The Stope Soaker 2000

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ABSTRACT

Bogging dry dirt is a cardinal sin, with the deadly impacts of silicosis and other dust related diseases well known. Production delays for dusting out a level from stope bogging and creating additional dust on the decline from ventilation drying out dirt in trucks should not be occurring in this era, but it's an all-too-common problem.

There are multiple solutions on the market, from cannons mounted on the back of water trucks, to portable cannons, dust curtains, even a 1" hose with a nozzle. After a crew member took to Facebook asking if a better solution existed, the Stope Soaker 2000 was conceptualised.

If the Stope Soaker 2000 was to be an improvement on existing systems, it needed to address all scenarios; from watering a blind uphole stope to reaching the far wall of a long strike stope. It needed to be easy to install, work when water pressure was low and be inexpensive enough to replace if it was damaged.

CSA Mine in Cobar NSW is an old, deep operation with a complex raw water network that is somewhat unknown as is often the case with a legacy system. Water pressure is impacted when the demand is great, either from too many users or from large draw items, and the system can struggle to provide the necessary supply for stope watering.

Under new ownership, Metals Acquisition Corporation is encouraging the workforce to suggest improvements to make CSA great again. The Stope Soaker 2000 is one of these suggestions.

This paper reviews the advantages and disadvantages of the existing stope watering systems available as used by the authors and details the Stope Soaker 2000 trial and results.