



SHIPMATES

Reardon Smith Seafarer's Newsletter

Issue No.14 March 2000.

We have now entered the year 2000 and I wish you all a happy and prosperous New Year, and thank all members who sent Christmas Cards and messages to the "Shipmates" Team.

I am pleased to say that "Shipmates" has been going for four years.

I wish to remind you that it is one year since our first Editor, Captain Tim Lawson, crossed the bar, this was a sad loss to "Shipmates".

It was September 1996, Mr. Major, Captain Oliver Lindsay and myself, met in Tim's Office and talked about starting up a newsletter for Reardon Smith Seafarers. After much chatting we agreed to have a go. Tim being the main man behind it, because he had contacts, office equipment, photocopier, etc, to produce such a newsletter. We never had many names and addresses of RSL personnel. Paul Hunt who worked in Cardiff Ship Management was contacted and he gave us some names. Tim also advertised in "Sea Breezes" and several magazines.

The next thing was the name for the newsletter, we came up with all sorts of names, and finally agreed on "Shipmates". What a good name it was to choose, it suited all ranks, and is now known worldwide.

Each Thursday in the month of November 1996 we met, collecting material to go into the first edition of the newsletter. On 1st December 1996 the first issue was sent out with an application form for members to join. From that first issue we had one hundred applications for membership. This gave the "Shipmates" Team much encouragement and from then onwards with Shipmates passing the word around the world we now have one hundred and seventy members.

For the first year Tim produced the newsletters himself, typing, copying, stapling together the newsletter, writing addresses on envelopes, by hand, etc. He did this at weekends because he was busy with his office work during the week.

The fee was £2.00 for the first year and we are pleased to say that the fee is still £2.00 for the year 2000. I am sorry to say that the fee will increase in 2001.

We will remember Captain Tim Lawson for his special effort in starting the Reardon Smith Newsletter "Shipmates".

The Editor.

**This issue is dedicated to the four ships called
"New Westminster City".**

John Hughes, a one time Reardon Smith seafarer recently visited Melbourne on business and was reminded of life there as an RSL apprentice 35 years ago..... he looks back.

Where are they now?

Who'd believe that 35 years on I would find myself, with my wife, looking out over Williamstown, now an up and coming suburb of Melbourne, from the upper floor of our hotel in the middle of town.

35 years ago I was an apprentice on the Cardiff City, moored to an old wooden navy dock in Williamstown whilst the engineers tried for several weeks to get the Doxford main engine to work as it should.

Who else was there at the time?

Well memories fade, but I recall the master was Idris Williams, the mate I think was Dan John from Cardiff. The second mate I do know was Charlie Boyer (we both enjoyed the hospitality of the local church whilst we were there) and the long suffering Chief Engineer was Len (though I think we called him something else) Taylor from Appledore...

It was looking out over Melbourne and Port Phillip Bay, and recalling those distant memories, that stirred me into writing about the last 35 years, or at least a précis of it all and in the hope that the memories of others may also be stirred.

I was a deck apprentice with Reardon Smith from 1961, having joined from the pre sea college of the same name in Cardiff. My first ship was the King City, which I joined in Greenwells Dock in Sunderland, though my first experience of the company was being bellowed at by the large pompous doorman at the Greyfriars Road head office.

The master there was also Idris Williams. He was relieved, as we left the dock, by Captain Higgins, he and I spent the next two years happily together on what turned out to be a couple of circumnavigation's and my first taste of life.

As these memories are really about people I should try to recall a few. The first Chief Officer I encountered, thankfully I never met another quite as odd, was Oliver Lindsay. Then came Carney Davidson, a happy chap never more content than to be sitting in the apprentices cabin telling long and tall stories of times past... after those two the memory fades somewhat until I joined my first ship as third mate.

The Houston City looked right, lovely lines, megreggor hatches and Captain T.W. Picton-Davis.

Sailing with that grand old man was both a religious and a cultural experience, though what religion and what culture no one really knew. He owned more uniforms than there were days of the week and had an electric organ,

amongst a ton of other toys, he played it badly but with energy and often late at night. It echoed around the alleyways during the middle watches and was particularly active during heavy weather. Why he always chose to go north of the Aleutian Islands on Pacific crossings in winter is beyond a normal seafarers understanding.

His was the payoff that needed the agents car and trailer and a small van to transport all his kit when finally he left the ship for well earned retirement.

Joe Thornhill came next. Well maybe there was a voyage which was something of a world tour of Japan with Idris Williams on the Cardiff City somewhere in between. Those who remember him will know that Joe had a solid view of life, which was certainly true blue. We were together on the Houston City during the Harold Wilson Labour government so we were all at the receiving end of a lot of after dinner political advice. I always felt it unwise to challenge any of big Joe's views.

Part way through that voyage J.C.Lee joined as the mate, a strange deep thinking vegetarian, I couldn't help but wonder if he wouldn't have been better suited to a gentler profession that didn't involve people.

My next experience was on the Devon City; someone asked 'was that the 'old' Devon?' Well I don't know, this one was built around 1958 and this voyage, which started in Falmouth, was under the command of Di Beynon, now there was a character! Recently recovering from throat cancer, his cheerful manner was unchanging. Even when he fell off the stern of the liberty boat in Kobe harbour he came up smiling. That was, I think, the best voyage. Peter Borroughs was the mate; I was second mate and my old friend Alan Nichol the third mate. Our time was happily spent mainly in general cargo service in the Far East, Australia and the US Gulf coast. We finally flew home from New Orleans.

My final voyage with Reardon Smith was on the Atlantic City; Charlie Boyer was the mate and again Joe Thornhill was the master, I was the second mate. Our chief engineer was an eccentric Pole who lived in a brown dustcoat and never seemed to sleep. India, Australia and Japan were our trade routes and a pretty disinteresting dust covered eight months it was, only punctuated by the joyful news of our first daughters birth whilst we were in Port Headland.

I certainly left Reardon Smith with no regrets, well I was happy to see the end of the long voyages and bad food, but sorry to leave behind so many friends.

What happened next ?

I left as second mate, and joined Esso Petroleum Co. Ltd in 1969 as third mate (with rather more money and to ships that had unlocked fridge's groaning with quality food!) thus began a career in the oil industry that has taken me from third mate to VLCC master to Operations Vice President of Exxon's International Marine Organisation.

I was also privileged in 1997 to be elected a Younger Brother of Trinity House.

It took rather longer to get there than to write about it, there's no question but that Reardon Smith and latterly Exxon have provided me with a rich and fulfilling career.

I retired from Exxon in April of 1999 and am now the Executive Director of the Oil Companies International Marine Forum, based in London. It's a wonderful job and one that is right at the heart of the international marine world.

Our marine world is a small one; I meet people in so many different places who owe their first seagoing experiences to Smiths. For almost 20 years I worked in Esso with Gareth Jones (apprentice on the Fresno City). Charlie Starr (chess playing apprentice on the Welsh City) and who, until recently, was master in the Esso Petroleum coastal fleet.

I have quite regular contact with Tony Field, who is now working for Lloyds Register Quality Assurance, and during my visit to Australia I encountered the name of Graham Mapplebeck who now works for the Australian Marine Safety Authority in Canberra (he third mate, me second mate on the Welsh City during the Jack Dash Royal Docks strike). I met Jonathon Chalacombe (apprentice on the Atlantic City) sometime last year at the UK Chamber of Shipping, he is now a Director of Curnow Shipping.

And so it goes on Where are they all now? No doubt many will have gone aloft. For those of us still about there have to be many stories to tell and lamps to swing, so why don't we..... ?

Information Wanted :- Mike Cox wants to know the Nett and Gross Tonnages and Deadweight of the "Bibi" and "Tepozteco" if anyone can help please send details to :- Mr. Mike Cox, 4 West Litteton Road, Marshfield, Wiltshire. SN14 8NF.

S.S."Norwich City":- Due to lack of space in this issue we are unable to write about this vessel this time but, it will be published in issue No.16. If any member got any stories or information about the " Norwich City" will please send it to the Editor.

Obituary :- William (Bill) Henke M.B.E a prominent man in the shipping world in South Wales crossed the bar on 28th January 2000, aged 81. He worked for the Shipping Federation during WW2 and until he retired. He was on many committees, The Cardiff Merchant Navy Association, The Russian Convoy Club and many seamen's charities. He died at the Seamen's Memorial, sited at the Pier Head, Cardiff, which he campaigned for, and had erected. He was not a member of "Shipmates".

HISTORY OF THE FOUR SHIPS NAMED "NEW WESTMINSTER CITY"

S S "New Westminster City"(1)

One of eleven sister ships built by William Gray & Co. Ltd., of West Hartlepool for the Reardon Smith Line Ltd., between the years 1927 and 1930. All were steamers of about 4,740 gross tons with boilers capable of being fired by coal or oil.

The photograph, below, is of the vessel sailing from West Hartlepool in early September 1929 on her maiden voyage, bound for British Columbia, in ballast under the command of Captain Brice Thomas.

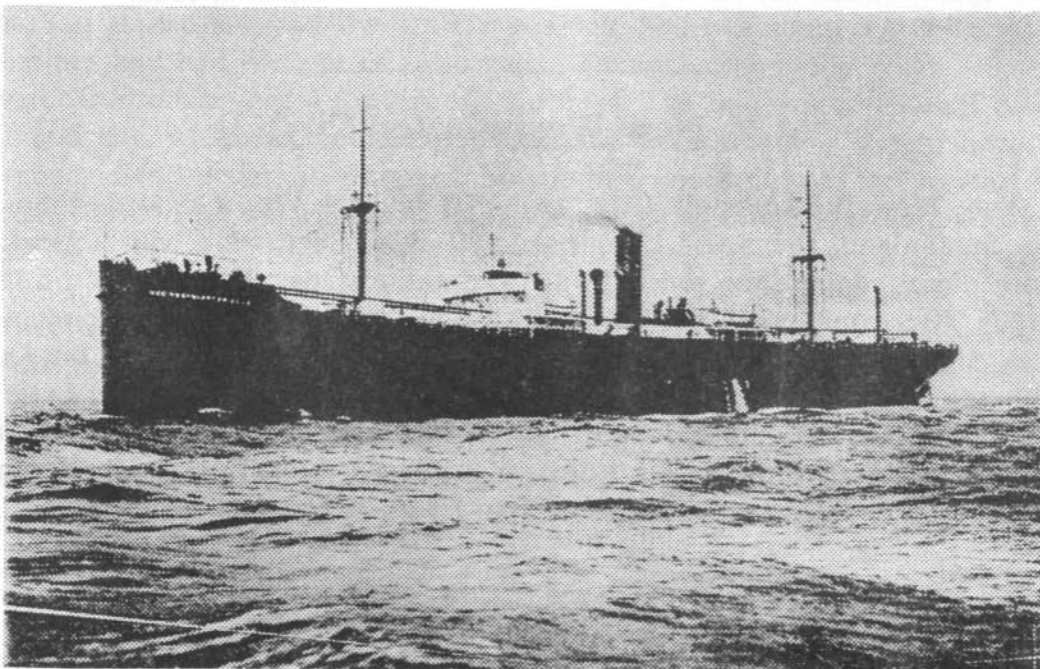
She arrived New Westminster B.C. on the 22nd October 1929 and her arrival was celebrated by a civic luncheon and reception and Captain Thomas was presented with a gold capped cane and plaque.

R.S.L. had inaugurated a liner service from British Columbia and U.S.A. west coast ports in 1928 and the S S "New Westminster City's" first cargo was loaded in this service.

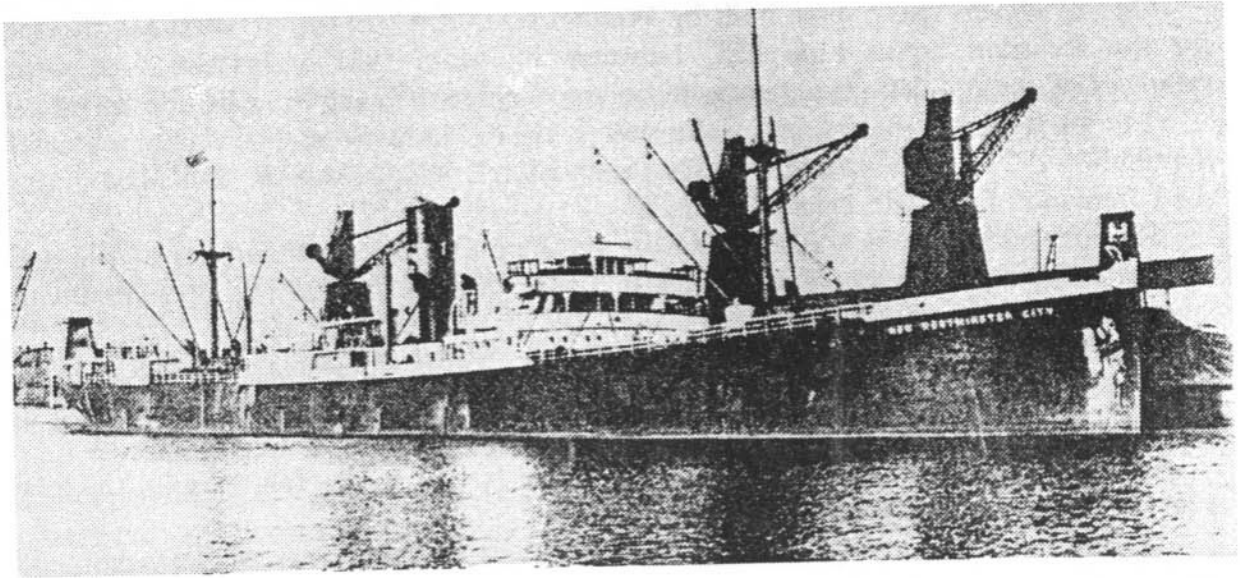
In the ten years before the onset of WW2 she traded successfully despite the lean years for shipping of the mid 1930's.

During the war her luck ran out on the 3rd April 1942, when she was bombed and sunk at Murmansk when berthed alongside discharging military cargo. Unfortunately two of the crew lost their lives and are buried in Murmansk. After the end of hostilities the Soviet Authorities raised the vessel, made the necessary repairs to make her seaworthy, loaded her with a cargo of lumber and she arrived in Penarth in 1948. Sir William Reardon Smith & Sons Ltd., were appointed by the Ministry of Shipping to be the agents for the vessel. After discharging the lumber she laid for a while in Penarth - she was sold to Irish Bay Lines Ltd., (H.P Lenaghan & Sons Ltd.) of Belfast. She was towed from Penarth to another port for extensive repairs and replacement of deck housing, bridge etc., on completion she was a smart looking vessel named "Dingle Bay". In 1951 she was sold by H.P Lenaghan & Sons Ltd., to Nakamura Kisen K K of Japan and renamed "Asakaze Maru" she was to serve her new owner for 15 years before being broken up in Japan

Oliver Lindsay



S.S. "New Westminster City" (2)



50. NEW WESTMINSTER CITY of 1929 owned by Reardon Smith. [W.I.M.M.]

Built in 1929 by Short Bros., of Sunderland, as the "Anglo African" for Nitrate Steamship Co., Ltd., (Lawther, Latta & Co., Ltd.) of London. Gross Tons 5601.

Purchased by Reardon Smith in 1943 from Lawther Latta along with the "Anglo Indian" and both ships absorbed in the Reardon Smith Line. Vessel did war service and at that time regulations prevented the renaming of the ships until the end of the war.

In 1948 the "Anglo African" was renamed the "New Westminster City".

The vessel was sold in 1949 to Ship's Finance & Management Co., Ltd., and renamed the "Lord Codrington" in 1958 she was again sold this time to Japanese Owners:- Tozai Kisen K.K. and renamed "Tozai Maru No.7". During 1956 was another change of ownership to Kusakabe Kisen K.K. and renamed "Risshun Maru."

She finally ended her career by being broken up in Japan in 1965.

Presented by O. Lindsay.

"M.V. New Westminster City" (3)

The "New Westminster City" (3) was built at Wm. Doxford & Sons Ltd., Pallion, Sunderland, she was 8,136 gross tons, 3,342 Nett tons, with a Doxford LB 700 bore diesel engine. She sailed from Corporation Quay, Sunderland, on the 12th June 1956, after completing sea trials, and storing, with the following complement:-
 Master:- Alfred Ward, Ch. Officer:- Mark Higgins, 2nd. Officer:- Jan Dennis,
 3rd Officer:- Mervyan Hollinger, Radio Officer:- Tom Tilk, Ch. Steward:- Leslie Smith,
 Chief Engr:- Arthur Thompson, 2nd Engr:- Newby Stanlay, 3rd Engr:- Alec Osborne,
 Elect. Officer:- Mr. Swinburn, 4th Engr:- Alan Martin, Junr. Engr:- Mr. Hutchinson,
 Junr. Engr:- Alan Duff. Junr. Engr:- Alec Donaldson.

The maiden voyage went as follows:-

From	To	Cargo	Miles
Sunderland	Baltimore(USA)	Lightship	3913
Baltimore	Alexandria(Egypt)	Grain cargo	5132
Alexandria	Kossier(Egypt)	Lightship.	500
Kossier	Kawasaka (Japan)	Phosphate cargo	7584
Kawasaki	Geraldton	Lightship	4276
Geraldton	London (via Cape of Good Hope)	Grain cargo	11,252

When the **"New Westminster City" (3)** was in Alexandria, it was the time that the Suez Crisis was beginning, but we had very little knowledge about what was going on. Abdul Mussa was the ship chandler in Alexandria, he could arrange to descale boilers, do small ship repairs, etc.. Now Abdul looked after the seafarers very well, giving them his personal attention each day, selling anything from underwear (best Egyptian cotton) that severely shrunk after the first wash, (caught again!). He would arrange a sightseeing trip to the Sphinx, with a tour of King Farouk's Palace thrown in, this was a favourite attraction at that time. King Farouk being exiled following a military coup in 1952. Abdul Mussa's taxis, picked us up at the ship, and give a guided tour of Alexandria, etc., where we finally ended up at Abdul's bar, and shop so that the boys could spend their money drinking his beer and buying presents.

Two days after clearing the Suez Canal bound for Kossier in Egypt in the Red Sea, the Suez Canal was closed to all ships, there was now no passage from the Mediterranean Sea to the Red Sea and Indian Ocean. Kossier was a small port and a pretty peaceful place, a small wharf, lovely clear water where you could clearly see the coral reef below. The Suez Crisis was on but there was no disturbances at Kossier.

The 2nd voyage was an eventful voyage where we had Salvage Money this went as follows:- Newby Stanley left the vessel, I was promoted 2nd Engineer, Alan Martin went 3rd Engineer and Alec Donaldson 4th Engineer a Junior Engineer we called Bellis joined the vessel. Gordon Walker joined as 2nd Radio Officer also 2 Engineer cadets, Mr. Williamson and Mr. Rodrick. Ch. Engr. Frank Rowell joined at Osaka.

The vessel sailed from London for Norfolk (Virginia U.S.A.) and loaded coal for Osaka. Lightship to Geraldton, West Australia, and loaded grain for Avonmouth sailing via the Cape of Good Hope.

The ship sailed from Osaka on New Year's day 1957 and the highlight of the voyage was when the vessel had passed the Philippines Islands the U.S.A. authorities requested for the **"New Westminster City"** to turn back to stand by an American "T 2" tanker called the T.S. **"Southern State"**. This ship was fully laden with grain. It took more than a day to reach the vessel's position. She was about 350 miles east of the Philippines and had run out of fresh water. Being a water tube boiler ship they had no water to produce steam to drive her turbines. The ship was completely blacked out night and day, which we could not understand because there should have been an emergency diesel generator onboard. Maybe they could not get this to start or didn't have any diesel fuel we will never know. It was strange because there was not much sign of life aboard, no one moving around during the day. It was overcast and cloudy and the ship was just wallowing in the heavy swell. We steamed slowly up and down past her for about two days until a tug arrived from Manila, it was then discovered that this tug was too small to tow the tanker, but the small tug stood by until a larger one came to the tanker. We were relieved and proceeded on passage to Geraldton.

On the 25/2/64 I was awarded my share of the salvage money for the **"Southern State"** which was £60.00. The Tax Man had his share 30%, I got £42.00.

Alec Osborne Ed.

M.V. "New Westminster City" (4)

Built Upper Clyde Shipbuilders. Ltd., Govan, Glasgow, in 1972 for the Reardon Smith Line, 16,706 Gross tons, one of the seven Cardiff Class bulk carriers built for the company between 1970 and 1972.

November, 1972 vessel was employed on the Reardon Smith Line, British Columbia /U.K./ Continent service, on the 3rd November when entering Cardiff fully laden with forest products, she unfortunately grounded off Penarth Head. Was subsequently refloated, however the vessel suffered severe damage. On refloating vessel entered the port and discharged the parcels of cargo for Cardiff and sailed for Bremen, 12th/15th and Antwerp 18th November where vessel completed discharge of inward cargo.

Vessel drydocked at Antwerp for inspection of the bottom damage and to receive quotations for the costs of the damage repairs from several Drydock companies. It was decided to take the vessel to Amsterdam Drydock, Amsterdam.

She sailed Antwerp for Amsterdam on the 3rd December arriving on the 4th and commenced grounding damage repairs which took about seven weeks.

Complement onboard New Westminster City October 1972

Captain:-	J.H.J. Thornhill	Chief Engineer:-	B.M. Draper
Chief Officer:	B. Jones	Second Engineer:-	W.A. Bruce
Second Officer:-	P.M. Baverstock	Third Engineer:-	J. Foots
Third Officer:-	P. A. Ward	Fourth Engineer:-	R.E. Diamond
Radio Office:-	E.G. Broham	Junior Engineer:-	P.A. Osborne
Ch Steward/Purser:-	R. A. Peach	Junior Engineer:-	A.H. Calder
Navigating Cadet:-	I. Cowan	Electrician:-	T. Willoughby
Engineer Cadet:-	S.B. Bath	Engineer Cadet:-	D.G. Wedlake

Vessel remained in the fleet until 1983 when she was sold and hereafter sailed under several names:- in 1983, "Kassia", 1986, "For", 1988, "Singe Wilrager", and 1990, "Norman Ranger".

Reardon Smith Line Shares 30 years ago.

During the month there have been numerous fluctuations, some aided by a continuance of the firmer freight rates and others by influences such as reports in the financial section of newspapers, The kind of report which has quite an influence on share prices is given below and appeared in the Sun newspaper on 12th January 1970.

"Shareholders in the Cardiff-based Reardon Smith Line can expect their ship to come home next month. For that is when the first six 25,000 tonner "tramp" ships currently under construction for the company at Upper Clyde will be handed over. Another three will follow within months; and the last two - for which the orders have been placed - will be ready next year. It will give the company - with 11 ships afloat at the moment - its biggest deadweight of shipping in its 60 years of history.

And for shareholders I forecast their ship will have come home in more ways than one. For the past few years the company has been taking advantage of the Government's policy of "cheap money" to help the struggling shipbuilders. It has meant

holding back. The shares are currently undervalued at just below 10 shillings mark - and assets at about 30s a share. The company should now start to reap the benefits of the world shipping shortage. And there is a technical situation which makes the company an interesting speculation: stock is difficult to come by on the market, since there is a large tied family holding". There was also an article in the Investors Chronicle which would encourage the purchase of Reardon Smith Line shares.

At the time of going to the press, the price of the ordinary and "A" Non-voting shares was 14/6d and 12/3d respectively, having started at 9/1½d and 8/1½d from our previous advices.

Missed the list.

Mr. Bill Gill from the Isle of Cumbrae, Scotland, writes to say that he was not on the December 1999 "Shipmate" membership list, sorry about that Bill, I will make sure it won't happen again. Bill says that him and his wife Marian are both now retired and probably working harder than ever. Good luck both, in your retirement.

I deeply **apologize** to the following members for missing their names on the December 1999 membership list :-

Mr. G. Gaywood from Carrickfergus, Co. Antrim.

Capt. Terry Haxell from South Shields, Tyne & Weir.

Mr. J. Robson from Seghill, Northumberland.

Mr. A. Thomas from Lisvane, Cardiff.

Mr. J. Tinsley from Barry, Vale of Glamorgan.

Mr. L. Townsend from Pinner, Middlesex.

Mistake:- In the Newsletter No. 13, page 11, it was stated that **Captain Lennie** was lost on the "**Cornish City**", this is untrue. **Captain Lennie** crossed the bar in his bunk, on the "**Empire Baxter**" from natural causes.

Note:- If you sent an article which is not in this issue it will be in one of the issues to follow.

New Members.

Mr. Joe Fitzsimmons from South Shields joined "Shipmates" last year and tells me he is sailing as Chief Engineer on the "Queensland Star". His wife Carol is sailing with him on the vessel. The ship carry passengers, so they have plenty of company.

Mr. Len Williams from Caerphilly, is now a member, he joined Reardon Smith in 1941 and was Director and Secretary of the company, from 1973 to 1985.

Miss A. Trehwella from Pendeen, Penzance, has known Reardon Smith ships for many years and was aboard the "Tacoma City"(3) when the ship was at Falmouth Docks. Avril kindly does some typing and work for "Shipmates".

Mrs. J. Shreebe from Gibraltar has had connections with the Reardon Smith for many years, her husband Marc is stationed at Gibraltar with the M.O.D.

Some Notes on a Visit to the Nuclear Fusion Development Unit at Culham near Abingdon.

The earth's atmosphere is made up of 78% nitrogen and 21% oxygen, the balance being made up of small amounts of argon, carbon dioxide, and water vapour. In the last 200 years we have gradually been fouling this mainly from the products of combustion of coal and oil, until at the present time we are pumping into this atmosphere about 10 million tons of carbon dioxide, 200.000 tons of sulphur dioxide, and lesser amounts of other noxious gases each year, and this is expected to rise by about 40% in the next 40 years.

This is already causing damage to the polar ice caps, ocean currents, and probably world weather, and on the above, fouling this can only get worse. The U.S. National Oceanic and Atmospheric Administration and the U.K. Meteorological Office have already warned of the danger. The small island on which the New Millennium first commenced, will not exist in 20 years time. It will be covered in about 2 or 3 feet of water..

Power stations using nuclear fission energy cause no damage to the world's atmosphere, but serious problems arise in holding and storing the dangerous waste products, which can have an after life of up to a thousand years. Also in the event of an accident can cause huge damage and loss of life.

In Culham, to overcome the above problems, they are working on the production of heat energy from nuclear fusion, an inherently safe process in the event of an accident, and with only low levels of radioactivity of waste products and materials for up to 15 years.

Nuclear fusion is the process used by the sun to supply heat energy to the solar system, including the earth. In this process 600 million tons of hydrogen are converted into 596 tons of helium per second giving out 4 million tons of heat energy to the solar system, that is a loss of only 0.7% of its weight for the vast amount of energy produced.

Due to its huge size, 860.000 miles diameter against 8.000 for the earth, the pressures available allow fusion to take place at the, comparative, low temperature of 10 million degrees. On earth to allow for this, it is necessary to go much higher than this, say 145 million degrees

Plasma is the fourth state of matter, that is a state which is neither solid, liquid, or gas. Deuterium is a heavy form of hydrogen, tritium is an even heavier form of hydrogen, and is slightly radioactive. A 50:50 combination of the two, forms a plasma which is being used at Culham to develop the fusion process.

Stated simply, for the fusion process, a cored apple shaped plasma, held in shape and position by powerful magnetic forces is inundated by a 1.000amp microwave causing violent disturbance of the atoms in the plasma so that in colliding and fusing

with each other they give off a small fraction of their weight in the form of heat energy.. Taking this into understandable units, an ounce of plasma would give off the the equivalent heat energy of 28 tons of coal, with no fouling whatsoever, and in the event of damage or failure in the fusion unit, the process would just stop.

The unit carrying out this process is a hugely complex machine with sophisticated control, diagnostic , and measuring equipment .As one example, the Kodak camera recording operating conditions in the plasma runs at 40.000 frames a second. At Culham with the existing fusion unit, they have only had fusion for less than a second.With the larger machine coming on stream shortly, they hope to achieve up to 5 seconds. These units and their development are hugely expensive and as bigger and bigger machines (power stations) have to be built which it is envisioned will take perhaps 40 years then worsening damage to the planet will continue.

There is full co-operation throughout Europe to help develop this fusion process, with even Russia giving worthwhile intellectual input and certain countries having their own development units but at present the U.K. is the lead country. It is possible that if we were fortunate enough to get the same kind of intellectual breakthrough they had in Los Alamos when developing the fission bomb, then fusion development could go much faster, and cost less.

To end these Notes.

In the Solar system, Uranus 32.000 miles diameter, Saturn 75.000 miles, Jupiter 90.000 miles, Sun 860.000 miles, after that, there is only a pile of debris one piece of which is the earth, fortunate among all the others to have water, an atmosphere, and heat from the sun which has given us human life. If however we don't do something rapidly about the above, then by the next Millienium, we'll have an unrecognisable planet, with vast areas of present land, buried beneath the sea, with all that entails. Perhaps just another piece of debris.

Spherical Takamak Power Plant

Key

1. Vacuum Vessel
 2. Toroidal Field (TF) coils
 3. Poloidal Field (PT) coils
 4. Central TF Rod
 5. PF Support Joint
 6. Sliding Joint
 7. TF Flexible Leaf Joint
 8. Solenoid (around TF Rod)
 9. Diagnostic/services port
 10. Coil Tails
- Vacuum Flask diameter 4 meters
 Vacuum Flask height 4.4 meters
 When on test Plasmas achieved
 10 milloin degrees C

