SURFACE SUPPORT IN MINING **BOOK REVIEW**

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Surface support in underground mine development has been a live issue in Australia in recent years, more particularly since the publication of the MOSHAB guidelines in 1999. This book is therefore a welcome addition to the literature on the subject. It is handsomely produced and its three editors have international eminence, appropriately in the three countries which have been at the forefront of developments, namely Australia, South Africa and Canada.

The book has two distinct parts, as follows:

- Part 1 – Thin Spray–on Liners (TSLs) – A Quick Reference Guide
- Part 2 – International Seminars on Surface Support – Proceedings

Part 1 lives up to its title and, in 40 pages, summarises current knowledge on TSLs, including a brief history, the types of products available, occupational health and safety, testing methods and field trials and applications. This is a concise state–of–the–art reference book that summarises a great deal of information which, until now, has been available in a variety of technical papers in diverse locations.

Part 2 is a selection of technical papers from three previous seminars on surface support held in Perth, Johannesburg and Quebec City in 2001, 2002 and 2003, respectively. The bulk of these papers (25) are on TSLs, in four categories, namely, design, testing, testing for rockburst conditions and field trials and applications. The remaining papers are related to shotcrete (15 papers), ore pass lining (3 papers) and mesh (5 papers).

TSLs are 3 – 4 mm thick coatings, sprayed on to exposed rock surfaces to seal the surfaces and to provide some degree of structural support. TSL technology originated in Canada some 15 years ago and has since progressed in Canada, South Africa and Australia; in that order. To date, it has achieved only limited success in its original objective of replacing mesh for general surface support in underground development

(Chapters 21, 22 and 25 of book). However, it has proved effective in certain specialised applications.

As noted in the book, Australia's contribution has been relatively modest to date, although trials have been carried out and several mines. However, Australia (read ACG) has taken the initiative in organising the first surface support seminar and publishing this book which is the most significant publication on the subject to date. Hopefully, this is a portent for future developments

Mesh has been the mainstay of surface support in Australian mining for many years and, no doubt, will continue to be used extensively in the future. Its main advantage is that no additional or specialised equipment is required for its application. However, in the past decade, shotcrete has been used to an increasing degree, fuelled by developments in fibre reinforcement and cement additives. Trials of boltless shotcrete have been carried out in Canada (Chapter 34) but it remains to be seen whether this will ever be a practical reality.

This book will occupy a prominent place on my bookshelf and is highly recommended for any engineer or geologist with an interest in ground support.