



Institute of Electrical and Electronics Engineers

INDUSTRY APPLICATIONS SOCIETY

CEMENT INDUSTRY COMMITTEE
EAST COAST SUBCOMMITTEE



Title: Mill outage "Safety & Efficiency:

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Background/Problem: During my 40 plus years in the industry I have performed hundreds of mill inspections. Ball Mill inspections, audits, or mill maintenance of any kind is always a challenge due to confined space and often exceptionally hot conditions. Confined space protocols make access challenging and internal conditions compromise productivity as you are only able to work for brief periods of time before needing to exit the mill to cool off. Everyone with plant experience can relate to this challenge. We cannot subject personnel to these conditions for extended periods of time nor expect workers to perform efficiently under such harsh and challenging conditions

Solution:

Several years ago I was invited to perform an inspection (In July no less) and during my travel time I was going through the usual dread and anxiety about the task ahead. Upon arrival in the mill room I found a rental AC unit (think party tent provider) with a large flexible duct routed into one Man Hole opening. When we entered the mill I was amazed at the difference this device made in overall "mill tolerance" if there is such a term. Our measurements, photographs etc were completed in about an hour and a half which was unusual as this type activity would normally take much longer with several breaks to exit the mill and cool off. Remember the confined space protocols required for air sampling/safety watch etc.

This customer had several shifts of mill maintenance remaining after our departure and I found myself reflecting on how clever this plant was in attempting to address the confined space high temperature issue with this simple rental AC unit. I am convinced the safety risks associated with working in confined space and high temperature were radically reduced as a result of this innovation. I am also convinced, as my own experience demonstrated, that the worker (labor cost) efficiency associated with this innovation probably more than offset rental charges for the AC unit. This innovation did not make the mill a comfortable or pleasant place to work but did radically influence the ability for us and the other contractors to tolerate the otherwise challenging environment.

Indirectly employee/contractor moral had to be greatly influenced in a positive way.