

# BALL VS. ROCK

THE HEAVYWEIGHT CHAMPIONSHIP NEWS LIVE FROM DONHAD

"BALL LOOKING TO BOUNCE OPPONENT OUT OF THE RING"

THE AGE



ROUND THREE



## 2009 FOOTY TIPPING COMPETITION

At the business end of the AFL season, the Donhad Tipping Competition is heating up. Simon Borck is topping the leaderboard, but only just, with a host of others sitting back waiting for him to make a mistake. With only three rounds left to go it's time to throw out a few roughies to try and claw back some ground. Best of luck to all.

**To see where you're sitting on the ladder click here.**

### Factors That Affect Grinding Media Wear

	Factors	Trend	Effect
<b>A</b>	<b>Grinding Charge</b>		
1	Grinding media size	> size	< wear rate
2	Grinding media distribution	> small size	> wear rate
3	Charge weight	> charge weight	> wear rate
<b>B</b>	<b>Ore</b>		
1	Work index	> work index	> wear speed
2	Hardness	> hardness	> wear speed
3	Density	> density	> wear speed
4	Concentration / grade	> concentration / grade	> wear speed
5	Abrasion / nature of gangue	> silica contents	> wear speed
<b>C</b>	<b>Particles</b>		
1	Feed size	> size	> wear speed
2	Product size	> size	< wear speed
3	Shape	sharp corners	> wear speed
<b>D</b>	<b>Slurry</b>		
1	Corrosion	< pH	> wear speed
2	Viscosity	> viscosity	< wear speed
3	% solids	< % solids	> wear speed
<b>E</b>	<b>Nature of Contact</b>		
1	Impact velocity	> velocity	> wear speed
2	Impact angle	> angle	< wear speed
<b>F</b>	<b>Mill</b>		
1	Discharge type	overflow → grate	> wear speed
2	Diameter	> diameter	> wear speed
3	Speed	> speed	> wear speed
<b>G</b>	<b>Circuit</b>		
1	Throughput	> throughput	< wear rate
2	Circulating load	> circ. load	> wear rate
<b>H</b>	<b>Grinding Media Quality</b>		
1	Hardness: – surface or avg. volumetric	> hardness	< wear speed
2	Grain size	> grain size	> wear speed
3	C contents	> C contents	< wear speed
4	Alloy contents	> alloy contents	< wear speed
5	Shape	sphere	min. wear

### Key

With (>,<) "Trend", the "Effect" (<,>).

> = Increasing      < = Decreases  
< = Decreasing      > = Increases

### First Bolts Delivered to CITIC HIC for the Sino Iron

One of the largest mines in the world will be the Sino Iron project in the north of Western Australia. The processing plant will consist of six identical trains with a Ø12.2m x 11m AG - 28MW gearless drive mill and a Ø7.9m x 13.6m - 2 x 7800kW Gear drive dual drive ball mill in each train

These mills are the largest of their kind in the world and are being manufactured in China by CITIC HIC ([www.citic-hic.com](http://www.citic-hic.com)). The importance of the integrity of the fasteners that hold these large mills together was acknowledged by CITIC and as the leading supplier of structural mill fasteners in Australia, Donhad was awarded the contract to manufacture the bolts for all six AG and ball mills. This was the single biggest order for fasteners ever received by us and we are pleased that our quality and reliability has been recognised on the international stage.

Just over 2,600 bolts have been manufactured for the first train consisting of M64, M56 and M52 hex head and 12 point flange screws. These were packed and shipped this month heading to Shanghai for assembly of the first mills.



### Launch of the Donhad Online Technical Library

For all those who have not already seen it, Donhad has now launched a technical library on our website. With topics ranging from 'Understanding and Utilising the Inherent Mechanical Properties of Bolts/Nuts' to 'Improving the Wear Characteristics of Moly-Cop Forged Steel Grinding Balls', the library is sure to become a valuable resource for all industry members. Have a look now by clicking here. If there is a topic not included that you would like to know more about, let us know.

