Sibanye Stillwater Mining Operations

Nye, Montana

Only a miner knows what it's like to be chasing a vein while thousands of feet underground, blasting through hundreds of tons of solid rock each day in pursuit o precious metals. This is not a job for the meek or claustrophobic or those who need to see a little daylight or breathe fresh outdoor air in a 12-hour shift. Rather it takes strong will to hang your tag and make the journey deep underground facing the challenges that could be waiting in the darkness.

Mining is a tight knit family of men and women that rely on each other to ensure that "everyone goes home every day." The Stillwater Mine, along with the nearby East Boulder Mine located outside Nye, Montana are owned and operated by Sibanye Stillwater and are the lone palladium and platinum producing mines in North America. These two mining operations extract, processes and refine palladium, platinum, gold and associated metals.

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No industry understands the importance of safety and training more than mining. Thousands of tons of heavy wire mesh panels are secured to the walls and ceilings throughout every tunnel in the mine to assist in providing the necessary support to the exposed rock of the mine excavations, thus creating a safe work environment. This painstaking process includes drilling 5' deep holes into the solid rock and then driving rock bolts through bearing plates affixed to the wire and into the drilled holes, securing the steel mesh panel in place.

After each blast, new safety wire is secured in place to protect the blasting team before the subsequent blast. Wherever electrolytes (moisture) are present, the resulting corrosion and consequential weakening or potential failure of the wire mesh is of grave concern. This corrosion concern is resolved by utilizing hot dip galvanized (HDG) wire along with galvanized rock bolts and bearing plates, providing decades of protection in this highly corrosive environment.

The hot-dip galvanized wire provides an added benefit as the initial zinc and iron alloy layers that form in the HDG process are significantly harder (up to 60%) than the bare steel wire, thus providing additional durability. A recent discovery by the mine has determined the galvanized wire is able to withstand the blasting better than the bare steel wire within the affected blast zone. This results in fewer panels needing to be replaced after each blast. The incomparable advantage of long-lasting protection from corrosion and the added benefit of superior strength for this critical ground support component far outweigh the cost of hot-dip galvanizing.

It's safe to say that miners will keep chasing that vein and hot-dip galvanizing will fill a small but vital role in making sure that everyone goes home! ■

Galvanizers
AZZ Galvanizing - Denver

Owner
Sibanye Stillwater

Other
Taylor Fence
F & H Mine Supply

Industrial