



ASSOCIATION OF MINE RESIDENT ENGINEERS

From the Presidents Desk.....

The Association of Mine Resident Engineers of South Africa, which consists of some 600 members drawn from hard rock gold, platinum and other metalliferous mining operations, was established in 1924.

The main objectives of the Association have always been to originate and promote the general advancement of all matters appertaining to the work of engineers within the mining industry and at all times strive to protect the interests of its members.

During the 2008 strategic session of the Association council it was agreed to have a survey done via the members of the Association to get feedback on the issues that are important to the members. The outcome of this survey is available on the Association website and one of the issues following this survey was a request for formal communication to the members and thus the intervention of this newsletter from council.

During the past year the Association had a number of successful interventions that the members have participated in and some of these are the articles in this newsletter. Those interventions not covered by

more detailed articles included the following:

- Safety seminar held in July at Kloof Mine on "Safety, Health and Training" with more than 230 members attended.
- Joint workshop with our colleagues from the coal mines SACEA on winder ropes and the legal responsibilities of engineers as required by legislation.

I encourage all members to register with ECSA as this process of registration is in the interest of the Engineering profession and could become a pre-requisite for all practising engineers on the Mines.

I would also want to use this opportunity to wish you and your family a blessed Christmas and prosperous 2009. I trust that you will enjoy this festive time with your loved ones and travel safely if you are on the roads.

December 2008

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Safety Incidents and accidents

Shell supported Mills

To add to the objectives of the AMRE it is important to share experiences and incidents amongst members with reference to large machinery

One of the Mining Companies embarked on an upgrade program on the Slipper Pads of their Shell Supported Mills.

The Slipper Pads are the bearing configuration supporting the shell.

The upgrade program resulted from investigations to establish the integrity of the Slipper Pads for safe milling operations.

Non Destructive Test was conducted and about 80% failed the test and had to be scrapped and replaced.

Rom Radial Slipper Pad Information

Radial Pads

Each of the radial white metaled pads is supported on a spherical seating and located by a 4 -way " cross Key" which allows the pad to tilt in any direction to the maximum of 2° , but remains located in the axial and transverse planes. This self aligning characteristic accomodates manufacturing in accuracies in bearings and bedplates plus foundation misalignment and shell deflections as well as performing the main function of tilting in operation, to form the wedge angle necessary to generate a hydrodynamic film. The spherical seating is located on a screw jack arrangement which allows equalising of bearing presures.

Equalising Pressure

Once all the pads have been replaced the pressure on them have to be

equalised. This is done by observing the pressure on the high pressure guages once the pads have been jacked hard against the shell and the cradles removed. If one pressure is lower than the rest, the pad corresponding to that pressure must be jacked harder against the shell until it's pressure rises to within 2 MPA of the rest.

High Pressure Lubricating System

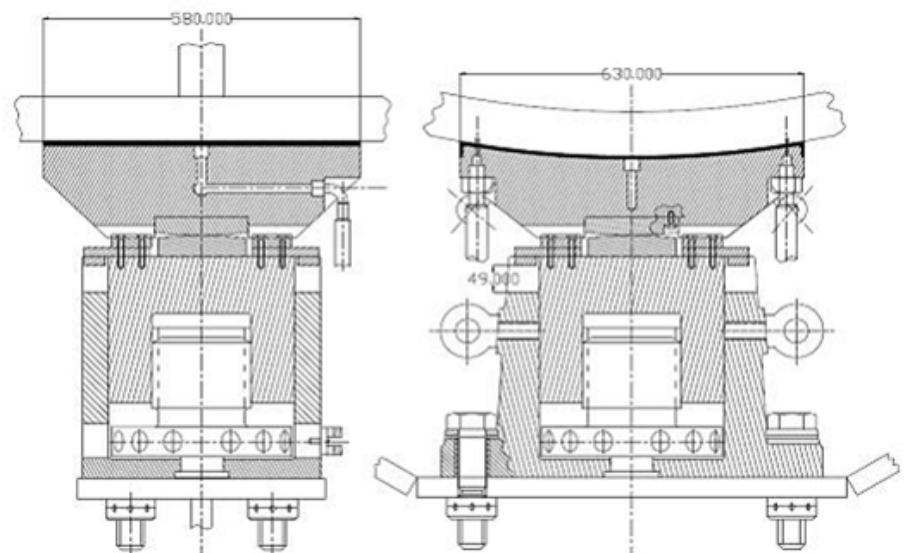
The high pressure lubrication operates only during start-up, run down and during barring of the mill. During start-up the high pressure oil lifts the mill off the bearing pads while stationary and continues to separate the bearing surfaces during run up off the mill with the bearing acting in a hydrostatic mode. The high pressure pump is shut down automatically when the mill has reached approximately full speed, after which there is sufficient sliding speed to operate in hydrostatic mode from the low pressure system.

Low Pressure Lubricating System

The low pressure lubrication only becomes effective above a certain mill speed during the run up period when the bearings start to function hydrodynamically. The thickness of the oil film increases as the speed of the mill increases to approximately 0,2 mm at full speed. Each radial pad is provided with 2 oil supply slots along the leading and trailing edge, extending nearly over the full width of the pad. Both slots are kept filled with oil under pressure. Oil is dragged through the pad clearance from the leading edge slot by the moving shell and is progressively squeezed out sideways along the pad and drains back into the sump. The leading and trailing edge changes when the mill changes direction.

Accumulator

A mass loaded accumulator supplies low pressure oil at approximately 250 Kpa during run down of the mill after a power failure, when no oil is available from the pump. It supplies sufficient oil to maintain an oil film of about 0,1 mm for at least half a minute.





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New Members

The Association of Mine Resident Engineers currently have 610 members on the data base which include all its new members.

Council would like to welcome all the following new members from January up to and including October 2008 as listed below.

Ordinary Memberships

L Harmsen, AngloGold Ashanti -
 W T Allen - Driefontein Mine
 C P Storm - Mponeng Mine
 A J Sutton - Blyvooruitsig
 P J Strydom - AngloGold Ashanti
 B J Hlatshwayo - Harmony Gold Mine
 J J Nienaber - Anglo Platinum
 P Kruger - Blyvooruitsig
 B G Van Loggernberg - Kopano JV
 N J Otto - Impala Platinum Limited
 P J C Lamprecht - AngloGold Ashanti
 C L Oosthuizen - Harmony Gold Mine
 R J Dekker - Xstrata PLC Rustenburg
 J J Price - AngloGold Ashanti
 Q M A Jali - Anglo Platinum
 C L Schoeman - AngloGold Ashanti
 E G Van der Berg - Xstrata Alloys
 Z Pambuka - Xstrata Alloys
 J S Breet - Anglo Platinum
 R M Kallmann - De Beers
 T P J Hayward - Lonmin
 A Venter - Anglo Rustenburg Platinum
 L D Clelland - Impala Platinum Holdings Ltd.

Associate Memberships

M Jojosi - GFL Mining Services
 R J Tink - GHH Mining Machines Pty, Ltd.
 H Nieuwoudt - Anglo Platinum
 M U Macnab - TWP Consulting

Affiliate Memberships

E K Tebekana - Kloof Gold Mine
 P J Petit - TWP Consulting
 T Sertic - Impala Platinum
 C F Bonham - TWP Consulting
 D M Joubert - TWP Consulting
 T M O'Brien - TWP Consulting

Student Memberships

S Baloyi - Gold Fields -Kloof
 V L Maluleke - Gold Fields -Beatrix
 J P Moeketsi - Gold Fields -Kloof
 G Mabitsela - Gold Fields - Kloof
 M J Mokwena - Gold Fields- Kloof
 I B Noko - Gold Fields - Kloof

A Ramterath - Gold Fields - Kloof
 F W Van Zyl - Target Gold Mine
 H Zitzke - Anglo Platinum Mine
 N G Rasalanavho - Impala Platinum Mine
 S E Dubazane - South Deep Gold Mine
 J M Mofokeng - South Deep Gold Mine
 B Thiel - Kopanang Mine
 P M Tsilo - AngloGold Ashanti
 T J Saul - AngloGold Ashanti
 J S Maphaka - Lebowa Platinum
 E J A Grimbeek - Rustenburg Platinum
 M Maraka - Driefontein Mine
 M A Malokane - Western Chrome Mine
 D Molapo - Lonmin Platinum
 G D Wernecke - Lonmin Platinum
 S Nyawo - Anglo Platinum Mine
 J M Mphela - Lonmin Platinum
 K B Mathipa - Lonmin Platinum
 J S Masilo - Lonmin Platinum
 O I Nchupetsant - Lonmin Platinum
 T N Qhamakoane Lonmin Platinum
 S Deonarain - Driefontein
 S M Mahlangu - Tau Lekoa
 H H Knopjes - Anglo Platinum
 D J Arlow - Anglo Platinum
 M Parshotam - Anglo Platinum
 R Mabaso - Tau Lekoa
 L H Meier - AngloGold Ashanti
 P D Kgasoang - Bafokeng Rasimone Platinum
 J Somers - AngloGold Ashanti
 L V Molefi - Impala Platinum
 R Pretorius - Gold Fields
 M L Sillen - Driefontein Gold Mine
 A Sewapa - Harmony Gold Mine
 J T Seepie - Wesizwe Ledig Project - GTI
 V T Khosa - Xstrata Alloys
 W A Van Zyl - Murray and Roberts
 J C du Preez - Xstrata Alloys
 V Mgolombane - Rustenberg Platinum Mines.
 C Masoea - Gold Fields
 W Viljoen - Anglo Platinum

L Holtzhausen - Anglo Platinum

The Association wishes to strongly encourage members to regularly inform the Secretary at MPAS in the Chamber of any change of personal details to ensure that the data base is accurate for better communication and for the invoicing of subscriptions.



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Mine Closure Seminar

A mine closure conferences was hosted by Wits University (The Ecological Engineering and Phytoremediation Programme, The school of Animal and Environmental Sciences), Australian Centre for Geomechanics and the University of Western Australia (Centre for Land Rehabilitation) from 14-17 October 2008 in Johannesburg (Indaba Hotel). This was the 3rd international conference held in South Africa. The following topics were covered:

- Policy and regulation for mine closure;
- Finance and costing for mine closure;
- Mine closure planning - closure criteria;
- Mine closure planning - design and implementation;

- Mine closure criteria and monitoring;
- Implementation of mine closure;
- Modelling and mitigation of mine closure waste seepage;
- Mine waste reclamation;
- Environmental legacies and risk assessments;
- Mine waste stabilization;
- Mine waste remediation and restorations;
- Evaluation of mine site restoration success and
- Socio-Economic impacts of closure.

“Objectives of mine closure 2008 is to provide an international forum, where specialists, regulators, engineers, scientists and practitioners can exchange views on how to ensure that clo-

sure of mine sites is achieved economically, whilst minimizing future environmental and societal impacts”.

This seminar was attended by delegates and specialists across the globe. The 4th seminar will be in Perth - Australia, 9-11 Sept 2009.

Survey Results

Council would like to thank all the members that participated in the survey. The detailed results of the survey can be viewed on the AMRE website. We have taken note of all your comments and suggestions and will be addressing these issues over the coming months. Work has already commenced in improving communications with members and in upgrading our website to give members access to up to date information. The intention is to put systems in place to promote interaction between members and to better the Association to serve the needs of it's members. Through your district representatives, please feel free to continue providing any comments or suggestions to assist us in bettering the Association.



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Annual Presidential Visit

The 2008 AMRE presidential visit, attended by thirty-two members of the association, started off as usual with a dinner at the Southern Sun Airport Hotel - and with some brave members taking a quick after-dinner swim in ± 4 deg water! After a short Kulula flight to Durban, the group arrived at Fibrewind for an informative tour of the company's plant and were shown how pipes and vessels are manufactured using multiple fibre strands and resin. From there to the Umhlanga Sharks Board, where - besides being treated to (smelly) dissection of a shark - we were told a great deal about the activities of the Board.

Friday 03 October found us being warmly welcomed by the personnel of Mondi. The sight of magnificent trees being turned into rolls of paper was not a little humbling, and most of the members found this a remarkable visit.

The next stop was the Bell factory, where we were shown a video about the history of the company, followed by a tour of how heavy earth moving machinery is manufactured - from scratch to final product, including all the quality checks that are part of that process - it was impressive!

The members stayed at the Sibayi Lodge for the weekend. This was

a treat all of its own, with leisure activities such as golf, scuba diving and a 3-hour boat cruise on a luxury catamaran. While some members enjoyed the cruise immensely, others did feel a little green around the gills and were grateful to have their feet on solid ground again.

Our heartfelt thanks go to organisers Shirli and Margarida - the group had a most enjoyable time, not least because the entire visit was so professionally arranged.





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Annual Fund Raising Golf Day

The AMRE hosted its 8th annual Golf Day at Randpark Golf Club on 12 October. Twenty one companies entered twenty four balls and we had a full afternoon field on both nines. There was over R10 000 in prizes and special thanks must go to Vital Power Transmission for again donating four full sets of golf clubs for the first place prizes. GHH Mining also donated generous prizes. Newcomers SolarHeat offered a R25 000 solar water heating system to the person who made a hole in one on the 2nd hole, no winners this year but the guys are keen for another crack at it next year.

A full dinner was served after the prize giving for all the players. It was also great to see that so many wives and girlfriends played this year. The R17 000 raised from the day will go towards the bursary fund for one of our bursar students. Being a great success, organizer Brian O'Connor has already booked Sunday November 15th again at Randpark - keep swinging!



Above: Winning Team (left to right)

George Schroeder, Johan Kleynhans, Richard Carter, Nico Roets,

Upcoming Events

The Association of Mine Resident Engineers have enjoyed a full year of activity in 2008 with a single and combined General meeting, an entertaining Annual Dinner, two successful seminars, an AGM that hosted Barrie Bramley expertly presenting the Mind the Gap issue, which each generation could definitely relate to; an informative and enjoyable Presidential visit to Natal and a hugely successful Golf Day under our belts, and we are set and ready to face 2009 and beyond with a similar calendar of events!

Starting with the first on the 27 January, 9 Council meetings are planned for 2009 at the Chamber of Mines, where the affairs of the Association are administered by the elected President and Council Members and managed by the full time Secretary.

On the 27 February 2009, we have plans in motion to host the AMRE Annual Dinner Dance at Gold Reef City and we are thrilled to confirm that we have secured Icon BARRY HILTON, "The

Cousin" as our entertainment for the evening. Barry Hilton has reached international status as a stand-up comedian performing all over the world. Many agree that he is, without a doubt, one of the top comedians South Africa has ever seen. We will also have some great sounds afterwards to dance the night away to.

On the 5 March we will focus on the first Safety Seminar for the year which promises to be better than the last and will alert all members timeously.

The Annual General Meeting and Dinner will take place on the 15 May at Gold Reef City.

There will be a very necessary Strategy Session on the 29 May to ensure that the vision and mission of AMRE stays in focus, and the details and outcomes will be shared ultimately with all of our members!

That is just for starters.