

British Section

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The McLaren Technology Centre, Engineering At Its Best



On 18th June a group of 30 members and guests had the privilege of a visit to the McLaren Technology Centre in Woking. Designed by Norman Foster the low building sweeps across the site with a long glass wall facing a large lake. The building has been designed with great precision, and inside it is remarkably clean and well organised. After an excellent finger buffet lunch we were split into 4 groups and lead by guides around the areas within the building where the various parts of the F1 cars are built. Each car consists of 13.000 parts of which the engine is just one item. The care and skill put into the design and build of each car is just amazing.

We viewed the wind tunnel where designs are tested and the rig where the crews practise their pit stop routine. We were not allowed to see the simulators where the drivers get to practice on the circuits before getting to a race venue. We viewed the many cars from previous years on display and noticed how the designs had changed with both new technology and changes to the F1 rules. A walk through a large light and airy tunnel brought us to the road car production facility which builds the performance cars which are sold to those who can afford them throughout the world. The people at McLaren gave us a truly excellent afternoon !



Pictures from the Foster Partnership website

Making a connection with French engineering and science

The Spring Voyage, On Board A Big Ship !



The First Two Days 4th and 5th May 2014 Reported by Tony Miller

After much time spent in preparing for the cruise on The Adventure of the Seas, 40 of us arrived at 13:15. All-in-all embarking was fairly painless. What an enormous ship - the largest cruise ship at sea when she was built a few years ago, She had 14 public decks and then a whole lot more below the waterline.

Once on board we started the process of finding our way around, our cabin (stateroom with balcony) - very good, our lunch - not bad. Then we commenced discovering the myriad of other restaurants, bars, shopping arcades, swimming pools, hot tubs, gym, spa, theatre, cinema and many others - all very grand. Just after 16:30 the ship dropped its moorings and pulled slowly away from the quay. It was quite remarkable how such a big ship can manoeuvre so precisely

The sea was calm and those in aft facing cabins were able to watch a lovely sunset. At dinner, we all met up and enjoyed a good meal with lots of catching up with each other and discussion of the next days' activities.



Day 2 started hazy and chilly, but soon warmed up for the 40 min coach drive to Bruges. It was beautifully sunny as we walked through the parks and drifted around the mediaeval streets, galleries and museums. There was time, but not much, to eat moules and down a beer or two. It was all very pleasant. Each evening we were given the Cruise Compass broadsheet for the following day setting out the timetable of the 40+ events and activities to come. At 19:30 there was a champagne reception in the Promenade, which was pleasant, with an informative address by the captain. It was edifying to know that we were among 3,260 guests being looked after by 1,200 or so staff. Some of the entertainments such as the ice skating and the Beatles Tribute Band were excellent.



Day 3, 6th May - Le Havre - Honfleur Reported by Kevin O'Keefe

After a near perfect day when the sun shone on our visit to the old town of Bruges the fates had their revenge on the Tuesday. To begin with the ship was very late docking in Le Havre due to some unexplained problem of port organisation. The result was that our tour to the picturesque old fishing port of Honfleur was even more delayed. However we got away and were pleased to have the chance to cross the Seine via the Pont de Normandie. This elegant, cable stayed bridge was opened in January 1995 and for a while boasted the world's longest span. We arrived in Honfleur at 10.15 to be told that we only had two hours for the visit.



. Our amiable guide, Noémi, seemed to take a delight in telling us of the good restaurants and local dishes that we would not have time to enjoy. She gave us an hour's interesting tour of the port explaining that at three periods during The Hundred Years War it was occupied by the English. The central harbour is still surrounded by timber-framed houses in the "Style Normand" and is criss-crossed with narrow passageways. The Church of St. Catherine was, she explained, built by the fishermen at the end of the 100 Years War, out of timber, as a temporary measure, but it is still in daily use and is the oldest timber built church in France. We were then released to explore the town but heavy rains drove us into the cafés and, eventually, back to the bus. Nevertheless, we did appreciate the charm and history of Honfleur.

When we arrived back at the ship our party broke up. Some took advantage of the activities laid on, some enjoyed the excellent free food available and some very brave voyageurs risked the delights of the hot tubs under the rain. The weaker spirits took a siesta to prepare for the camaraderie of the excellent dinner.

Day 4 and 5, 7th and 8th May Reported by Bjorn Hansen

The Ship was virtually stationary in the Channel all day as we were not far from Southampton. We had the opportunity to hear 2 presentations in a comfortable screening room on Deck 2.

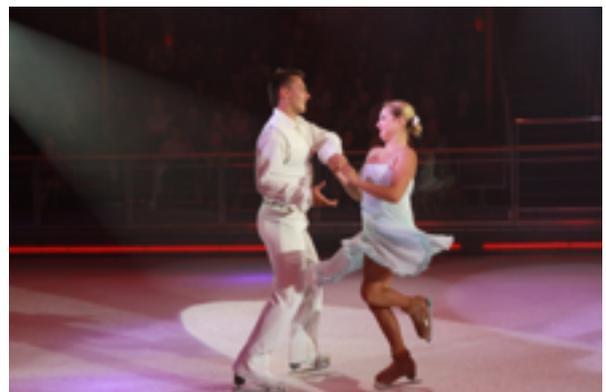
Ron Walker gave a presentation, '**Celestial Navigation**'. The determination of a ship's position on globe using sun, moon and certain bright stars (58 of 6,000 visible stars) and time

using knowledge of astronomy and mathematics. Ron described the history of navigational instruments from the 8th - 17th centuries and showed us a Sextant. The Longitude Act passed in July 1714 resulted in determining Longitude by a precision clock. Ron concluded his talk with technical information on modern day GPS satellites and functioning of GPS receivers.



After a short coffee break, David Brewerton gave us a presentation '**Light Railway Systems**'. The oldest tramway in the World is still operating (Magnus Volk's electric railway Brighton 1883). By 1915 London had the largest tram network in Europe. Nowadays, Metrolinks are proving very popular with the general public. One of the top three UK projects is the expansion of Manchester Metrolink (£1.5bn) to be completed in 2016. David considers that future systems will be similar to the successful ULTRA Personal Rapid Transit (four passengers per driverless pod) at Heathrow. Proving extremely popular with the 1m Business Class passengers transported at present.

A Vote of thanks for two very informative presentations was given by Peter Blair Fish.



The afternoon Ice Show was stunning with ice dancing and trapeze. Later Royal Caribbean singers and dancers performed in 'Jackpot' at Lyric Theatre. We all convened in the Vivaldi Dining Room, for a final excellent dinner. Afterwards some of us attended the Farewell Sing-a-long/Dance Party on the Royal Promenade,

On Thursday the ship docked silently at City Cruise Terminal, 5.30 am. Drawing the curtains we looked out onto dreary, wet Southampton as crew and guests prepared for disembarkation. We finally dispersed through torrential rain after four very interesting and enjoyable days

President's Day, Farnborough Airport, 20th May

We all assembled in the car park of the TAG Farnborough Airport, and set off by coach for our tour. To me the airport was a surprise. I remembered the old Royal Aircraft Establishment with trials and experimental flights as research and development takes place. It was used for this purpose over two world wars and 40 years of the cold war. But today it is far from that. We saw numerous clean and sparkling private jets parked on the tarmac with smart new hangars and control tower. We went inside one of the hangars where two private jets sat very clean and polished. Later we visited the control tower, both downstairs where the controllers were viewing radar screens and upstairs with a brilliant view of the whole airport and its numerous private jets laid out in front of us.



The company TAG who also make the watches, purchased the airport on a lease in 2003 and the freehold in 2007. Since then they have spent many millions developing the airport as a premier airport for private jets so the major airports can concentrate on airline traffic.

After an excellent lunch at the Aviator Hotel, a new hotel also built by the TAG Company, we visited the Farnborough Air Sciences Trust. A group of enthusiasts, mainly people who used to work at RAE, looked after and cherished many of the old artefacts from the RAE and which have a place in the fascinating history of aviation. One main exhibit is a full size replica of the first powered plane to fly in the UK, flown by Samuel Cody in 1908. We all felt that more should be spent preserving the history of the important role of the RAE in the development of aviation.



Finally we all visited the Flight Safety International building with its 14 simulators of smaller jets where the private pilots train and keep current with the job of flying their aircraft. In groups of 4 or 5 we were allocated to an instructor who took us in one of the simulators. We all had the opportunity of "flying" the simulator, causing much laughter as well as surprise!

A fascinating day. On 27th May a second group went through the same programme. All now well prepared for when we buy our own private jet!

Our Secretary John Beck is assisting Sir Alcon Copisarow, our patron from 1992 to 2013, to launch a book of his memoirs. The book will be published soon and will make fascinating reading.

Nuclear Fusion - Clean Power for the future?

Our lecture at the RAF Club on 9th July was by Dr Neill Taylor, Project Leader on Safety and the Environment for the European Consortium at the Culham Centre for Fusion Energy. He spoke to us about the Promise of Fusion Power.



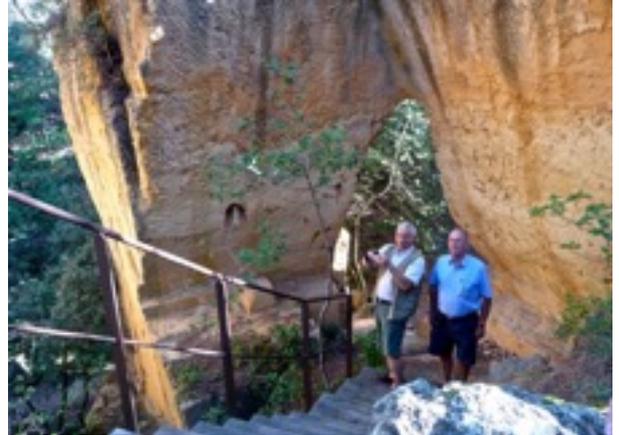
Dr Taylor gave us an enthusiastic talk explaining the science and technology of nuclear fusion and how it could be a new energy source that is safe, clean, and virtually inexhaustible. The technology needed to capture this energy is very complex. His talk was very pertinent to our upcoming Voyage d'Etude when we would be visiting ITER, the new larger experimental fusion unit at Caderache in Provence..

Voyage d'Etude, Aix-en-Provence 3rd to 7th September 2014

Arrival and a Day of Cézanne Reported by Chris Lumb

A late Wednesday morning check-in time at Heathrow made a civilised start for the thirty-six voyagers who travelled by air, After two changes of Gate number in barely more than five minutes, we were able to board the flight. Two hours later, in Marseilles, where the weather was pleasantly warm, familiar faces were in the arrivals area to welcome and guide us to our coach for the 30-minute drive to Beaumanoir Hotel, where there was another warm welcome from the 'car brigade'. The hotel was

comfortable, if somewhat distant from the centre of Aix, and it boasted a pleasant outdoor area for socialising, adjacent to the swimming pool that was used by some voyagers during the stay.



Thursday saw us boarding two coaches for a short journey to a parking area, where we transferred to minibuses to be driven up a narrow track to the Bibémus Quarries entrance. Although now overgrown to some extent by trees, we were able to see the rich colours of greens, browns and ochres that, together with the blue sky, provided Cézanne with colour-laden views for his paintings during the last decade of the 19th Century. All too soon, we left this fascinating spot to travel a short distance uphill to the 87.5 metre high Bimont Dam on the Infernet River, opened in 1952.

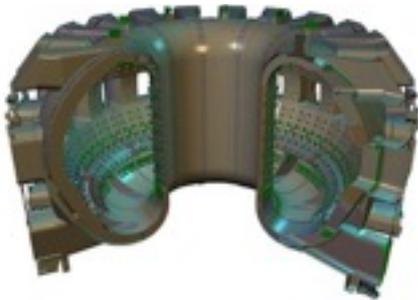


Returning to Aix, we were dropped off at the massive 154-yr old Fontaine de la Rotonde, from where we walked to our lunch date. This was at the iconic Brasserie les Deux Garçons, with grand

décor unchanged since 1792. We were able to imagine Cézanne and his friend Emil Zola enjoying the same ambience, over a century earlier.

After lunch we visited Cézanne's house at Les Lauves, above the town, that he built in 1901. Here his studio is well preserved, just as he left it on his death on 1906. There was something haunting, yet wonderful, in seeing this hallowed space, still containing many of the objects that may be seen in his paintings. A short drive from here took us to the Chemin de la Marguerite, where he painted a number of views of his beloved Mont Sainte-Victoire, after which we saw the large house at Jas de Bouffan that his father bought in 1859, and where Cézanne had his first studio. Altogether a long but absorbing day, rounded off by an excellent dinner at the Brasserie Léopold.

A Day with the Future of Energy Production? Reported by Andrew Graham



Picture from ITER website

On Friday the group visited the ITER tokamak site near the French nuclear site at Caderache. This is a very large international experiment involving the nuclear fusion of deuterium (heavy hydrogen) with tritium (even heavier hydrogen) to produce energy for electricity in a very safe and clean way, and producing helium and a neutron as part of the process. In the morning ITER staff gave scientific lectures on the project and emphasised the safety requirements in controlling plasma at 200 million degrees C and the resultant energetic neutrons. The fuel is a deuterium/tritium mixture and about two grams are maintained in the magnetic field. International collaboration enabled the necessary

funds (\$50 billion) to be available and the EU, Russia, India, Korea, China, US, Japan are each providing parts of the structure rather than funds. All these countries possess much smaller tokamaks, in the UK represented by JET. The experience gained worldwide is harnessed in the construction of the ITER machine. This is an experimental setup and no energy will be available for external users. If this plant works successfully providing the planned energy output of ten times the input energy, the next stage, DEMO, will have the ability to produce external, useful, energy. After an excellent lunch in the ITER restaurant provided by the host organisation we were shown a video of the stages in construction.



Picture from ITER website

The associated presentation greatly helped our understanding of the jigsaw of pieces and how this tokamak is to be put together. We next boarded coaches and were taken to see the construction site with the finished concrete base ready for the next stage. We now have a much better appreciation of the size of the structure and the challenge to the programme in scaling up all previous tokamaks by a factor of at least ten. Following the day of fusion science came an excellent dinner in the Chateau de Cadarache at which the group relaxed after a day of information.

Thanks to all who sent me contributions for the Newsletter. Space means some will be used next issue. Please keep them coming. Bill Bayly, Editor, anthony.bayly@yahoo.co.uk

Saturday 6 September - An Ancient & Modern Chateau

Reported by Humphrey Pocock

On yet another sunny morning we arrived at Chateau La Coste nestled in the hills to the north of Aix-en-Provence, which turned out to be a mixture of ancient and modern. Evidently, wine was first made here by the Romans and for seventy years it was in the hands of a French family who produced only rosé wine. However, an Irish businessman by the name of McKellin bought it in 2002. Seeing a potential for further development he enlisted Matthew Cosse a well-known winemaker from Cahors, to modernise the production. Whereas previously rosé wine had been made in large quantities, nowadays red, white and rosé wines are produced in less quantity but of better quality.

After being shown the shell of the old winery soon to be a museum, we viewed the new one that is housed in two buildings that resemble modern aircraft hangars. As the vendage was in full flow we witnessed the grapes being crushed before the juice is transferred to stainless steel tanks. The best wine is aged in oak barrels and a limited amount of it is blessed by a rabbi to be sold as kosher wine to the Jewish quarter in Marseiile.



Naturally we had an opportunity to taste some of the products under the guidance of Edouard and purchases were made by some of the voyageurs. For lunch an old custom of voyages, that of a picnic, was revived. The excellent food of a wide choice of chacuterie, wonderful breads, and especially the cheese, was accompanied by

the Chateau's excellent wine. In the afternoon there was an opportunity to take a guided walk in the grounds to view a collection of sculptures that are examples of work by leading artists of the present day.



The one that attracted the greatest interest was a work by Paul Matisse entitled "Meditation Bell". Not wishing to miss the tour Geoffrey Cope was driven round in a golf buggy, but managed to climb the steps of the outdoor theatre to sing a lovely chorus to the delight of all.



We returned to the hotel the Gala Dinner at which Peter Blair-Fish presented gifts to Peter & Rae Varley and Ron & Nancy Walker and thanked them on our behalf for their efforts in staging such an excellent voyage.

The Last Day -A Tour of Aix Reported by David Brewerton

On the last day we were driven back to La Rotonde in a larger coach for a guided walking tour of the centre and old town of Aix.

We walked up the south side of the beautiful tree lined Cours Mirabeau. The population was only 27000 in the 18th and 19th century (now 140,000), and the old parliament building was demolished to create La Rotonde and Cours Mirabeau. Many grand houses line the street with vast "staircases of vanity" inside and ornate statuary on the front facades.



The city fathers provided a free water supply for all, with over 100 fountains, many still functioning. Nowadays there are over 750 lawyers in the city, which has France's Court of Appeal, and over 50,000 students at the University. We saw Cézanne and Zola's school, the Lycee Mignet, and the house of the 17th century sculptor Pierre Puget who had 3 wives and 18 children. The partially restored Place D'Albertas showed the difficulty of mixed funding with 50% state, 25% council and 25% owner, with some owners reluctant to cooperate.



We saw the colourful markets in the squares, and an amazing stall of every type of edible fungi, the Archbishop's Palace where there is a 3 week outdoor opera festival every summer, and the

13th century Romanesque/Gothic cathedral with its rare octagonal baptistery founded in AD 580. At the Place de la Universite, Cézanne studied law but found it boring and went to Paris to paint instead

After the tour we enjoyed drinks and lunch in the beautiful squares in time for our farewells and thank you's, and a very pleasant and trouble free journey home.

Welcome to New Members

We are delighted to welcome our new members since the April Newsletter

Philip Wilkinson. Introduced by our Patron Robert Mair, Philip was an undergraduate at the Lycée Louis le Grand, Paris, and a post graduate at Ecole Polytechnique and at Imperial College (Business School). He worked for ITT Africa and Middle East as Manager Telecoms . He has also held senior positions in shipping companies

Leonard Threadgold. Len has been involved with Site Investigation and Geotechnical consultancy for over 48 years. In 1983 he established Geotechnics Ltd, now one of the largest independent geotechnical consultancies, and has been involved with many geotechnical projects world wide.

Chris Bridger Chris is a civil engineer with wide experience as a Project Director, recently responsible for Blackfriars Station and Bridge Project. Previously experienced in airports, railway, and healthcare projects.

Garry England. Garry is a civil engineer experienced in engineering and programme management with the railway industry. Having worked on a number of railway projects he is Programme Manager for Great Western Electrification and Infrastructure projects