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Interview with Paul Galbraith

Paul Galbraith's six-year tenure as Chair of JPEL/64, the decision-making committee for the BS 7671 Wiring Regulations, came to an end last year. His tenure culminated in a Leadership Award presented by BSI. Here, Paul chats to us about his time as Chair.

Can you please tell us about your career and how the electrical industry has changed?

I served an electrical apprenticeship with Whipp and Bourne Switchgear Limited in Castleton, Lancashire from 1961 to 1966. I was part of their erection, testing and commissioning team from 1966 to 1972, and worked on many prestigious projects, such as, installing low-voltage and high-voltage switchgear on the Cunard passenger liner Queen Elizabeth. I then moved into their sales and contracts department where I specialised in tendering for d.c. traction contracts for Mass Transit Systems globally. Our first major success was a contract with the Illinois Central Gulf Railroad, Chicago in 1976 which was my first of many overseas experiences.

In 1978 I was invited to join a small team who were setting up a wholly owned subsidiary of the French company Merlin Gerin. During my time there I held a number of roles including Technical Manager, Product Manager, Design Manager and Engineering Manager as this organisation grew into the market leader that is now Schneider Electric.

My latest post of UK Manager for the Standards and Certification division, which I gained in 1996, enabled me to participate in National, European and International standardisation on a full time basis.

Throughout my career I have seen many small and medium-sized enterprises (SMEs) in the electrical industry fall by the wayside or become incorporated into larger international organisations such as Schneider Electric, Siemens and ABB.

What is it like being the chair of JPEL/64?

Being the Chair of JPEL/64 is very demanding, whilst at the same time very rewarding. The number one priority for the committee is to ensure that BS 7671 is not compromised in any way. During my two terms of office I have been responsible for the introduction of the 17th Edition and its amendments, including Amendment Nos. 1 and 2 and, of course Amendment No. 3, which was issued in January 2015 and which comes into effect in July 2015.

BS 7671 is based on the international electrical installations and electric shock standard IEC 60364 and the European equivalent HD 60364. As both of these standards consist of numerous separate parts, which are often not totally up to date with each other, it can be very difficult keeping BS 7671 synchronised with them. This is why it is necessary to produce regular amendments and new issues.

JPEL/64 consists of forty-two members and meets approximately five times a year. It is not possible for a single committee to undertake the amount of work needed to cover the many aspects being addressed. For this reason there are four panels, Verification, Thermal Effects, Shock Protection and External Influences, which carry out the work and report back to the main committee. Often the need also arises for the setting up of project teams to deal with a specific topic e.g. the Part 7 section dealing with Electric Vehicles.

This whole process could not function as it does without the secretariat support of the IET and BSI.

You're also the Convenor of an international Working Group – can you tell us more about this?

Being the Convenor of an international Working Group carries similar responsibilities and duties to that of Chairing JPEL/64. However, there are added complications, the first being the different languages and the second the different cultures. I am very fortunate in so much as English is the international language in Standardisation globally. There can, however, be problems with translations, which sometimes hamper reaching a consensus. I find culture to be the most interesting and rewarding part of both International and European standardisation work. I have found that it broadens your horizons and demonstrates that your way is not the only way, and sometimes not the correct way either. Driving on the left is a good example.

What are the future developments in electrical installations standards?

The immediate future development in electrical installations standards will be to consolidate all the constituent parts of IEC 60364 and HD 60364 into a single document. Not only will this make it easier to use, it will also be a perfect opportunity to bring all the different parts up to date. It will then be much easier to mirror those changes in BS 7671.

Historically electrical installation standards have only considered safety related requirements; however, 60364 standards are now introducing new parts that are non-safety related, such as Energy Efficiency and LV requirements with respect to smart grid/micro grid.

What does the future of engineering look like, and what are the more exciting regulations you expect to see debated?

I foresee some very challenging opportunities in the future of electrical engineering; the most exciting being questions around the introduction of renewable energy into the existing electrical infrastructure. Historically in the UK, the electricity supply network has had a limited number of large base loads generated from typically 600 MW power stations that feed the grid twenty-four hours a day. Smaller generating plants with much faster response times are then utilised to support the peak time demand. In contrast, present day renewable energy generation is generally many small loads in the order of kilowatts with no base load capabilities. One big challenge is how the UK will cope with the ever-increasing demand for more electricity as a number of 600 MW power stations are reaching their end of life.

From a standardisation viewpoint, one avenue being pursued is to move from alternating current to direct current generation, which brings me full circle in my career to where I was in the 1970s.