



## **Australasian (iron and steel) Slag Association Inc.**

### **Membership Annual Survey Results**

**January to December 2009**

Prepared by  
HBM Group Pty Ltd

Ed: 1	Australasian (iron & steel) Slag Association Incorporated	Page: 1 of 3
Date: Sept, 2010		ASA_survey_results_2009.doc

The Australasian (iron & steel) Slag Association (ASA) conducts an annual survey for information regarding iron & steel slag (ISS) production and value added sold quantities by members and non-members for each calendar year. This report compiled during 2010 provides results for the 2009 calendar year.

Information provided by members and non-members is reviewed, compared, collated and then aggregated into a national set of results and include ISS production levels, and nominated uses for all slag products.

For the calendar period January to December 2009, approximately 75 percent of all 3.325 million tonnes (Mt) of ISS produced, some 2.482 Mt were effectively utilised within various value added civil and construction material applications throughout Australasia.

The survey results include all generators, (iron & steel plants) marketers, (processing and marketing companies) and users for the total production and resulting sales by each end use. Where required, data is supplemented with importation data<sup>1</sup> and other secondary data<sup>2</sup> sources for accuracy purposes.

The key results for the calendar period 2009 survey were:

- Approximately 3.4 Mt (million tonnes) of iron and steel slag products were produced within Australasia (Australia and New Zealand).
- From the ISS produced, some 2.482 Mt or 75 percent has been effectively utilised [sold or reused for some beneficial use]
- On per capita basis, this equates to 113 kgs per person recycled or reused
- 22 percent or 0.561 Mt was used in cementitious applications - "high value add" [HVA]<sup>3</sup> Note: approx 0.255 Mt of GBFS was imported
- 67 percent or 1.713 Mt was used in non-cementitious or road construction applications - medium value add [MVA]<sup>4</sup>
- 12 percent or 0.295 Mt was in general civil or fill applications – low value add [LVA]<sup>5</sup>

In summary the recovery and reuse of ISS provide significant positive environmental impacts, including resource conservation and in this case, the reduction of greenhouse gas emissions from the processing of virgin resources.

<sup>1</sup> ABS [Austats] based on import tariff code for Granulated Blast Furnace Slag (GBFS)

<sup>2</sup> Company annual reports and other published data sources

<sup>3</sup> HVA – High Value Add – means where ISS materials are sold for > (more than) \$100/tonne

<sup>4</sup> MVA – Medium Value Add – means where ISS materials are sold for between \$10-\$100/tonne

<sup>5</sup> LVA – Low Value Add – means where ISS materials are sold for < (less than) \$10/tonne

The following table provides more detail for individual category sales of ISS for the period 2009.

		<b>Australasian (iron &amp; steel) Slag Association</b>						
		<b>2009 Slag Sales and Production Survey</b>						
<b>Company and Site Name</b>								
<b>Member's Name</b>								
<b>SECTION A</b> Slag Beneficial Use Calculations (mt)		BFS	GBFS	SFS	EAFS	KOBM	Other	2009 Combined
A1. Total produced (Jan-Dec)		1,519,000	734,655	845,000	166,800	59,874	0	3,325,329
A2. Total production not used [stored]		449,122	80,071	245,253	48,626	20,366	0	843,438
A3. Total production not used [disposed]		0	0	0	0	0	0	0
B2. Total of All Beneficially Used (Auto calc)		1,069,878	654,584	599,747	118,174	39,508	0	2,481,891
A4. Removed (If any) from storage for use		88,778	0	0	0	0	0	88,778
<b>SECTION B</b> Auto Calculations								Combined
B1. Total available for use (Auto calc)		1,607,778	734,655	845,000	166,800	59,874	0	3,414,107
<b>SECTION C</b> Slag Use (mt)		BFS	GBFS	SFS	EAFS	KOBM	Other	Combined
C1. Cement or Binder products		0	561,529	0	0	0	0	561,529
C2. Feed stock for Clinker/Glass products		25,510	0	0	0	31,760	0	57,270
C2. Grit Blasting products		0	0	0	0	0	0	0
C2. Structural Fills/Embankments		243,443	0	145,000	0	0	0	388,443
C2. Road Base/Sub-base		268,993	41,700	94,100	118,174	0	0	522,967
C2. Rockwool products		2,000	0	0	0	0	0	2,000
C2. Mineral Fillers (e.g Asphalt)		31,182	7,548	0	0	0	0	38,730
C2. Agricultural applications		0	0	0	0	611	0	611
C2. Water treatment/filtration products		25,643	0	0	0	0	0	25,643
C2. Asphalt & Concrete Aggregates		513,805	0	163,780	0	0	0	677,585
C3. Mining Applications		0	9,337	44,047	0	0	0	53,384
C3. Waste Stabilisation/Solidification		0	0	0	0	7,137	0	7,137
C3. Miscellaneous/Other		48,080	34,470	152,820	0	0	0	235,370
Total Use (Auto calc)		1,158,656	654,584	599,747	118,174	39,508	0	2,570,669
<b>SECTION D</b> Summary Results		BFS	GBFS	SFS	EAFS	KOBM	Other	Combined
D1. Total SOLD and used (Auto calc)		1,158,656	654,584	599,747	118,174	39,508	0	2,570,669
D2. Total NOT used (Auto Calc)		449,122	80,071	245,253	48,626	20,366	0	843,438

Table 1 - 2009 Slag Sales and Production Survey

Australasian (iron & steel) Slag Association  
Sept 2010