Curriculum Vitae: DR E. J. France --- 2021 --- Short version. Personal Details :- Name : Dr Edwin James France.- F.I.MMM .-M.Weld.I.- C.Eng. - M.C.Q.I. Address : 9 Myrtle Grove, Whitefield, Manchester, M45 7RR Telephone: 07847 - 696 - 836 E-mail: enquiries@ejfranceconsulting.co.uk Website : E. J. FRANCE CONSULTING.co.uk

Professional Qualifications and membership numbers.

Bachelor of Technology in Metallurgy --- Doctor of Philosophy, at Brunel University.

Fellow of the Institute of Materials, Minerals and Mining--- 00139866 Member of the Chartered Quality Institute --- M015151 Member of the Welding Institute --- 53998781 Chartered Engineer --- 312956

Previous Work Experience.

- 1975 1978 --- Senior Welding Metallurgist, Fairey Eng. Ltd, Stockport.
- 1978 1979 --- Vessel Engineer, Fluor Petrochemical Ltd, Manchester.
- 1979 1987 --- Materials and Welding Fabrication Engineer, BNFL, Risley.
- 1987 1988 --- Welding Services Manager, Williams- Fairey Eng. Ltd.
- 1989 1999 --- Materials, Welding, Quality Consultant, Director, Owner. Fabrication Technology Interface Ltd, Ashton-under-Lyne.
- 2000 2001 --- Quality Manager / Consultant,

BEP Surface Technologies Ltd, Bury, Manchester.

2002 – --- Materials, and Welding Fabrication, Quality Consultant, Self Employed, as E. J. France Consulting.

Professional Recognition and publications. President of the Manchester Metallurgical Society 1988 – 1989.

Made Fellow of the Institute of Materials, Minerals and Mining for my contribution to welding science.

Design Manual for Structural Stainless Steel... Published by the Nickel Development Institute, June 1994...Contributed to the text and research and development programme via my consultancy company of the time Fabrication Technology Interface Ltd. Paper: "What can be learned from the welder?" Welding and Cutting Journal Issue 4/2008 ---- this is the fundamental paper that revealed and established for the first time, the truth regarding welding engineering, i.e. welding engineering is empirical science only.

Paper in the Steel Times International Journal, September Issue 2020, Volume 44 No.6, pages 22 - 27 entitled : "The nature of welding and its relationship with the steel industry" --- The paper established that "welding" is in fact atom bonding and it has a symbiotic relationship with the development of metals and their alloys. --- Further the paper went on to reveal the existence of an engineering virus that is crippling the welding fabrication industry in all aspects.

Publication related to ability as welding engineering expert witness: Paper entitled "The Alexander L. Kielland Disaster Revisited: A Review by an Experienced Welding Engineer of the Catastrophic North Sea Platform Collapse." --- In the Journal of Failure Analysis and Prevention 2019, volume 19, pages 875 – 881. --- The paper for the first time, in forty years after the incident, discovered the true cause of the platform collapse which is the explanation now accepted world - wide --- it was bad welding practice. ---- Why was there bad welding practice, well it was due to the undesirable influence of the engineering virus.

Examples of actual practical expert witness in the industrial environment: In 1992 --- Sorted out Beryl gas field pipeline hydrogen cracking in circumferential stove welded butt joints. --- Provided to all companies involved on the project the explanation as to why hydrogen cracks were present and then revised existing weld procedures to cure the problem.

Leaking Stena Seacat vessels in Holyhead: Determined the reason for these vessels forever exhibiting undue leaks that prevented regular usage and requiring an inordinate amount of disruptive weld repair and maintenance work.--- Recommended a welding derived solution to the problem.

Failure of a gimbal expansion unit in a fire fighting facility on an oil rig in the North Sea. --- Found the reason why the unit had failed, it was caused by bad application technique of the TIG process by the coded welder. Redesigned the unit and supervised the production of a replacement. Synopsis of some of the acquired experience, skills and capability from working in industry over 45 years :-

1. Originate cost effective methods of fabrication by application of new and the appropriate technology to manufacture products, especially in aluminium alloys and stainless steels.

2. Train and test welding personnel to satisfy any weld quality and standard.

3. Give lectures on metallurgical / fabrication subjects to any type of audience, e.g. professional engineers, senior management, university students, professional societies.

4. Undertake expert witness services in technical disputes and where litigation is proposed.

5. Carry out failure analysis and metallurgical investigations.

6. Advise design engineers how to design for welded fabrication.

7. Providing advice on the selection of materials and the characteristics involved in their usage.

8. Technical liaison with research and development organisations on manufacturing techniques usually welding but not always restricted to this subject.

9. The derivation and preparation of fabrication product specifications.

10. Scrutinise and approve fabrication procedures of equipment e.g. nuclear containers, which have potentially serious health and safety connotations.

11. Derivation of rectification and repair schemes to bring products back in line with specification especially where considerable sums of money are at stake.

12. Technical liaison with design engineers and contractors with reference to fabrication problems of equipment for nuclear applications from the design stage, tender exercises, to actual manufacture and installation on site. The process was not restricted to nuclear but other more commercial products.13. Derivation and preparation of quality manuals and systems to satisfy any

specification including the ISO 9001:2000.

14. Carry out supplier assessments and quality audits for any specification requirement.

15. Organise conferences on metallurgical / engineering subject matter.

16. In addition to the professional mode of operation I still can carry out the practical welding skills required because to me it is part of the job.

All the above welding engineering experience coupled with my natural talent makes welding coordination activities second nature.

C.V. Dr E. J. France 2021