

IRON AND STEEL SOCIETY (I&SS) ANNUAL REPORT FOR 2015

1. Board membership

At the end of 2015, the membership of the I&SS Board comprised 17 persons:

- Dr Andy Backhouse (Outokumpu)
- Dr Martin Brunnock (Tata Steel)
- Dr Mike Copeland (formerly SSI)
- Prof Claire Davis (Warwick Manufacturing Group)
- Mr Brian Edy (Tata Steel)
- Dr Geoff Hale (IOM3)
- Mr Joe Lee (Primetals Technologies Ltd)
- Ms Emma Leighton (Taylor and Francis)
- Mr Chris McDonald (MPI)
- Dr Norrie McPherson (University of Strathclyde)
- Dr Peter Morris (Beta Technology)
- Dr David Price (Taylor and Francis)
- Dr Ken Ridal (IOM3)
- Mr Bob Ruddlestone (MPI, formerly Tata Steel and UK Steel)
- Mr Martin Smith (Primetals Technologies Ltd)
- Mr Mick Steeper (Primetals Technologies Ltd)
- Dr Richard Thackray (University of Sheffield)

Two members left the Board (Mr Vince Ludlow and Dr Mike Pettifor) during 2015. No new members joined.

During the year, Mick Steeper was elected as Division Chair in succession to Richard Thackray, and Martin Brunnock was elected Deputy Chair.

All I&SS Board members are members of IOM3.

2. Board meetings

Four board meetings were held in 2015 as follows:

- 4 February at 1CHT – 12 attended in person (and 3 by teleconference)
- 30 April at Outokumpu Stainless, Sheffield – 13 (0)
- 7 July at Warwick WMG – 13 (2)
- 30 November at 297 Euston Rd – 8(0)

Richard Thackray chaired the first three and Mick Steeper the last.

There was also one special general meeting to which all board members were invited. This was called to develop a Divisional strategy (see also item 4) and was chaired by Mick Steeper:

- 5 October at 297 Euston Road – 8 (0)

3. Activities during 2015

3.1. Technical programme *(Summary; details in Appendix)*

The second series of Steel Strategy Seminars is proceeding, with two events in the year (one at Tata Port Talbot with a theme of Product Development and the other at Warwick Manufacturing Group with a theme of Steel Substitution Challenges). Both kept up the very high presentation quality of this series, but attendance is becoming more and more of a challenge, as steel industry business prospects worsen.

The other significant public event organised by the I&SS was Bessemer Day (incorporating the Bessemer Masterclass as well as the Bessemer Lecture and I&SS awards ceremony). Because of the relocation of IOM3 HQ, this took place at Sheffield's Cutlers' Hall with the SMEA (Sheffield Metallurgical and Engineering Association) organising the Bessemer Dinner. The whole event achieved strong support, as well as considerable acclaim. The Masterclass in its new extended format got off to a successful start (though a final judgement waits on the summer 2016 team reports and "Dragon's Den" finale). Professor John Beynon as the Bessemer Laureate gave proceedings the air of a homecoming, as well as considerable individual panache in their delivery. The resulting clamour to keep Bessemer Day in Sheffield (or alternatively to hold it in a sequence of steel industry locations) demands consideration.

3.2. Web-site developments

Nothing to report. Upkeep of the website is recognised as a problem for the I&SS and we are trying to find and enlist a webmaster.

3.3. Engagement with technical community and/or local societies

In June, the SWMA (South Wales Materials Association) in conjunction with the SPECIFIC IKC at Swansea University held a successful two-day conference on "Achieving Zero Carbon Buildings using Steel", but there was no SMEA Conference in 2015.

Increased liaison with Germany's VDEh took place throughout the year, with the Divisional Chair's historic attendance of the annual ESIC meeting (allocating European and International steel conferences among the national institutes) being augmented with I&SS member attendance of several VDEh technical committee meetings. There is no doubt that the VDEh is far the strongest of the European steel institutes now, with only AIM, ASMET and Jernkontorets among the others claiming to be maintaining historic levels and scope of their activities in industrial metallurgy generally. It is hoped that closer work with VDEh will give sufficient value to UK organisations to encourage more purposeful collective effort in support of the home steel value chain.

3.4. Contributions to IOM3 house journals

Three active members of the I&SS Board have direct roles in the delivery of the Ironmaking and Steelmaking and Steel World journals (David Price as Executive Editor and Norrie McPherson as Assistant Editor, and Emma Leighton as their Publishing Manager at what is now Taylor and Francis).

The year has closed with very worrying delays in journal publication under the new Taylor and Francis regime, which will need urgent redress early in 2016.

The I&SS contributed copy to the journals as follows: editorials and commissioning/editing of eight articles for Steel World by David Price and contributions to Materials World introducing the new Divisional Chair and the Bessemer Master Class and Lecture.

3.5. Other

The general dire state of the global steel industry in 2015 cannot go without note. Global productive capacity is generally considered to be of the order of 30-40% in excess of demand. Pretty well all of the world's steelmakers are incurring financial losses and many are structural loss-makers at current prices (ie production makes a negative contribution so that the more steel is made, the greater the loss). According

to some estimates and relative to the beginning of 2015, direct job losses in the global industry will top 1 million by mid-2016. In this climate, sustaining (let alone developing) the knowledge community of steel is rarely a priority of the business making it, and collaborative activity is widely replaced by a self-interested survival instinct. This position threatens to leave the aims of the I&SS at odds with the needs of the industry it serves – leading to a recognised need to instigate the strategy process described in the following section.

As a consequence of lack of UK industry support (including a dearth of likely sponsorship) the I&SS had to hand back the 9th European Continuous Casting Conference (ECCC9) to ESIC. Instead of a UK venue, it will now be held in Austria as part of ESTAD in summer 2017. The I&SS will have to work hard to avoid other ESIC and ISSI-allocated events in our calendar for 2018 and 2020 going the same way.

4. Strategy and Objectives for 2016 and Beyond

For the reasons stated above, I&SS has spent the second half of 2015 developing a formal strategy, so that all Divisional Board members contribute to and agree a consensus on our activities and responsibilities, as well as common and clear ideas about how we can serve our technical community effectively. The resulting strategy and policy will be formally agreed and published early in 2016.

4.1. Opportunities and constraints

The new Divisional strategy addresses a number of opportunities and constraints facing steel. Particularly important among these is the issue of an aging profession. The I&SS will focus on attracting young members, and on refreshing the image of industrial metallurgy as a career.

4.2. Specific targets for 2016

During 2016, the I&SS will deliver two further Steel Strategy Seminars (the first on the UK Innovation Landscape and the second on the Sustainability of Steel Products and Green Issues. The extended Masterclass will be expedited and we will consolidate the idea of a “traveling” Bessemer Day. We will also work on aspects of the new Divisional strategy and policy. Overall however a year of relatively low activity is foreseen in terms of exposing IOM3 to financial risk. This approach is considered appropriate in the prevailing steel business climate.

4.3. Specific targets for the 3 years beyond 2016

IOM3 has been invited to host the 3rd International Conference on Ingot Casting, Rolling and Forging (ICRF3) in summer 2018. The challenge will be to secure sufficient industry support – which really needs to come from the open-die forging sector – to deliver the event.

In 2019, IOM3 will celebrate the 150th Anniversary of its founding organisation, the Iron and Steel Institute, and the I&SS will soon begin planning for an appropriate commemoration.

During 2015, the ISSI granted IOM3 a further international conference for 2020 (Electric Steelmaking). The I&SS will decide whether to accept it during 2016.

5. Other matters

The I&SS was pleased to note the elevation of Professor Harry Bhadeshia (University of Cambridge) to a Knighthood in the New Year Honours 2015.

Appendix: Technical Programme as of December 2015

Date (YY/YY/MM)	Status (Held /Progressing /Planned)	Title	Location	Organising Division(s) /Committee(s) /Collaborators	Financial Underwriter (IOM3/ Local/ Other)	100% Target No's	Actual No's
15/04/2015	Held	Steel Strategy Seminar Series 2, Seminar #2	Tata Steel Port Talbot	I&SS/Tata Steel	IOM3	80	~60
18/11/2015	Held	Steel Strategy Seminar Series 2, Seminar #3	Warwick WMG	I&SS/WMG	IOM3	80	~50
13/11/2015	Held	Bessemer Day, including Masterclass and Lecture	Sheffield (Cutlers' Hall)	I&SS/SMEA	IOM3	M/class 24, Lecture 200	24 and 200
May 2016	Progressing	Steel Strategy Seminar Series 2, Seminar #4	MPI, Teesside	I&SS	IOM3	80	
Nov 2016	Planned	Steel Strategy Seminar Series 2, Seminar #5	TBA	I&SS	IOM3	80	
Summer 2018	Planned	3 rd European Conference on Ingot Casting, Forging and Rolling (ICRF3)	Sheffield	I&SS/Sheffield Forgemasters	?	250 (series norm)	
2020	Planned	European Electric Steelmaking Conference (EESC)	UK	I&SS	IOM3	400 (series norm)	

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