

Jeff Smith

‘Always an engineer at heart’

As the principal engineering witness in a successful High Court test case, Jeff Smith is used to a challenge. He is the first president of the Institute from the former Institution of Mining and Metallurgy (IMM) and is aware that some may still view him as coming from ‘the other side’! Sally Wilkes spoke to Jeff about his work as Managing Partner of the mining consultancy Wardell Armstrong, and his objectives for the Institute this year.



What made you choose mining as a career?

The launch pad was my interest in underground caves and tunnels. I'm originally from Stockport near the Peak District where there are lots of tourist caves and mines, and every time there was an opportunity to go underground and view some sort of feature or a tunnel I'd be first in the queue! I was always an engineer at heart, and at university there were five principal choices for engineering courses. I started off as a Mechanical Engineer at Newcastle University doing a general degree, and then did a 12-month conversion course leading to an honours degree in Mechanical Engineering and Mining Engineering.

What work have you been the most proud of in your career to date?

The biggest thing I've been involved in, with the most personal commitment and therefore the largest amount of stress, was being the principal engineering witness in a Respiratory Disease case [Jeff was appointed by the British Coal Respiratory Disease Litigation Group on behalf of miners with chronic bronchitis and emphysema]. I was on the witness stand for nearly five days giving evidence in the cases of eight miners. It was a test case, and

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the preparation, research and reading took many hours over many months, with a great number of sleepless nights in-between. We won the case, and as a result designed a computer model to help come up with compensation amounts following the judgement. I am still involved in an extension to this case.

What is the major Department for International Development (DFID) study into artisanal mining that you are managing?

The project is concerned with poverty in artisanal (subsistence) mining. A lot of the world's poorest people depend on this type of mining, which is carried out in small cooperatives and family-run activities where they dig for saleable minerals at a very low return. The minerals are collected by agents and sold, with the profit multiplying at each stage. The people at the blunt end are extremely poor and we're working with DFID on this as part of their poverty alleviation activity. This is a large scale problem in a huge number of developing countries, with Africa being a prime example. One typical scenario is the miners of uncut gems, who are paid very little – these are the same gems that end up on Bond Street with a massive mark-up.

What do are the most important issues that need to be resolved to achieve humane and sustainable mining in developing countries?

As well as the major aim of getting a fair price for a fair day's work for miners, in most

developing countries there is a large amount of female and child labour with no inspection or management regime, and a very poor health and safety record. In some countries, small-scale mining is recognised and catered for by legislation. But in many other countries it is actually illegal and some governments have a very aggressive line, using local militia or police to chase the miners off prospects to protect the interests of larger companies. However, some large and informed mining companies will assist and share resources with small-scale miners. DFID are trying to produce a framework for the small mines industry that can be applied globally.

Another big problem in tropical countries is the onset of disease, as shallow holes left after small-scale mining activities turn into breeding grounds for mosquitoes. Artisanal mining also despoils the environment as the miners have no interest in sustainable practices – it doesn't feed their families.

You're the first mining engineer to become President since the merger. How do you see your role in light of this?

I'm not going to merely look after parochial interests of the former Institution of Mining and Metallurgy. I'm very interested in the grassroots activities going on in the branches and societies. I'd also like to continue the tradition of previous presidents of having an oversight or high-level view of where the Institute's going, how it's managed, and what its role is in the institution arena, since we're now a major player. I'm also aware that there are many small institutes whose interests reflect those of some of the technical divisions, so this may have a place in the medium-term activities.

Do you think the Institute is moving in the right direction?

We have settled down remarkably well after a relatively painless merger [some working on the membership database may not agree!]. The two merging Institutes were a very good fit as the former IMM came in at the front end of the materials cycle. However we must be careful not to just focus on the big issues, and remember that the regions are important for supporting the fundamental work of the Institute.

What will be your main objectives during your presidency?

My preferred directions and core issues for the Institute (as I couldn't hope to achieve all of these in one year!) include:

- *Establishing what members want from the Institute.* Many members do not attend local functions and even fewer use the facilities at ICHT. This is particularly true for overseas members, whose only contact may well be *Materials World* and the website. 'My Materials World' certainly promises to help in this regard.
- *Providing visible support to our regional and local activities.* These activities depend on active and interested members, but we must not take their interest and support for granted. This must be a priority over and above any 'public good' activities – although I recognise the importance of these.
- *Addressing present and evolving social and demographic changes.* These include an ageing population, the need for waste recycling and energy efficient homes and transportation systems, understanding and communicating with the new 'cyberspace' generation, and the exporting of service and industry jobs overseas.
- *Raising the profile of our field among young people.* Unless we can present technology as 'cool' to school children, tomorrow's engineers and materials scientists will not exist. We already have an excellent schools initiative, but how can we get the media interested in technology news and away from their apparent fascination for medical stories?
- *Being more inclusive.* I believe that we (and all other professional institutes) should offer equal value and importance to non-professional, non-university-educated members.

You were president of the IMM Western Branch twice prior to your new role as Institute president. What do you enjoy about these sort of roles?

I think it's a sense of being part of something substantial, of having a presence

in an important organisation that can influence and shape events, and colour attitudes at high government or company level. The variety appeals to me as well.

What role do you see the Institute playing in order to strengthen the future of mining engineering?

I'd like to think that we now have a greater voice in the mining industry than we had before and more clout than the individual institutes had before merger. Hopefully we can have a hand in halting what seems to be the decline of the UK coal industry, which is sadly subject to short-term economic pressures.

What advice would you give to young people in the UK considering a career in mining?

Go for it! There's going to be a desperate need for mining engineers and it's the best opportunity for travelling to virtually any country. The UK has trained some of the best mining engineers in the world. Unfortunately, the opportunities in this country are limited unfortunately, but a mining degree could be traded anywhere internationally. There are other opportunities for using a mining qualification, such as working for an investment bank in the city.

How could the Institute encourage more students into the profession?

I think we're going in the right direction by going into schools to encourage children. I'd like to understand why engineering is not as popular as it was, as I was one of a swarm of people who went to university to study engineering.

Travelling has played a large part in your career. What is the most interesting place you have worked in?

It has to be the Wieliczka salt mines in Poland [a World Heritage site]. This mine tapped a water source and we explored the route to advise the EU on dewatering equipment. As a Catholic country, the miners had carved statues and chapels into the salt to a very high standard, and there were electrically-lit salt-crystal chandeliers – it's a marvellous place! Thailand is the most exotic country I've worked in. It's a great country with lovely people. The most challenging place I've worked was a major project on a coal deposit in north-west Bangladesh, which is largely on the Himalayan flood plain. It was very difficult geologically and the logistics of getting to the site were tough.

How do you relax outside work?

I play golf, the guitar, and listen to music. Old cars have always interested me and I've restored three sports cars. I've owned my Daimler Dart sports car for more than 30 years. My brother and I also have a boat in North Wales and we've both done navigation and seamanship courses.