

Editorial - Holding in balance Society, Economy and Ecology

Daily, it seems we are reminded about the state of the global economy, whilst at the same time, messages about global environmental sustainability have not gone away. Balancing the two seems at times an impossible task, however, balance we must. Dr Glenn Albrecht¹, philosopher and key note speaker at the Association's 2007 Sustainability conference challenged the delegates to ensure that eco-industrialisation should not become 'greenwash' but lead to real and sustained improvements for the long term good of civilisation. He reminds us that true sustainability lies at the intersection of the interests of society, economy and ecology as expressed in Aldo Leopold's² 1933 statement, quoted in a sign on the main street of Goa, India.

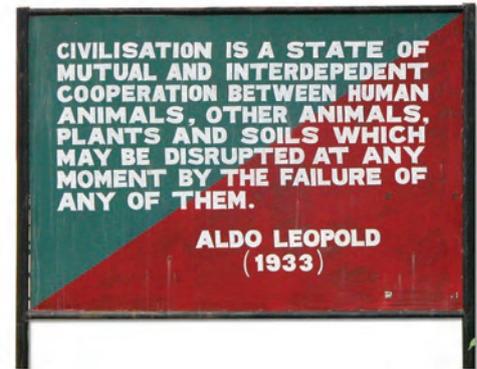
The success of the Global Slag conference in Strasbourg France last November confirms that although the global economy is in difficult shape, the message of sustainability is too important to defer.

Globally, slag products continue to play a significant part in reducing the environmental impact of human activity. When used in air cooled or aggregate form, they replace products that otherwise would be quarried from the finite resources of the earth. It is as granulate that iron blast furnace slags make a most substantial environmental contribution. Replacing Portland cement, saves around one tonne of CO₂ generation per tonne of ground granulated slag used in concrete and other cementitious applications.

Albrecht¹ calls for a new industrial revolution in which the principles of sustainability, including the need for industrial systems to eliminate all waste (not just CO₂) are central, with industrial systems "symbiotically connected to societies and ecosystems".

The Global Slag conference in Brussels, Belgium in November this year will again focus on sustainability in the slag industry. Given the downturn in the global iron and steel industry, the shortage of slag and the potential of new sources will be discussed. Negotiations are under way to host a Global Slag event in Sydney Australia during 2010. This will confirm the importance of the Australasian Slag industry to the economy and the environment.

Note: 1. Albrecht, Dr. Glenn - University of Newcastle - Presentation to the ASA 2007 Sustainability and Slag Conference (Sydney Australia). Available along with other presentations to this conference from the Association's website at www.asa-inc.org.au 2. Leopold Aldo - 1887 - 1948 - ecologist, forester, and environmentalist. Influential in the development of modern environmental ethics and in the movement for wilderness preservation



Sign on the main street in Goa India - taken by Dr Glenn Albrecht 2005



International Global Slag Conference

23 - 24 November 2009 Brussels, Belgium

DONT MISS OUT!

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CONNECTIONS EDITORIAL TEAM

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Slag Aggregates to be used in Redevelopment of Liverpool Hospital.

Bovis lend lease has been appointed as Managing Contractor for the design and construction of Stage 2, Phase 1 of the Liverpool Hospital redevelopment in Sydney. The contract is valued at A\$296 million.

Liverpool Hospital is the major tertiary referral hospital in south west Sydney and provides clinical care, teaching and research. It is a teaching hospital for the University of New South Wales. Bovis Lend Lease has been contracted by the NSW Department of Health and Sydney South West Area Health Services.

The Stage 2, Phase 1 works will include the construction of a new 45,000 square-metre clinical services building, a refurbishment of the existing clinical services building, extension and refurbishment to the cancer centre and pathology department buildings and all associated engineering and site infrastructure works.

Work has commenced on the new clinical services building. It will comprise seven storeys, plus a basement level and a heliport and will be completed in late 2010, with the existing clinical service building refurbishment completed by late 2011.



Liverpool Hospital

De Martin and Gasparini have been awarded the contract for the supply and placement of approximately 20,000 cubic metres of Special Class 25, 32, 40 and 50Mpa concrete. High early strength, post tensioned mixes are also being used with 10% flyash. In the original specification, the use of Slag Aggregates was precluded from use. The management of ASMS saw this as an opportunity, to talk to both Bovis Lend Lease and SCP Consulting Engineers. After lengthy discussions, and careful consideration, slag aggregates were approved, and will be used in the majority of concrete on this site. This concrete will be supplied from Concrete at Moorebank, with back up on larger pours from Narellan plant.

Source: ASMS – contact: pthedossiadis@asms.com.au

Steel Cement Upgrades Mill to meet Demand

After 18 years of service, Melbourne's Steel Cement's granulated slag grinding mill had reached its capacity. Strong demand for supplementary materials required Steel Cement to review options for increasing the output of the current plant. After considerable review of options and subsequent negotiation with Engineers at UBE Techno (Japan), the upgrade option decided on was to retrofit a high efficiency separator. A hot gas rotary valve was also installed to partially pre dry material prior to entering the mill. Guaranteed performance from 30 to 35 T/hr (17%) was assured for what was in the end a moderate capital investment.

Careful planning to ensure the least disruption to the market was undertaken. The window also provided the opportunity to rebuild the aging gear reducer (1200 Kw -38T unit) and to replace the system PLC which had also provided reliable service since the start of operation in 1991.

The upgrade was completed in early February this year with the Mill back on line after 5 weeks of intense construction & overhaul. Melbourne had recorded its highest ever temperature of 46.7 degrees celsius after a record number of days in excess of 40 degrees celsius, so day shifts were cancelled in lieu of working at night. Further challenges to the project were encountered with the simultaneous realignment of the wharf adjacent to the Mill. The \$25m project is part of the channel deepening project undertaken by the Port of Melbourne Corporation. All expectations were met on the project with current outputs in excess of 37T/hr. The \$1.5M separator upgrade will help Steel Cement meet the growing demand for ground slag.



Removal of old separator



New separator and upper casing installed

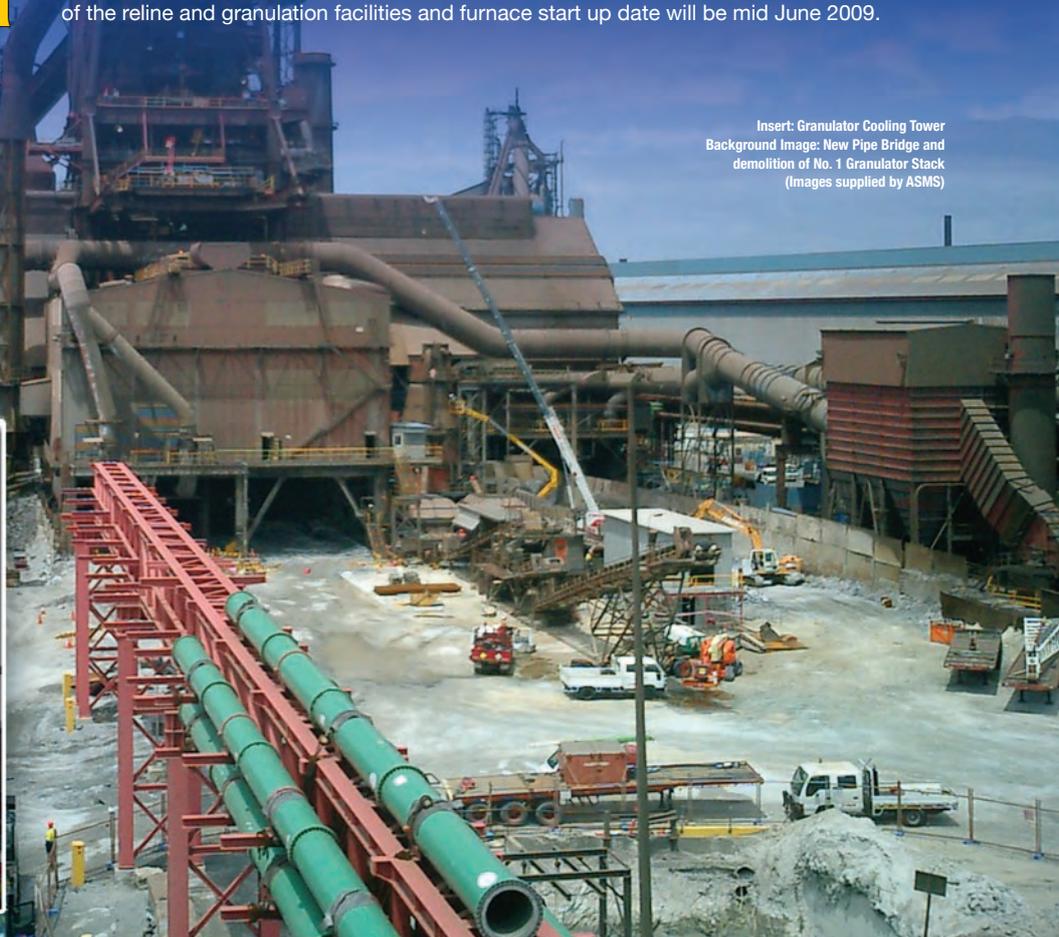
ASMS build new granulator at Port Kembla

On Saturday, January 17th 2009, the ASMS Granulator at Blast Furnace 5 was shut down after 17.5 years service in readiness for the Blast Furnace rundown. The granulator had had a successful 17.5 year campaign. Over the life of the campaign 6.5 million tonnes of granulated slag has been produced. The highest production in one year was 480,000 tonnes which was achieved last year.

During the reline of Bluescope Steel's No.5 Blast Furnace, ASMS is spending approximately \$45million on granulation facilities. This work will make it possible to granulate from all three tapholes of the blast furnace where previously it was only possible to granulate from two. A significant change will be to upgrade the facility from a hot water granulation system to a cold water system. This will deliver better environmental outcomes and the potential to increase granulate production.

Work during the upgrade will include overhauling and upgrading the dewatering wheels, conveyors and water reticulation system as well as replacement of most of the slag pit walls. Number 3 taphole slag runner will be connected to a new granulator head, three new stacks will replace the two old stacks and a cooling tower for cold water granulation. The completion of the reline and granulation facilities and furnace start up date will be mid June 2009.

Insert: Granulator Cooling Tower
Background Image: New Pipe Bridge and
demolition of No. 1 Granulator Stack
(Images supplied by ASMS)



Company Members

A primary role of our Association is to bring together Slag Producers, Processors, Customers & Suppliers to the Slag Industry. Our activities cover technical developments, plant operations and processes, education and promotion. If you would like more information on the Association and how you can become involved, simply complete the information section at the end of this newsletter. Current membership is as listed below.

Australian Steel Mill Services Pty
BIS Industrial Logistics
Blue Circle Southern Cement
Bluescope Steel Ltd (Port Kembla)
Cement Australia
Cemex
Concrete Pty Ltd
CSIRO
HiSmelt Ltd
Holcim NZ Ltd
Hunter Mill Services Prt Ltd
Komatsu Australia Ltd

Monash University
MultiServ Australia Pty Ltd
OneSteel Limited
Premium Tyre Service Pty Ltd
Roads & Traffic Authority of NSW
SCE (Steelstone)
Steel Cement Ltd
SteelServ Ltd (NZ)
Sunstate Cement Ltd
University of Newcastle
University of Queensland
University of Wollongong

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Hinczak, Dr, I (Hon.)
James, W (Hon.)
Jones, D E (Hon.)
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Venour, M (Hon.)

Related Associations - National Slag Association (US) | Nippon Slag Association (Japan) | European Slag Association (EU)

Slag Products contribute to Port Kembla Port Infrastructure Expansion

Port Kembla has been identified by the NSW Government as one of the key ports for the movement of marine cargoes into and out of the State. In recent times importation of cars has been moved from the Port of Sydney to Port Kembla changing the face of the port and providing additional impetus for the Port's further development. In July 2008, the State Government announced plans to almost double the handling capacity of the port with significant development in the outer harbour. Costing around \$600 million, the project on completion will create seven new berths in the outer harbour.

Over many decades, slag products from the nearby BlueScope Steelworks have played a significant role in the development of port infrastructure. In that time, significant quantities of slag products have played a part in the construction of the steelworks inner harbour berths, the coal loader and grain handling terminal and more recently in developments associated with site preparations and berth expansion to accommodate the new car terminal.

On March 27 this year, NSW Ports Minister Joe Tripodi announced approval of \$20 million of the reclamation works for stage 1 of the Port Kembla outer harbour development to get under way. One million tonne of BlueScope Steel blast furnace slag product will be supplied and delivered from its Port Kembla plant to the harbour by Australian Steel Mill Services in the reclamation works. This work will lead to the reclamation of 52ha of land, allowing for the seven berths to be constructed by the conclusion of the overall project.

Further information contact: ASMS pthedossiadis@asms.com.au



Image supplied by Port Kembla Port Corporation

Australasian Iron and Steel Slag utilisation reaches 80% in 2007 calendar year.

The Australasian (iron&steel) Slag Association monitors the aggregated utilisation of slag products on behalf of the members each year.

Over the years, the figures show an increase in product going into high value added uses.

For the calendar period January to December 2007, approximately 80 percent of all Iron and Steel Slags (ISS) produced in Australia and New Zealand were utilised within various cement, concrete, civil and construction applications throughout Australasia.

- For the calendar period 2007, 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 2.76 Mt or 80 percent has been effectively sold or reused for some beneficial use.
- On per capita basis, this equates to 125 kgs per person recycled or reused
- 25 percent or 0.679 Mt was used in cementitious applications - 'high value add' [HVA]
- 60 percent or 1.63 Mt was used in non-cementitious or road construction applications - medium value add [MVA]
- 15 percent or 0.42 Mt was in general civil or fill applications – 'Low Value Add' [LVA]

It is important to note that approximately 0.25 Mt of Granulated Blast Furnace Slag was imported during the period for cementitious applications

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.

The survey includes total production and sales by end use for the Associations producer (iron & steel plants) marketers, (processing and marketing companies) and user members.

Successful Global Slag Conference in turbulent times

The 4th Global Slag Conference took place in Strasbourg, France, November 2008, despite a severe downturn in the steel industry. Representatives from the main steel groups were present, as well as many of the main users of slag, including the world's largest cement producers.

After a convivial cocktail reception on the evening of Sunday 9th November, the conference was opened the next morning highlighting the main trends in the global slag industry. The main points that the industry has to contend with are the sudden collapse in global steel demand (producers have cut back by 15-40% on scheduled production, which will lead to subsequent decreases in slag supply – and possible increases in slag prices); decreases in cement demand in major economies such as the US, Spain, Ireland and the UK (but possible increases in government infrastructure spending – as indicated by the Chinese government's announcement that day of a US\$600bn infrastructure investment package) and the collapse in global freight rates by over 90% compared to their peak in mid-2008 (possibly leading to an increase in the amount of slag shipped over long distances).

It was initially proposed that the 5th Global Slag conference be held in conjunction with the Australasian (iron & steel) Slag Association in Sydney this November. However the continuing impact of the Global Financial Crisis has forced a change of venue.

This year's conference will be held from November 23-24 in Brussels, Belgium. According to the organisers, "this is the only major slag event in the world this year".

To be held at the Renaissance Hotel, close to the European Quarter and the European Parliament; the conference will address issues of sustainability in the slag industry and strategies for surviving the slag crisis'.

The current downturn in demand for iron and steel has led to a drop in the availability of slag on the international markets: "The 5th Global Slag Conference will examine new sources for slag, and will bring buyers and sellers together, as always".

Negotiations are underway between Australasian (iron & steel) Slag Association and the Global Slag Conference organisers to bring a conference event to Sydney in 2010. Watch future issues of Connections for advanced notice and details.



European Parliament Building



5th Global Slag Conference and Exhibition Slag and Sustainability
23-24 November 2009 Brussels, Belgium

Global producers: Global buyers: Global markets Make contacts in the global slag industry:
Catch up on the latest developments and news

A call for papers has been issued - enquiries to <http://www.propubs.com/gsc/gscallforpapers.html>

General enquiries about the conference can be directed to <http://www.propubs.com/gsc/> with further updates on the Association's website www.asa-inc.org.au

**REGISTER
NOW!**

AUSTRALASIAN

6.5 Million Tonne of Granulate from Port Kembla Blast Furnace

After 17.5 years of operation in the recent campaign, BlueScope steel's No. 5 Blast Furnace was blown out on January 18th 2009 in preparation for the extensive reline currently under way. In 17.5 years, 6.5 million tonne of granulated blast furnace slag was produced, much of it for the Australian cement market. (see story p3)

Call for Conference Papers

A call for papers has been issued for the 2009 Global Slag Conference to be held in Brussels, Belgium November 23-24. If you are interested in contributing contact the organising committee at <http://www.propubs.com/gsc/gscallforpapers.html>

HBM – New Starter Niribi Charker

Niribi Charker has joined the staff of HBM Group as Research Assistant in the secretariat serving ASA and its members. Niribi is currently undertaking a Bachelor of Commerce at the University of Wollongong, majoring in Marketing and Management. Previously she was working in London as a Marketing Assistant for Brixton PLC, a property development company. Last year Niribi spent 3 months backpacking Europe where she had the opportunity to experience a range of cultures and different lifestyles. Niribi has a family link to the Australian steel industry, her grandfather Frank Charker as a former Port Kembla Steelworks executive, pioneering granulation of blast furnace slag at Port Kembla.



Niribi Charker

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Concrete Solutions 09 - Adding value in a changing climate.

The 24th Biennial Conference of the Concrete Institute of Australia will be held at Luna Park Sydney on 17th to 19th September 2009. Contact Conference Secretariat - concrete09@conferenceaction.com.au or www.concreteinstitute.com.au/conferences

INTERNATIONAL

Lafarge supplying slag cement for D.C. sustainable projects

As the demand for sustainable design and building practices continues, slag cement supplied by Lafarge is playing a key role in the construction of award-winning and inspirational landmarks around the nation's capital. The new Air Force Memorial, National Museum of the Marine Corps, NOAA's Satellite Control Center, and Nationals Park are just a few highlights from a growing list of the area's structures being built with Lafarge NewCem brand slag cement to achieve concrete strength and environmental goals.

Source: Lafarge North America – Cement Newslines Issue 230

New leader for Harsco Metals business

HARRISBURG, PA, Jan. 6, 2009 (GLOBE NEWSWIRE) – Harsco Corporation announced that William R. Jacob is joining the Company to assume the Americas region leadership of the Harsco Metals business group. In his role as President-Americas for the Harsco Metals group, Mr. Jacob will assume senior

management responsibility for all Harsco Metals group operations and business growth opportunities throughout North and South America. Following an appropriate transition period, Michel Kratz, who has held the position during his assignment to the Americas, will assume new responsibilities at the Metals group headquarters in the U.K.

Harsco Metals is the world's leading provider of on-site, outsourced services to the global metals industry, serving leading producers at approximately 170 locations in 35 countries worldwide. Mr. Jacob brings to his position over 30 years of direct metals industry experience, most recently as president of North Star BlueScope Steel, an Ohio-based joint venture between Cargill Inc., and Australia's BlueScope Steel. Before that, Mr. Jacob served as president of New Zealand Steel, a division of BlueScope Steel focused on integrated steelmaking, iron production and raw material mining.

Source: NSA Slag Runner Feb 09

National Slag Association Directors present at the Third Annual National Resource Conservation Challenge (RCC) Training Workshop

The Third Annual National RCC Training Workshop is scheduled for March 25–27, 2009 in Arlington, Virginia. Two NSA Members, John Yzenas, Edw. C. Levy Co. and Bill Stanley, Edw. C. Levy Co., have been personally invited by EPA to present at this workshop. John will be presenting on "The Importance of Appropriate Specifications for Recycled Materials and By-Products". Bill will be presenting on "Utilization of Steel-Making Slags in Portland Cement Manufacturing; An environmental approach to Delivering Commercial Value". The purpose of the workshop is to build on EPA success in implementing RCC by exchanging information and strengthening working relationships among EPA Headquarters, Regions, States, other federal partners and industry.

Source: NSA Slag Runner Feb 09



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