KEEPPING
UP TO DATE

Sir – What follows qualification? Can we expect to be taken seriously as a leading engineering institution whilst there is no formal requirement on a member after qualification around 30 years of age? A qualification achieved around 1960 is still sound in basics, but not convincing on all the developments in manufacturing management and technology which have occurred since that date.

What does our Institution offer to the majority of members after qualification to assist their development to being leading practitioners? What is the incentive to the younger qualified members to see our Institution as critically important to the development of their careers?

I suggest that the future success of our Institution and of its members depends on finding answers to these questions. This inevitably will identify the need for training and development after qualification. I suggest a rolling programme of requirements to be met, say every five years, in order to retain membership of a corporate grade.

It may be argued that members will leave this Institution for another which has no such requirements, but that is a short-term view. Employers will quickly recognise the importance of updated qualifications and our Institution and members will prosper from a commitment to excellence.

I invite members who agree with this strategy to make their views known and contribute to the debate.

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POWER TO THE PEOPLE

Sir – In the President’s letter ‘What’s in a Name?’ (Feb 1989) he suggests three roles of engineers in manufacturing: operational, manufacturing development engineering and manufacturing management. He says that in some countries operational engineering is labelled industrial engineering. While this role is certainly one which a proportion of engineers undertake, the industrial engineering is very much wider.

It is not appreciated in this country that engineers in North America and elsewhere with the typical broad based 1E education and training, operate successfully in industries such as health care, passenger and goods transport, port operations as well as financial services. In the latter, getting the paperwork through fast and correctly checked is a complex processing operation with a high financial penalty for lack of quality control.

I was responsible for the Industrial Engineering Department in the University of Hong Kong from 1973 to 1981 and my experience and that of my successor, Professor N N S Chen, is that our graduates, because of their broad-based first degree, rapidly rise to management positions in the very competitive Hong Kong environment in a wide range of industries from garment making to industrial risk insurance.

I heartily endorse what the President says about the importance of engineers in the manufacturing management role, but success here depends not only on the understanding of the technology and processes but also of people, their needs and aspirations within the system. Many failures in UK industry are due to expecting people to adapt, with little or no training assistance, to impose systems rather than adopting a ‘people-centred systems engineering’ approach. This concept must surely be an element in our engineering education at all levels but it does not appear in any of the letters commenting on the President’s article in the April 1989 issue. But Michael Slade’s article, ‘The Human Factor in the March Journal is very relevant to this, as is Stanley Oliver’s contribution ‘Zen and the Art of Excellence’ in the April issue. Just look at the Japanese ranking of the importance of ‘Knowledge and Understanding of human nature’!

Sticking to the hardware, and now the software, of engineering, is to my mind, an old-fashioned view which has landed engineers where they are – at the bottom of the professional heap with little top management representation. Perhaps some emphasis on ‘Peopleware’ as an essential part of an engineer’s education is relevant.

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OUT OF CONTROL

Sir – An article such as ‘FMC and JIT: The Odd Couple’, Schott and Wilkinson, (Production Engineer, April 1989) which raises issues of human involvement in manufacturing systems is to be encouraged. They are all too few in the literature. However, on reading the article I am left with more questions and ‘so-whats’ than are helpfully addressed by Schott and Wilkinson.

Although data exists which would allow useful comment on many of their points, it is one of their apparent main themes – the possible changes in who controls manufacturing systems – which particularly interests me. This is because alternative data suggests possible issues of contention to their assertions. These are: (1) the authors’ definition of control. Do they refer to control of the product, the technology, the finances, the hardware, the software, and/or the people? Research suggests that control by managers of any of these is imperfect: they only have partial control. (2) The authors’ implication that control is a static entity, able to be passed from one group to another. Surely it is more dynamic, variable and partial than this? It is fluctuating over time and from company to company, often potential rather than actual, jointly held in continuously varying degrees by differing persons or groups, perhaps with broadly similar aims. (3) An apparent implication that human involvement in manufacturing systems is good, which socially I applaud, but which collected data suggests may be a danger to the systems. Errors due to human activities in such systems can be shown to be on a massive scale. Frequently it is detrimental to the extreme. No wonder that engineering policy may be based on ‘distrust of the human agency’. People interfacing with machines may not be the best use of human skills. This point I feel is still open to empirical investigation. (4) The authors’ quotation of Rosenbrock to the effect that design engineers share ‘a matrix of attitudes, assumptions and beliefs resulting in a limited range of problem-solving techniques and solutions’. I have read this previously and doubt the claimed result.

Whilst agreeing generally with the more human approaches of Schott and Wilkinson, perhaps their argument could have been drawn more tightly. In which case their warnings to the UK manufacturing industry would have been more soundly based.

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BREAKING THE MOULD

Sir – Reference the letter in the April issue of the Journal from Mr R A Mould of Wokingham. Mr Mould should realise that he too can generate intense irritation!

The facts are that the Institution has about 2% of its membership that are active in committees. Perhaps another 8% attend meetings. The elected officers are very conscious of these facts and seek ways of increasing the extent of membership involvement. The officers know that the activists are very largely in favour of the name change of the Journal; hence the proposal that was announced in the February issue. At that stage it was a proposal based on what the officers believed to be the best interests of the Institution.

But the Institution belongs to the membership, not to the officers, not to the activists. (Failure of the I MechE officers to recognise this led to the failure of the merger recommendations.) The Journal is the only means of communication with all members and that is why the proposal to change its name was aired in its pages. The percentage of members who were stimulated to argue against the proposal was minimal and therefore the officers saw the proposal as being generally acceptable and the name change has gone ahead.

One individual alone does not have tremendous influence, but the ideas of one individual can generate support from many; which does create influence. So please do not get intensely irritated; make proposals as persuasively as you can and help us to move this Institution forward with the speed that is necessary.

Mercom Lunt
Chairman Publications Policy Board
Chairman-elect of Council