or - you know and there’s some funny things in there you might want to have a little look at - something that i got a real good hiding for aswell. ill let you read it!

**No tell us, tell us.**

So that was it, once i did all that

**After the 5 years?**

Then it was stamped as completed.

**And then would you be free to? and then, what did you do then?**

I stayed at the yard because I lost the opportunity to go to bp. cos, it went there was 3 of us. There was me - well there was about 20 altogether, there was me and two other guys. one of the guys was from singer sewing machine company, and he got a job. he was a really nice fella, his job was making precision parts for sewing machines. he got a job as a sea gun engineer. But i did go to the sea afterwards; i went to sea with Alder Brothers

**After this?**

After this yeah.

**So you finished at mills and knight in 68, and then you stayed**

Stayed on till the yard closed in late 69. once the yard closed i was mucking about a bit i didnt know what to do. it was blokes actually in the street. crime, that take me -

H**ow many people were there when it closed then?**

I would say theres probably altogether about 120 people in that yard. there was painters, there was polishers, there was carpenters, fitters, turners. there was 12 fitters and mates - cos you had a mate in them days, plumbers and mates - so yeah there must have been about 120 of them. had a machine shop, drawing office, plate rolling, plumbing, shipwrights, boilermakers of course, scalers

**What’s that?**

Cleaners, just clean up and get it all ready for - and that was a terrible job, i never did that job. we had a bonding warehouse where we used to keep parts for other ship companies, and they made quite a bit of money out of that. so there was quite a spread of trades. but you could see the little yards next to us, all going. and it was a shame really because as i said in my notes, there was no inward, no inward investment, so there was no way they could diversify easy, and say right we'll take on machining this or

**Aeroplanes -**

North sea was just coming online. See as this finished, North Sea was coming online. but they didnt have the skills they didnt have the plant. they just wanted the short term maximum profit. and this didnt go skin. the owner the parent company was, the parent company was, well here it says 66-mark lane, thats up by Fenchurch Street, still there. But the company was who owned this was called Ray Arc. now ray arc is still going somewhere today i think. but Ray Arc owned that and what they did is they went into property development and apparrently they built a block of flats somewhere down in Gravesend and it collapsed, and thats what brought the company down. this was actually a full order book, even though they was struggling they had a full order book. and just because in them days the sludge from London went private , you know the process john basil built the first major sewage, goes ... some of it out falls south side, goes to Barking round there Cross Ness. and they would then, what they couldn’t refine, deplete or reprocess or turn it into methane or something like that, was put in the ship and dumped in the north sea, you know, so i mean not very nice. and that went on - it was the only way they could get rid of it back in the 1800s, cos they preferred to drink beer than water because water was so badly polluted. so all these things were all building up to a point where - so what was wrong with the industry. we're in the middle of a major city, probably the biggest city in the world. The roads are too small, the demands are increasing, costs are going up, and containerisation is coming in where you could put probably 8 lorry loads in 8 little boxes, chuck em on the ship - gone. roll- roll was coming on, so one rolled off, one rolled on. you know, you were getting cranes now where a guy could sit there with a little stick about that big, and he could put it anywhere he wanted, and so instead of having 13 men like they did in the Royal London ... docks unloading potatoes, thered be one container on the lorry off to market. and you got one driving it, one driving the lorry, one probably just helping. and thats it. so, you know you took 10 men out of the equation, so costs started...So it was not just about the skills and not just about lack of investment, it was about where it - where London is. and how you got to it. and of course this is rearing its head today, we've talked about this, whether we have a boris island down where we live, are we going to expand London, Heathrow , are we gonna do Gatwick, so theyre starting to think about the same sort of things, they’ve come round again. so yeah all these streets round here were full with lorries. potatoes, meat, machine tools. You know, waiting to bring things in. of course the thing was, you got fresh fruit from South Africa or Jamaica or something like that. M and S come along with an old thermometer and stick it in the banana and goes - no, dont want it. the temperatures too high, they've started to go. Thousands of pounds worth of stuff, and then there was the pilfering as well, a lot of that went on, lots - alot of theft round here in them days im afraid. so you know what happened to me then was that i worked in various engineering jobs in power stations went out contracting at sea at some rough old ships and then

**Sorry you went out to sea then?**

Yeah i went to sea, went to merchant, the merchant navy. i was working for a contracting company first, and we went to - i had to go to rotterdam. and in Rotterdam i picked up a ship called the Doric Chariot. Doric Chariot was a really old - built in Germany, in Bergen. built in Bergen. but when she come back she was wrecked. she was falling to pieces. when we was at sea, you could see, when the ship was rolling you could see where it had been cracking you could see the plates moving like this where you could see the cargo hold had been just worn out. and we'd patch it up and it was doing a contract run from Massachusetts to India to Mumbai, or Bombay in them days. so and i was supposed to go to Massachusetts with it and then go back to Mumbai but i signed for holder brothers and signed on their vessel Moment Warwick. I went down to West Africa to a place called New Aldeburgh in Mauretania where we picked up about 40,000 tonnes of iron ore and brought that back to Birkenhead.

**So what were you doing on the ship? what was your role?**

Engineer on the ship.

**So you'd work as you went along?**

Yeah, look after the engines. it was a single screw, had to sit in the docks for the engine. Built in Sunderland, the engine. So, and then we went from there to Zebrine. and from Zebrine we took on fuel and then we went to South America, we went to a place called Pretoria, Pretoria? no Vitoria. not Pretoria cos thats in South Africa. Victoria. and..

**In Brazil**

yes, Brazil. and i bought - i still got it today - a coffee set. Hand painted, what do you call em with the big plumes at the back? peacocks. and you hold it up like that and you can see straight through it. and there were three sets of geisha girls, mexican ponchos and plain ones. i wanted a geisha girl but i ended up with the plain ones probably because we were all a bit drunk. But anyway - we still got them today, and they’ve never had coffee in em and they’re never touched. Theyre washed and kept in here, just something ...and ive got a big butterfly plate a tray which is illegal now you can’t get them.

**Butterflies**

Yeah. tray. they used to use the wings of butterflies, which is not very nice when you think back on it. but they look so lovely in the shops. And that coffee set cost me a week’s wages which was 28 pound

**Did you enjoy being out on the boat?**

I did yeah there were - the trouble was what was happening in london was catching up to the sea going craft aswell because the ships were old but also there was the first oil crisis looming. The Arabs suddenly realised how much wealth they had under em. And how much the imperial countries were exploiting em. UK, Germany, even the yanks. France, all having fuel for pennies, and now we know whats happening to our fuel today. theyve cottoned on now, they know how to do it. so all these things were cathing up like we were running to Brazil, empty. And i said - well we had a discussion one night after dinner and i said why are we running empty whay arent we taking something down there? and he said thats what they want us to do, and it all sort of added grist to the mill for the change we got today. i mean ships just go out at sea now, and we, we had one load. this just started. We had one load of iron ore and we were heading back to Liverpool and then we diverted to, where were we diverted to somewhere on the continent, cos they’d sold it, they got a better price for it. so they said we'll take it there then. you know.

**So this is really down town around town. This as I said is the yard, this is the old fever hospital Rotherhithe. Bombed out during the war.**

**I see**

That was all destroyed as was most of this. That’s where I was born, that block of flats on the corner. This cutting was done away with, this was all filled in. And this here is the second bridge and there it is again in 1812.That custom house, see that custom house? I believe that's still round there now. That’s the second wood by the Moby Dick pub.

**Oh ok!**

The Moby Dick pubs just over here somewhere. And this is where all the, this is where the Baltic line used to come in the Star line the port boars used to come in there as well

R**ight right. Let me just take you back to where we are in the story, which is you're at sea now as a ships engineer. So you were going were going from, you were going to...you said you'd ended up in Europe after your cargo got sold to...**

Yeah we were in Europe discharging it and then we went back to - we went back with another load in to Brazil. And then when we came back we got coming across the Bay of Biscay we ended up in a bad storm about a force 8 a force 9. And we got a fire in the engine room, and what had happened was the piston had broke, the piston rings had broke and they - what was happening was they, as they were going up they were doing that – all shower of sparks was flying up all over the place like a firework display. We were going down, that was alright, there was no problem there. So when we got back into Liverpool we had to take the whole piston out. And the piston was about, with its leg on it probably taller than this room, and about the diameter of this table. Filthy job but it had to be done so to save money they made you do it - the crew do it or the engineering staff.

**How many were you on the ship?**

erm...4 to 8, 8 to 12, 12 to 4, 2 to watch, 6, second engineer, 7 ,the old man, 8 - maybe 9 of us with a cleaner - a greaser. He didn't do much greasing. All he ever did was looked after his contraband he picked up in Brazil. Name was Miller, all Millers were called Dusty for obvious reasons and he used to - we got chatting one night, him and I smoked a pack of cigarettes and I never smoked cigarettes or anything, I just don't like it. And he said “I don't either, I always get them", and I scratched my head and I said "why?" He said, "I'll show you when we get to Brazil." So there you go off his packet of Benson and Hedges and he come back with Opals. Cos in them days the pound was so bad, that they wouldn't take pounds, wouldn't take it, but Benson and Hedges, you could bargain with them. So we used to buy opals. Some of them about as big as a thumbnail, for just say 200 Benson or something like that worth a fortune, I said "What you want - I see why you collect them, valuable - but why?" He said "My pension, my pension. " And I said, "How old are you?", "Oh about 68" he said. "You're never 68". Well they've retired him, and he said he was 78 but they doubt he was, they reckoned he was older than that.

**Really?**

Yeah he come from ....Which was another port we used to go into. That's where I first see Tom O' Connor, up there. The comedian guy?

**Right**

So yeah we used to drop round all these different places, and in here -

**So someone has to watch the engine**

Oh yeah yeah.

**Through the whole journey, so that's what you're - you're there to maintain the engine to make sure, so it's like a 24 hour**

Yeah - 24, continuous. It used to be 4 to 8, really great. 8 to 12, oh I don’t know something. There's a rhyme that goes round the three on em. So you split up the three watches. It'd be the second and me, I'd sub Julian in. And then there'd be the third and him, then the fourth and Julian and another one. I'd specialise in generators. I'd buy an engine, on general stuff, so I've got a bit of everything, you know whatever'd come along. And you did... so your job was really looking after that. But what really mucked it up for me was that I couldn't get my body clock right, and I wanted to go on the ordinary day one, but the second liked me and he knew I knew what I was talking about, so I had to go with him, but he was terrible for this ...

**drinking**

Oh he was a sod for that.

**So he used to drink and watch the engine. Oh he didn't drink on duty cos you'd get sacked for that immediately. But you'd know that by the time you'd come down the pit, the engine room, he'd had enough! His eyes were that colour** **pink?**

Yeah. Terrible stuff. He stunk.

**So, it must have been really loud in the engine room. And you'd sit down in there for hours.**

Come towards - this, this deafness. I got pleural thickness from the smoke asbestos, really. Yeah I got damaged left lung, but because I keep active I'm not too bad. I'm ok with it you know. I don't give up easy so..I don't want - I don't talk about it much but this is the normal -

**That's work related**

Oh it's all work related injury. You know. I mean things like, when you see -

**If you're working in a dry dock under the rope**

I've been inside. The only time I go there is if I have work to do on the propeller or the shaft or anything to do with any moving parts. Other than that much of this'd be done by the boiler hands or the shipwright, normally or labourers or painters. But this was an old one and way before my time. It looks like an old Everards. Ellis Everards was a chemical company that kept their own tankers for moving bulk liquids around. And they used to plod and down the Thames quite a lot, and they used to get into Mills and Knights for repairs and there was a great pile of huge photographs in that Nielsen House where ships’ come in here with bomb damage from the war, and half the front had been blown away or the plates had all rolled back where they'd been in a collision or, you know something like that. They were a great collection, wouldn't let me get near em I had a big picture of a shop like that and I lent it to someone and I never got it back. This would have been fantastic for this project I might track it down

**Yeah.**

**But, so, just to go back to the ship, so you were in an engine room that was loud and smoky or**

Dirty. yeah.

**For how many hours then were you...?**

Did 4 on and 8 off. But that 4 felt like 24, because

**Because you have to keep an eye on everything.**

Oh everything. Just walk round the job

**And it's a huge engine.**

Oh big engine, big engine. Probably size of that building. Size of that - yeah. I think there might be a picture of one of em in here, somewhere. We'll look in a moment. So

**Because it felt like 24.**

Oh the noise and...loneliness and boredom is another bad thing because- I mean today they've got satellite TV and they've got all the, latest games and gymnasium and you can take the missus away with ya, and things .. I mean that was starting to come in but not on our line. One of the ships on our line was a ship called the em...one of the Alder Brothers ships. Beautiful ship. It was one of the oldest ones. Nice one. It was in the collision with a Chilean tanker and it just burst into flames and cos the ventilation wasn't running it sucked all the fumes and fire down in to the engine room. Killed everyone. Killed the wives, killed everybody on the ship and that was just, you know. Hardwick Grange. I thought it was Hardwick Grange

**And that was at a time when you were...**

Yeah, yeah, yeah. It happened just before I joined there. So you know, that was sort of

-So it was quite dangerous then?

Oh, very dangerous! Very dangerous. But it was what you lived with. The thing that used to really get to me, sitting down there - and it could be in complete silence, but of course it's not in complete silence. You do not want complete silence! Because all the time that thumping's going you know you're moving. And, but, in your own world it's quiet. You could hear the sea "chssssss", clawing at the plates with 40,000 tonnes of iron ore in front of ya. You could hear the salt hissing against the side of the steel plates. And you think to yourself...."You're just through there ain't ya" (laughs)

**So it's quite scary**

Yeah but you don't think of it you try not to think of it. Sorry-

**Well** **it's just that you know how the ships put together so it gives, it's even worse for you.**

That's right. That's right. You know, and it was in bad need of repair this particular ship. I mean you know it was leaking from the stern and in a storm, fire you think " Hmmm what else can we have wrong while we're about here?" It's sort of - well you get on with it don't ya?

**And then how long would one trip last?**

Could be 6 weeks. Could be 6 to 8 weeks. She could only do about 9 knots when she was full and if the wind was against you you know. And then, I hated it the old man would ring down and say "We gotta do this repair" and you gotta stop, and you around like this in the ocean, and you're trying to lift something out and the ships over like that and you're trying to lift it like that and ... just murder. But, you know then, something goes wrong and you have to hack this installation off you knew, *knew* it was asbestos...cut it off with an axe or something, there might be a fire in it you have to get to, or there might be something that's gone wrong, need to take out and replace, and then you had pipes burst. And it was just like putting a band aid on, a bit of rubber round it with a couple of jubilee clips, and that would keep it going till you got to port.

**So did you have a workshop on board?**

Yeah we had a little workshop, with a lathe and a dual press and bits and pieces but nothing that could do - we had a welder and an iron man, like - I wouldn't call them a blacksmith because he didn't have any blacksmith stuff but he could do welding or cutting and things like that and ... There were some strange things as well, strange ideas they had because I was changing a piston one day and you had to move the unit to unlock it, to lift it which weighed about 3 tonnes. And he said "We won't do that, we'll just cut a lump out the side of the engine." And I said, "You can't do that, because 1: it's designed to be like that, and that it’d weaken the engine frame, and 2: this is cast iron, and that won't cut our cast iron! That would just keep warming it till you run out of gas! You got to turn it,(...) strong." You have to put chain blocks, one this way and one that way, and you winch it up, winch it up and it turns, once it turns, breaks the seal and then you can lift the cylinder round and then you just clean it and you put a new set of rings on it and you put it back in and the winds still blowing, the arm hand screaming, when can we get away and, you know "Bloody hell we're doing here, winds getting up"...But you know, that's what you sign up for.

**And how long did you sign up for then?**

I had about a couple of years with them and I had come home for some reason, when I come home, we got a letter through the post and so did the other guys, everybody was made redundant, so ... And it turned out the ship I wasn't actually, though she flew the house colours, she was owned by the Warrick family, she was made with Warrick, the one I was on. There was the Muriel, there was David, there was the Gladys, and they were all the family. It was owned by the Warrick family in Cheshire. And they just gave them to alder brothers to manage.

**So then after that 2 years what did you do?**

Well I went to eh, I worked various jobs. And some of it was labouring jobs, cos work was strange you know. If you was in work it was great, if you was out of work and I actually quite, well I suppose getting married, I actually hated the 70's. Everything that was nasty and foul and decaying and going wrong, always seemed to happen then. You know this was, as you can see from the indentures, clicked into the 70's. Everything was dead. I mean Rotherhithe was just like, disgusting, I mean it was derelict. It's nice to see it cleaned and bright and vibrant now and it's good, with a mixture of people and cultures in there, flavours, and who they are, it's fantastic. But you know it was that period where month after month after month it was lorry after lorry, dumping ... rubble into the docks to dry 'em out and push the water out and you know make it ready for building what they've got now but....So no, I didn't particularly like the 70's much.

**Because it's sort of like a traumatic thing to -**

It really was. Exactly the right word, because the 60's by what we know were buzzy and people were just you know a bit footloose and fancy free so to speak and there was plenty of work, you could walk out of one job and walk into another, people were happy, prices were leaping up every other day. A gallon of petrol would cost you about 4 shillings and 11 pence and that was the top stuff. You know you could buy a pint of beer for about 2 bob or about 20 pence now, or 10 pence, so, you know all these sort of things. Other things we loved about it as well, you could near enough get any little kind of private job done at work for 5 bob, 2 half crowns.

**What do you mean private job?**

Like, they used to bring me stuff. Guys used to bring me, used to machine my break drum for me. I wouldn't dream of doing it any more but in them days you'd think yeah ok. Really thick drum so you'd take the skin out of it. Where the break line is. Someone would slip you a fiver.

**For the car?**

For cars, because if you took it to a garage it'd cost them a fortune. Like my father once, he had a Ford Popular. And the seal had gone. And he took it to Ford and they said it would cost £46. His salary was only about £12 a week. So I said to him, why is it costing so much? And he said, "I don't know." I said "let's go home and get the seal." So he said to me "What's it going to do?" and I said "come on let's go" and we drive to Poplar and I said to the guy, "Why is it that it costs so much to have it done with you guys?" He said " cos the seal is inside, needs a special tool." I went "Ah! What kind of a tool?" So he went, "a special tool". So I went, "show me the tool", I said "cos we're not going to bring the car in if you don't show us what you're going to use." You know, today it's like customer care in nit? Cos all he had to do was show me what it was and he said "Oh right, give me the seal. 4 shillings and sixpence." So my dad said "alright, let's go." So we went back to the shipyard, Saturday. It's about 10 o'clock in the morning. Jacked up the car, took off the back differential. I put the micrometers on the shaft, went to the machine shop, made the tool, came back to the car, pulled all the seals, pulled the old one out with it, pulled the new one in with it, filled it all up, run it round town a couple of times, make sure everything was alright and I said jolly good. So it cost 4 shillings and sixpence. He says "What are you going to do with the tool?" I said, "throw it in the scrap" he said "why?" I said, "next year this car will be out of date and they'll have something else."

**Wow**

I did bring you a starting motor in them days you could put new bearings in them to machine the journal up, and then you put it all back together you charge them 5 bob. And they got a brand new starter motor.

**But you didn't do that, that wasn't something you got into doing.**

No, no I wasn't...Sometimes I wish I had have done that, but I think it was the passion of the sea, you know, it does get you. It's something it's really difficult to explain to someone how you feel. They say you get the salt in your blood. And even now I get a flutter when I get near a ship, you know. Because I can see it and I know what them guys would be going through. Today they wear ear muffs, snow white...I'd had none of that, they got ventilation system. They sit in an office and they got a mouse! And if an engine starts to become sick, if it's becoming sick, they say "we'll close that bit down, and this lot will carry us through, we'll leave that...when we get in...unbolt the whole thing, put it on the deck, plug another one in, away you go. None of that hard graft. And it was strange there was other things about the job as well - coming back to the characters, if I

There was a guy called Diesel. And I was working with him on the first ship I worked on called the John Hunter, and it was a - shall we say it took the muck away from London. It was a 'S.H.1.T' ship, and I said "Why do they call this bloke Diesel" I said to one of them and he said "you'll find out" never tell ya, never tell ya anything. And a lot of the times, they wouldn't tell you a lot of, how to do things. Some of them didn't actually know so they would actually ask some of the apprentices because you’d just come out of college and all that. But between the two of us, you'd learn a lot because you had seen it done other ways. Because they get round it. Anyway - sent me the London Dock, West India Dock, and in the West India Dock in them days there was, I suppose like you get all them sweat shops in India and places like that, in them days it was, all the clothes were called 'Empire made', and in the back of the collar - all from Hong Kong - little Union Jack, 'Empire Made'. I remember these as a kid. And my mum, she could buy 3 or 4 shirts for about, I don't know, £3 or something or less. Anyway, they said "We'll show you why he's called Diesel." He actually cut the seal which was put on by the customs, which, that's - terrible trouble, and he would creep into the cargo hold, and you could hear him saying "These'll do for the missus! 'Diesel' do for the kids! 'Diesel' do for me!" And he was actually stealing clothes from the hold. And he would take em home. And everybody knew he did it. Even the police knew he did it! But they thought it was no good trying to stop him because he'd still do it. He was in the van with me one day, and the coppers on the gate looked over, he went, "What you got in the bag?" So I said, "tools". He goes, "I'm not talking to you, I'm talking to him." I said, "But I'm driving!". "Shut up!" "Ok, sorry officer "Because they knew each other, they knew each other. He said "tools, you told us you had tools" he went – “open the bag”, well I was gobsmacked. It was all the tools there and it was just like a body, and I thought, "oh God, what got in there?" pulled it back and it was a side of beef.

**Wow**

So he said: "You nicked it off the Star boat." Because there was a refrigeration boat from Argentina. So he said to him, "where'd you get that from?". He said, "It's a bone for the dog." He said, "....yeah alright." He said "where'd you get it?" He said: "I found it floating in the dock." Like he was going to dive in the dirty old dock and get it. And he said, "Look, I suggest you put that back where you found it." He said, "then we'll say no more." He said,” or I’m gonna have to. Nick us both." I went - "Take it back!" So they were the kind of people that you work with. They were great - I mean, you know, if they had tuppence in their pocket they'd give you a penny, they'd never see you without a meal or anything like that. They - some, when they were good, they were really good, and when they were nasty, they had a bad day, they could be really quite nasty. Bit hard you know? Wouldn’t think nothing of giving you a belt round the ear hole, if he went up and told it the old man he'd probably do the same, so just get on with it, but by and large I just got on with it because I liked what I did and I enjoyed but I tell ya I ache a bit now, now I'm feeling quite - now I'm in my 60's, I ache a bit more now,

**It's hard work. And did you stay in touch? Did you all live quite close to where you worked - did you stay in touch after the docks closed?**

No - a lot of them, well my brother in law worked with me, he was in drawing office then transferred to the fitting department

**Drawing office**

The drawing office yeah. He drew the first, you know the Mobil office, - he drew the first flying horse in it - a Pegasus. He drew that, he was the first person to draw that, and he moved into the fitting and turning department, so I mean, me and him saw quite a lot of each other, and he was courting my sister and they got married, 1970 I think, yeah. So they lived down at Borstal, and he's retired there himself, me silly fool I keep doing it because I enjoy doing it and helping people, but

**Do you still work now?**

Yeah I got my own van out and we pack the plumbing in on the side! The kids, the kids, the little kids say to me the other day he said - and I change the subject here, I'll digress for a second - he said, "You Pat a plumber? "I said "Yeah", he's about 5 or something, he's a little kid; I went "Yeah, yeah." He went; "Where's Bob the Builder?" I said "Ah! Bob the Builder," me thinking builder, "He's round the corner laying bricks." So he stood there for a second and he said "No he ain't." So I went "Yeah he is!" "No, no he ain't. Cos Bob the Builder don't lay bricks, he drives a truck." So that put me right didn't it!

So, but there was lots of things there was things that - it sort of revolved around the work, the social life at the Blacksmiths arms, and the surrounding pubs. Everybody knew everybody. I wrote in my notes here - we used to have a library on Tibal walk, and you could take your light bulb in there and they would exchange it. Yeah. And Dad'd say, "go to the library and get a light bulb", I'd say "alright dad" and they'd give you a light bulb! And it's all in your rent, 39 shillings and 6pence, my mum paid. You used to have a rent book, I don't know what's happened to them, if I come across one, I'll send you one of them. So there was that sort of things, you could get free cod liver oil and orange juice, that came in there. I did a paper round before I start my apprenticeship, I was in the pub bottling up my paper round, and he short changed me, the owner, and I said to him, "you short changed me" so we had a big row so I went off and told my dad, he came back and had a row with him and said "we'll get our paper somewhere else, so he said "you want to keep this job or not?" So I thought..."yeah I'll keep this job", "alright", so I all took the papers and went to all the haulage companies and sold the papers, when they should have been delivered, so one bloke went, "what’s 32 mean?" And I went, "it's just the way he marked 'em up." So I’d sell them all and got my money back two fold. And he got complaints...and I left the bag outside his house and never went there no more. Yeah so it was lovely and there was a lot of nice people that lived in, like, Silver Walk and Amos and...some of them I went to school with and some of them, it sort of I think reflects what's happened in this country in them days that the family unit, once the parents have died off, you only seem to meet up again at funerals or marriages or...something, or christenings. You know it's true what they say and it's sad really because this year I think - like me and my wife for example we lived in Sittingbull and we moved from Rotherhithe, from Plumstead to Sittingbull to be near our family and our family don't go near us. So we'll probably sit there on Christmas day with two paper hats and a leg of chicken and a glass of wine! But, just coming back to this, you know, I think for me in hindsight which is a wonderful thing. Lack of foresight, lack of long term investment, lack of thinking outside the box - you know, got a dock that probably won't be used much more, but we could have used it for pleasure craft, because that's still thriving on the Thames, got a machine shop that's outdated, some of it had to go like the rolling plant, too small and all that, but you could have expanded the skills and then gone after work whereby it would have kept everybody employed. Because Mullins who were making cigarette machines in Deptford, actually made parts for the space program as well, because they had precision engineers and the English engineering was like up there with the best. Which I think personally it still is today. And saying of which we had, when I was at college - I'm jumping about a bit here - when I was at college we had a great lecturer, fabulous guy he was, he had hands like bunch of fives but he was as delicate as anything when he come near a machine tool. And we were talking about some things and he was talking about woodwork with other lecturers. And the Yanks at the time were starting to getting down to this minimalistic type thing. We got it today when we are micro-engineering things, like these drones that they send up, they got everything in them aint they. Well in them days what the Yanks did is they sent, they sent a brass bolt to I think it was probably the equivalent of BEA

**BEA**

Systems. The brass bolt was that long.

**How long is that?**

About 25 thousandths of an inch long. Ok. And if we come down to 10, that’s the diameter which was 10 thousandths of an inch diameter. Sent this brass bolt to the lecturers, so they said, "how about that then?" So they just said "ok". They put two washers and a nut on it and sent it back! Didn't say no more, it never happened again.

**That’s a lovely story**

It's just typical of English you know. Just so clever, so easy innit. You know, let them, let the skills speak for themselves. You know cos they still come here today for a lot of their really high quality precision engineering. A lot of the programmes they do, a lot of them come from this piece of land here, so good or no - we still got it. If not enough of it, which we know we by political

**So did you use a lot of your engineering skill, after the docks, after you were at sea?**

Yes I did, yes I did. I have to say that one of the proudest things I did was that when I worked at the Health Service, I worked at the British Hospital for mothers and babies at Woolwich. And it was a maternity hospital only, and I met a lady there called Anne Knight. Bad tempered, ginger hair, gorgeous looking woman, and I told her so - I said I was in love with her ....and she said "you fool!" She was a fantastic nurse and she had a whole range of skills and qualifications ranging from midwifery to neurology and all the rest. She said to me one day "I've got to train nurses" - I hope you don't mind me saying this; you can edit it out when you finish but it's nothing naughty, it's how they said it to me - "I want a model made, and it's to do an episiotomy." I said "and that is..." and she explained. And Anne had this way where it was just me making a geal, she would explain it to someone. So, "Right ok”. And you want me to make this." She said "yeah" and she got this torso out, about as big as that...and it was the torso of a female. She says "But I want 2 dozen of these, they're £500 each". So I said "oh...I can't make anything like that....I'll do what I can.." So I worked out that the birth canal in the average woman is 12 degrees, so this is the skills you see?

**Yeah**

So and then I worked out the angle and I fitted a ring to the top, a fully dilated vagina like and

**Made out of what?**

Plastic pipe. And then inside I put a piece of red cloth and a piece of white cloth, and it was so designed where it fitted with a table tennis clamp to the table, so it had a ring in front of it and what the midwives had to do was to cut the white without touching the red and then suture it.

**-Fantastic**

So she said to me "right show me how it works". So I did it, showed her. She went "Not bad, Doyley, not bad. So I'll have 2 dozen." So I ended up selling all these all over the country. Some went to Liverpool, some went to Middlesborough, some went to Edinburgh...now they probably got something to but you know, you could see the saving the NHS were getting. But that didn't matter to me. If it meant a baby could be born and the mum didn't suffer because this person had skills that they used this piece of wood and plastic with, then I felt my heart was thumping with pride.

So then I came back again one day, and they said to me "got a present for you" apparently been to Hamley’s this lot been up London, in one of the big hospitals there, they'd seen this something being done there and when they - "got a present for you" so I say "what is it" and they put it on the bench, it was a doll. A life size baby doll. So I said "bit old for me to play with dolls" so she said "oh no, no we don't playing with it, the oesophagus, the trachea, a pair of lungs in it. You have a good time." So what I did was I cut the back open, took the back out, and I made that into a hinge. Put a hot poker down to form the nasal passages and soldered together two pieces of copper tube, and I went up and nicked a pair of surgeons gloves, and I took the thumbs off, made a ring, see it's all the engineering stuff, fixed the ring in there and we put a slight puffer, and you open the back doors and you go like that and see the lungs go...So what it was they'd fill the lungs with milk and the midwife would have to feed the capillary tubing in, remove the milk because that was the mucus that would form in the lungs. So she was well pleased with that! And we used that. And the last bit that I was proud of was a Drieger Manifold system which fed oxygen to all the special care baby units. These were babies that were really poorly. And I witnessed the guy did the servicing and he got a swab and wiped out the filter and found brass filings in the filter. Fortunately it stopped at the filter, but there was going to come a day when it would pass. So he said "somebody's using the wrong spanner." Usually a spanner will instead tighten. So, he says to me, the boss - nice little piece of work - "you make a spanner that won't tighten" cos you had to tighten it by hand. So I said "Ok, I'll do that." So I made it, took inspiration from the church actually - and it was made like a shepherd’s crook, with a little notch on there and as you looked the other side of it, it had a plate over that with a keyhole in it. And what happens is you slip that over the top and the nut fits in there. So you turn it like that and it will tighten it but if you try and turn it over the plate will prevent you doing it. So that is now part of the Dreiger Manifold kit. And my boss -

**Did you patent that?**

No, I've given up a lot of stuff. You know these Zimmer frames with wheels on? Designed that in 1979. I gave all my designs away. I just - I've been like this all my life. Anyway. So, so he got £1,000 for that. But it all comes back to this lovely little firm here where I had a passion for machining things and making things. I could look at things like this and go away, even three months later and make that, because like I got a photographic memory for that sort of thing.

**And this? What is this called?**

This is a gear wheel. A 40-tooth gear wheel. It was made on what they call a dividing head. And what it is you wind the handle and you turn and it moves the handle from that groove lining up for that groove. And I've seen some of them whereby they end up with a lump on the gear wheel where there's no teeth! Or there's too many teeth so your mathematics come into play again. So you had to work hard at the maths, make sure I got it right as you can see

**And what do you make that on?**

I turned it on a lathe. This was rough piece of steel and I machine that machine that, roughed out this roughed out that. Then finished it, and this was all board for I board it and then we machined it to a tolerance - remember me telling you about the tolerance? It goes on a (...) pushes on, fly press and the exaggerated, it’s tapered. So that the cutter will always go up against the taper, so it's always tightening. And when it's all finished it turns. Turn, cut, turn. Today they don't bother. Put it in your jig, couple of buttons in, and they go joom, joom, joom....Finished.

**It's made by a machine.**

Yeah it's made by a machine, this handmade. This is handmade, sort of handmade. One off machine shop or a jobbing shop or a specialist, that's part of the engineering I like, you know. I said to you about doing work on a little steam engine, it was a tiny little thing a generator. And it had gone into a specialist shop in Greenwich it was and they'd mucked it up because they hadn't - the foot was actually machine run so as they tightened the bearing, across the bearing to make it go up and down they tightened it and pushed it over one side because it wasn't square so as it did...it wear the rings out. I couldn't find this, and I thought this was my last chance before I go - 5 minutes to 5. They're all saying "Come on we want to go - we want to go home!" I put a (dial indicator on?) and it's just the last check. I checked it and it moved out 25 thousandths of an inch out, about that distance up. That’s it. I put a big black cross on it with my pencil, cleared my tools up, went home. Monday morning put it all together, took it back on the ship, put the steam on it, 'tst, tst, tst, tst, tst, tst,' and it just went until the ship was finally scrapped about 3 years later as it was an old steam ship so it went for scrap so it worked perfectly well.

**Wow**

Yeah. All the bearings I had to make and the piston rings. Piston rings, studs, bearings, machine the foot, blew it in, scrape it with Mr scraper, make sure it all works properly, get it signed off and it all went towards your indentures and towards your final qualification so.

**So this indenture is part of your qualification?**

Yes.

**I see - Indenture of apprenticeship. I see, so it's a 5 year apprenticeship.**

You couldn't get your qualifications - well you could have got your qualifications if you paid, I mean 400 pound a term, even in them days City and Guilds.

**Wow**

So, but then you would have these indentures, plus your qualifications.

**To pay for your study at the same time**

Yeah and they would know that you are beyond a shadow of a doubt a skilled man, a tradesman

**So you came out of this as a?**

Fitter and turner

**Fitter and turner,**

Fitter and turner, which it says up there.

**Right**

Take things to pieces, make it and put it back together. But also I did the marine engineering when I went out to sea. Learned that - engine, generators, pumps and that sort of thing. D'you know. So

**Are you alright? How are you feeling? Are you ok to carry on a bit more?**

Shall we say we close by about 4?

**Yeah. What time is it now?**

Just about half 3.

**Yeah, you've got a home to go to!**

Yeah! No this is lovely, I mean, I don't know whether any of this will be of any interest but this is a (...) this was

**What’s that?**

This was an engineer’s workbook, in 1966 this was. They used to bring out one every year, you know technology moves on, and what this would be for, I suppose it'd be like a laptop today, you keep all your information on there, properties of saturated steam, sizes of drilling and tapping of holes, which we used a lot. British standard association screw threads...

**So it's a reference book.**

It's a reference book yeah. So Whitworth standard so, this is all the threads they're using now. So, some of these are nice memories now. I just kept it, I just kept it for keepsake

**You probably memorised most of it didn't you?**

Sorry?

**You probably had a lot of it up here!**

Well you do in the end don't you, you know, you learn these things and you think - "I'll remember that!" And you can, you can use it. So, I just grabbed a handful of things that...

**I know, it's fantastic**

So

**Just to - so after the NHS**

Oh the NHS, I went to - after the NHS I got a job as the

**Sorry what was your job title at the NHS?**

Maintenance engineer. Just maintenance engineer. And from there I went to a company called Watley Street Properties which was, now it's the ABI or the Association of British Insurers and it was actually really run by Prudential. And I stayed there for about 6 years. And I ran all the services, and I - again in paper form I think I brought my skills back in and they come in very useful, and now a part of my life started getting interested in being an electrical engineer as well so I went back to college

**Oh did you?**

Went back to college to do that. Went back to college again and finished just recently, get my plumbing qualification. Pardon me. So, did 13 properties and only had me and 2 other guys. And I wanted to know how to manage them properly so I used my engineering knowledge, right, every site had a book, every book would be filled with everything that's in there, same as on the ship you see? And if anything was done on there so you , if you were a contractor working for me, you'd go on site, you wouldn't have to - not with me being here and my blokes - you could do it yourself. You go there, do what you had to do, you filled in your sheet, you took the site log, copied it, because I let them copy it. And that site log given the time in and time out pinned to the invoice, and that was sent to me for payment. If it - if one or the other was missing they didn't get paid. That's the management.

The management controls it. So I'd say right I was on there for 4 hours on site, charge is that rate it's that. Fine. Because they were being ripped off all over the place. So then I started to make, put the planned preventative engineering in place, all the boilers were checked properly, work was done within insurance. There were no generating plant but there were big compressors for air conditioning, so that was a new part for me so that was something else I had to learn, more skills to take on so that was good. But if I could for a second just come back to the hospital, a - two pieces of plant there was really important. One was a pair of steam packet oil fire boilers. Oil fire or gas? Gas fire boilers, sorry. And the other one was a generator. Lovely, just what I like. Now when they sent the boiler inspector down, who was an ex RAF man so the banter between him and I. Not RAF, Royal Navy. I was at it all round but it was terrific guy, we got on really well. I stripped his boiler down, I read the manuals, did everything I should have done, put it all back together as they sand - raised, switched off all the alarms, switch off the override preventer and tested the boiler to the - and I would have saved this which I would have done years ago and it makes a hell of a din. But they were. They were. Little boss come up, I got an official reprimand, said if I did it again, I would get instantly fired. So I say "You got to do it, because it says -" "We Don't do it." So I said you're an idiot. Me and him fell out so, with the generator they weren't doing the job properly so I checked what the service record said and what their record and the didn't match so I got in trouble for that as well. Just because I wanted to do the job properly. I said "Cos it's not me, it's the little things down in the cots down there that I'm worried about, and the nurses and the doctors, to make sure the mains go off, they can still operate cos the lights come on and the air conditioning and the hygiene and the humidifiers and the –god knows what else it is they use down there all works.

**What hospital was that?**

That was the hospital called the British Hospital of Mothers and Babies. Seemed to be a lot around the British way, a British Hospital, the Association of British Insurers, and later in life it was the British Council, which took me all over the world

**Really?**

So that was sort of full circle near enough now

**What were you doing for the British Council?**

Right, British Council. I went from the ABI, I was headhunted to the PRU. Peru was a different kettle of fish, really strange culture. If you got the key to the executive loo, you knew you'd made it. That says enough about the culture yeah? So stupid, but anyway. So I left there after about 11 years, and that was running all the maintenance for all the branches. We had 450 branch offices with about 6 capital buildings throughout the country, Northern Ireland. Went out there when all the bombs were going off and god knows what else, luckily got away with that. Went and saw this job advertised for a facilities manager, engineer for British Council so I went for it there, ended up working places like the wonderful New Delhi, Cairo, Sudan, Sierra Leone, Kiev, Odessa all over Africa, all the African states. Libya, just before it blew up (..) his nibs! Went out to Slovakia, lovely place, that was an amazing place, Northern Ireland, Scotland of course. Spain, beautiful - they got palaces turned them into schools in ...And a little bit of engineering stuff we moved, it may still be there if you go and have a look at the arch, there’s a guy called Clannery, Flattery, he died recently, motor neuron. Artist leaping hare a pair of leaping hares like this. Looked like they got a football on his foot But they were lovely people. I helped to move this from Madrid to London. It was a fabulous piece of work and it worked very well. This guy got me name up in light on this film as well so that was nice. And this thing sits there outside the British Council. And kids come along and they go....and the photographs and all the rest. Fabulous, it really was a fabulous and I enjoyed it and the people, for the art world, dealing with the Turners and the Gaugins and the Titians and Monets, all the rest of it, they were just like Oh so lovely! Lovely. So that was really nice. I enjoyed that. And then unfortunately about 2 years ago I had a stroke, and a mild stroke thank God. And I was looked after up at Guys St Thomas, wonderful people. So now I thought,

**Take it easy**

50 years I've been at it, I've had enough. So I've just packed it up and now I get by on a bit of pension and a little bit of plumbering. But that's getting quite popular as well!

**You're - you obviously do amazing quality work! You can't get away from it can you?**

I try to

**Amazing, what and amazing story. Can I just ask you one question about Bermondsey which is just because you've left you don't live here now, you've left. And it was just to ask you what your feeling about it is or what you miss about it, maybe, or do you miss it?**

I try not to miss it but occasionally the mind sweeps back. But I probably, now I'm 65, I'm probably feeling the same way as my mum did when she was about this age because even if I came back it would never be the same, all this wouldn't be there, them people wouldn't be there. I think I'd settle in alright because, I'm being that kind of a guy but things have moved on and I think you - I've always been a great believer in change and encouraging change and accepting change. Not resisting change. And I did, from time I learnt imperial to metric you see? So, I do miss it at times and thought about it this morning laying in bed I thought "wouldn't it be nice? I could come more often if they wanted me to." But then I thought "I've made a new life for myself down here and I do a bit of charity work and like tomorrow I'm volunteering at the Mills house children's hospice. So there’s a bit of a bittersweet thing about it. I never say no to the chance of coming back here and I marvel that the place is being looked after, and I hope that people are happy living side by side and I'm sure they are but I also like living in Kent. So I think I'm happy. I'm going to be a liberal here. I'm going to be a Lib Dem here and I'm going to sit on the fench and say my hearts here, but I can take it back to Kent with me when I like. I never say no to coming back in fact I do come back sometimes and see friends, we'll meet in the blacksmiths or we'll have a charity do or something like that. So I'm comfortable. I mean it's a fair way but it's not that bad. I do miss it but then I purposely close that bit off, there's no good pining for what it gone because you start looking back. You know so, I'm, I'm quite comfortable. And this has actually been quite therapeutic as well, because it actually lets you get rid of or lets out all those things that been building up or milling up in your mind for many years you know?

So yeah, thank you.

**Thank you that's just a fantastic story**!