Bay6 Solution's MAG-SHIELD® system

evaluated by

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- ✓ Ferrous particulates captured and held in place
- ✓ No restriction on particle size captured (<10mm)
- ✓ Removes larger particles from hydraulic tank
- ✓ Simple building block modular design
- ✓ Pump upstream installation
- ✓ No moving parts – no mechanical maintenance
- ✓ Simple, quick installation with minimal training
- ✓ Simple, quick cleaning and re-use of product
- ✓ Does not impede flow to pump
- ✓ Minimal pressure drop across system compared to existing screens (incl. particulate build up)
- ✓ Minimal impact on available hydraulic pressures
- ✓ Corrosion and wear resistant

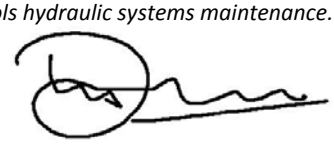
Assurance of mechanical availability is the key to lowering the risk associated with mining systems' productivity, especially in economically challenged markets. The global trend to multiple unit cyclic mining systems over 40 years ago lessened risk through the introduction of redundancy. Today's mining operations realize that success is driven through effective equipment maintenance management which inherently permits enhanced productivity to occur. Next generation CBM and RCM risk management strategies are morphing into proactive tools and techniques removing risk. **Bay6 Solution's MAG-SHIELD®** system does just that.

R&D groups are constantly aware that mine operating environments are some of the harshest conditions encountered for any mechanical or electrical system. Particulates, corrosion, wear, shock, energy draws and adverse fatigue motions are ever present and changing. Availability and production losses dramatically raise the total cost of ownership of such assets. Solutions that work in our industry are those that are simple in design and application. Those that are complex, have multiple moving parts or rely heavily on computer control frequently introduce downstream issues or outright fail to deliver. **Bay6 Solution's MAG-SHIELD® passive, proactive system** does not move, impede, communicate, deteriorate or add to the problem.

Tribology issues, both wear and lubrication related, in Canadian industry approached 1% of the GDP at $15B in 2012. In the U.S. this estimate exceeds $100B. The mining industry accounts for 30% of these values. Most hydraulic system service and failures fall under unplanned maintenance. They are commonly low hour, recurrent and catastrophic; frequently perceived as "unavoidable". Oil filtration and analysis programs are reactive and limited in their ability to control and predict failures. **Bay6 Solution's MAG-SHIELD®** system effectively mitigates common failures by use of high-energy "magnetic screening". Field comments demonstrate the value of this passive, proactive system:

- ✓ Feb 27, 2012: "I didn't expect to see the benefits in such a short time". (930E hydraulic installation)
- ✓ Feb. 9, 2012: "Since we have introduced the magnet system we have not had a repeat failure occurrence on a truck. We used to have brake teeth jamb up the brake cooling pumps at least 3 to 4 times a year, but now we have had no brake cooling pump failures from brake teeth floating around in the tank. We have had hoist pump failures, but where the magnet system was installed contamination from failures has been minimal".
- ✓ Nov 18, 2010: "800 hours ago we installed a Mag-Shields kit during a component outage. When an early hour hoist pump failed the shields effectively captured the metal contamination that the hydraulic filters were unable to contain. For the first set of Mag-Shields we installed in June 2009, the hoist pump has run over 3000 hours past benchmark".
- ✓ In general, end users show that using **Bay6 Solution's MAG-SHIELD®** system yields 85%+ less hydraulic maintenance downtime and 30%+ increase in pump component endurance.

*As professional engineer, consultant, educator and mining equipment performance researcher, I view **Bay6 Solution's MAG-SHIELD® system** as a major step forward in striving for best practice in mining tools hydraulic systems maintenance.*



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