

CONTENTS

Accident and incident investigation best practice

- Safety at home – this is where mine safety starts 2
K Biegaj
- Operation of mobile plant near underground voids 4
W Ilahi
- The significant role inattention plays in safety incidents 6
C Sylvestre

Benchmarking and the impact of leading indicators – metrics, case studies and strategies

- Creating meaningful and measurable lead indicators for safety 9
A Gibbs
- Lessons learnt from six mine disaster case studies to improve audit and assurance and ESG 11
A Atkins
- What do High Reliability Organisational principles look like in practice in Queensland mines? 16
M S Tuohy and A P Wilkinson

Current and emerging health issues – work-related disease, dust management

- Dust characterisation in Australian mines 21
N LaBranche, D Cliff and K Johnstone
- Improved hydration management on Australian mine sites with the MX3 hydration testing system 24
T Kilpatrick, M Erlichster, T T Lee, G Chana and E Skafidas
- Effects of chemical composition on the lung cell response to coal particles 29
G R Zosky, K Southam, Y Song and B B Beamish

Effective leadership strategies ensuring a healthy workplace culture – workers' health, well-being and productivity

- Is your risk management system providing you an accurate view of risks? 32
S Fraser, W Austerberry and S Garnes
- Eight competencies of safety leadership excellence 35
A Gibbs
- Leading safely doesn't only mean leading safety 38
A G Guinea

What has the last 100 years taught us about safety? <i>A G Guinea</i>	40
In support of frontline leaders <i>A Kite</i>	43
Leading people to use their brain as PPE <i>C Sylvestre</i>	46
A higher standard of 'safety' <i>A Turns</i>	48

Innovation and human interaction – technology, communications and automation

AI in enhancing mine safety under limited data <i>H Ş Duzgun</i>	51
Safety is all around – state-of-the-art underground mining safety with Mobilaris Mining Intelligence <i>A Prill</i>	53
SRS-1200, shaft rescue system with intrinsically safe communications and gas monitoring <i>B Stewart</i>	56
Designing a versatile, multimodal mine IoT system for accident prevention and emergency management in mines <i>D Zielinski-Nicolson and C Brockett</i>	59

Theoretical and practical aspects of risk management and critical controls

Managing major mining risks using bow-tie analysis <i>B Beale</i>	63
Critical risk management, good, but not good enough <i>D L Head</i>	67
Operational risk management and critical controls for interacting pit stages at Ok Tedi <i>R Mabilia and J Isarua</i>	71
Simplifying the management of critical controls <i>C Young</i>	74
Author Index	76