

Uranium Processing: The last and next decades

Dr Robert Ring

Australian Nuclear Science & Technology Organisation
New Illawarra Road, Lucas Heights, NSW, Australia, 2234

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The AusIMM Uranium Conference commenced 10 years ago at a time when there was an upswing in uranium price and accompanying interest in developing new projects in Australia, and worldwide. Despite a promising start, only two new mines (Honeymoon and Four Mile) have commenced operation in Australia since 2005. Another two overseas mines (Langer Heinrich and Kayelekera) have also been developed by an Australian company.

This presentation reviews the technological progress that the uranium industry has made over the last 10 years through process development, with particular focus on projects in Australia and those being developed by Australian companies. After a period of ~20 years' stagnation in the uranium industry, the last 10 years should have provided impetus for innovation to improve operational performance and bring new projects on line. Innovations that have been implemented or developed are discussed in the context of future applications.

As the uranium industry is well established, it has tended to adopt a "fast follower" position for technology implementation overall. Some new processes have still however emerged, which could offer significant advantages. Projects developed in the next decade are likely to face the challenge of lower grades and higher costs, and this presentation will aim to answer whether the industry has prepared itself for these challenges and what further opportunities exist.