

Technical training courses

Forthcoming short technical training courses at Swinden House

October

Carbon and Alloy Steel Metallurgy and Processing – 9th & 10th

This two day workshop is targeted at employees in technical and engineering backgrounds to help them gain an understanding of the metallurgy and processing of Carbon and Alloy Steels. The second day will study the processing and mechanical properties of the various steel product forms; rod and wire, plates, strip, sections, line pipe and engineering steels.

Introduction to Heat Treatment – 11th

This one-day workshop will provide a basic understanding of heat treatment processes, why they are necessary, what they involve and what goes wrong. It will encompass the heat treatment of the most common engineering metals, i.e. ferrous metals, including stainless steels, nickel based alloys and the light alloys titanium and aluminium. Surface treatments will be mentioned but the emphasis will be on bulk heat treatment.

Heat Treatment for Heat Treatment Professionals – 24th & 25th

This is a two-day workshop targeted at people who are already involved in using or operating heat treatment operations and need a fuller understanding of heat treatment principles in their job.

The course aims to be practical in nature but heat treatment is a process of micro-structural engineering and the fundamentals will be addressed. However, no prior metallurgical knowledge is required.

Common engineering steels, stainless steels, nickel based alloy systems and titanium and aluminium alloy systems will be covered. The course will consider bulk heat treatments but not surface heat treatments.

November

Metallurgy for Absolute Beginners – 8th (½ day)

Half a day programme aimed at those who require an introduction to Metallurgy from the beginning. Answers to frequently asked questions: What are metals? What is grain size? What is the structure of metals? What are the properties of metals? How do we know if this material is good enough to build a fridge or a bridge? And a few more. Designed to serve as an introduction to the world of metallurgy. Attendees could include professionals from all walks of life with no previous background in metallurgy.

Metallurgy for Non-Metallurgists – 13th & 14th

This two-day course is designed to give attendees a basic understanding of metallurgy and an appreciation of the issues involved in the production of metals and alloys. The Course Manager, Ian Martin, specialises in structure/property relationships and the effect of processing on mechanical properties in a variety of steels.

Stainless Steel Manufacture, Metallurgy & Applications – 20th

This one-day workshop will allow delegates to increase their understanding of the processing, properties and uses of stainless steels. It will be of interest to personnel involved in the production, processing, fabrication, utilisation and selling of stainless steels.

Titanium Metallurgy – 22nd

This workshop will allow delegates to gain a better understanding of titanium alloys, their properties and their uses. The course is aimed at those with some metallurgical background, but no in-depth knowledge of titanium. It will be of particular interest to personnel working within the aerospace, defence, offshore, chemical, oil or gas industries.

Nickel Metallurgy – 28th

This one day workshop will allow delegates to gain a better understanding of nickel alloys, their properties and their uses. The course is aimed at those with some metallurgical background, but no in-depth knowledge of nickel. This workshop will be of interest to recent graduates, designers, engineers, senior supervisors and technicians and sales personnel working in, or supplying to the aerospace, defence, offshore, chemical, oil or gas industries.

December

Mechanical Testing of Metals – 11th & 12th

This course is designed to provide basic knowledge of different mechanical properties, together with descriptions and demonstrations of the methods used to measure them. It is aimed at those with little or no metallurgical background, but could also be used as a refresher course.

STOP PRESS

NAMTEC in partnership with Sheffield Hallam University launch MSc programme
Details will be available shortly at www.namtec.co.uk

Chief Technical Officer appointed

Dr. Stephen Court has joined NAMTEC as Chief Technology Officer (CTO). Steve will play a key role in the strategic development of NAMTEC as a provider of technical services to the UK's metals and manufacturing sector and will be responsible for the leadership of the technical staff and for overseeing the technical "quality" of NAMTEC's deliverables.

Steve has spent eighteen years working in Aluminium R&D with Alcan and its spin-off Novelis. For the past two years he has been Laboratory Director of Novelis' R&D Centre in Neuhausen, Switzerland and as Novelis Inc.'s Chief Scientist. Steve has held a number of technical leadership positions within Alcan's R&D labs in Banbury, UK, Kingston, Canada and Neuhausen, Switzerland. He has a strong academic background and experience of establishing partnerships and collaborative research with universities and research institutes throughout the UK, mainland Europe, Canada and the USA.



Titanium Roadmapping Events

Earlier this year NAMTEC, in conjunction with the IOM3 held the first part of a Titanium Roadmapping Event at the University of Birmingham. The event successfully brought together representatives from both industry and academia to establish a draft roadmap providing a vision of where industry and academia believed new processes and technologies were required in 5 to 20 years time.

Presenters included key personnel from Rolls-Royce, Airbus, DePuy, Firth Rixson, BAE Land Systems, Timet and the universities of Birmingham, Oxford, Manchester, Swansea, Sheffield, Cambridge and Imperial College London.

The second phase of this initiative was a 1-day follow-up event that presented the findings of the initial roadmapping exercise and provided an opportunity for attendees to participate in the formulation of forward research. The event combined a workshop and brokerage between European industries, research organisations and universities. Topics for possible proposals in Ti Materials and Technologies for the current and forthcoming EU Framework 7 Programme and the UK's DTI Technology Programme Calls were identified.



For further details visit www.namtec.co.uk

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SMEA Conference and Exhibition

“The Effect of Melting, Refining and Casting on Product Quality and Properties” is the title of the sixteenth in a series of conferences organised by the Sheffield Metallurgical and Engineering Association. The event will be held at Tpton Hall, University of Sheffield on the 4th and 5th of July. The aim of the conference is to explore the effect of primary processes on the quality and performance of a range of alloys including Carbon, Alloy and Stainless Steels, Titanium and Nickel Based Superalloys. Attention will be focused on secondary steelmaking and continuous casting, vacuum-remelting processes and how they are related to product quality and properties.

Dr Chris Elliot, Technical Director, Corus Construction and Industrial will set the scene by looking at how product developments should meet customer requirements. On the evening of Wednesday 4th July, the SMEA Celebrity Lecture will be given by Mr Roy Tazzyman, Managing Director, Siemens VAI on the theme ‘The Life of a Plant Builder in the Modern Steel Industry’. This will be followed by a buffet supper.

Dr Adrian Normanton, Corus RD&T will close the conference reviewing process developments and the role of pilot plant operations in the development and evaluation of new technologies. There are 22 papers covering a wide range of developments that will demonstrate the latest technology.

[Download details and registration form from www.namtec.co.uk](http://www.namtec.co.uk)



Wire Drawing Event - Optimising Operations

In conjunction with UK Steel, NAMTEC are hosting a workshop for wire-drawing businesses and their supply chains. The event, to be held at Swinden House on the 4th July, will be of particular interest to tool manufacturers and the suppliers of capital equipment, tool, raw materials and coatings, who are looking to develop and support the UK wire-drawing industry.

The workshop will provide delegates with the opportunity to find out more about a range of technologies aimed at optimising operations. Presentations and exhibitions will cover: business process modelling, environmental management and control, product management via metallurgical control, opportunities in tool coatings and the benefits of drive systems.

[Download details and registration form from www.namtec.co.uk](http://www.namtec.co.uk)



New Business Development Manager

Dr Oluyinka Ogunjimi has joined NAMTEC as a Business Development Manager. Yinka has worked with start-ups and established companies for the past three years helping to develop and raise funds for new technology. Prior to that, he was the Practice Leader for the Applied Mechatronics Solutions Team of Pera Innovation Ltd where he developed strategic partnerships for innovative technology development and commercial exploitation for manufacturing companies. Yinka's experience of developing innovative technology and business start-ups will be used to support companies in the Innovation Technology Centre over the next 4 years. He will be working with member companies advising on technology development and creating strategic partnerships for success.

Special Metals Forum

One of the key activities undertaken by NAMTEC has been the establishment of a special metals network involving key industry sector representatives.

A proposal to establish such a programme was presented to the Special Metals Forum comprising: Corus, Outokumpu, Sheffield Forgemasters Engineering Ltd, Doncasters, Firth Rixson, Allvac, UKSteel, the British Stainless Steel Association, the Titanium Information Group and the Special Metals Information Group. The proposal was agreed and further proposals are being formulated to provide a national network that will provide a range of support services to UK metals companies; covering education and training, technical support and market information.

The SMF has been relatively successful in raising the profile of the Special Metals Sector and its importance to the UK economy because of the sectors it supplies (aerospace, medical, energy). Increasingly it is working to stimulate the understanding that innovation, directly focused at developing new products to replace ones lost to low cost economies, is also

critical to the long term future of the sector. The latter has been helped by locating the SMF at NAMTEC which is recognised as the independent centre for metals technology in the UK.

Richard Cinderey has been appointed as manager of the SMF and takes over everyday responsibility for its operation and the delivery of its services. Richard is a metallurgist by training and has a good background in specialist engineering alloys, including remelt alloys. In conjunction with the team at NAMTEC he is ideally suited to deliver the support that the sector needs. Richard will be developing a service package for the SMF so that all members are fully aware of what the body will deliver. It is intended that the Forum will be formally launched in September of this year as a subscription based network.

[For more details about membership of the SMF contact Richard Cinderey on 01709 723950 or email: richard.cinderey@namtec.co.uk](mailto:richard.cinderey@namtec.co.uk)



Sandwich Plate System (SPS) Project – Risers to the Challenge!

Since the project's announcement in the Spring 2006 Newsletter, Corus RD&T and Intelligent Engineering Ltd have made major steps forward in establishing a business case for the manufacture of SPS stadia riser systems in the Yorkshire and Humber region.

The project, managed by NAMTEC, is part funded by Yorkshire Forward under their large company, Industrial Research and Development scheme.

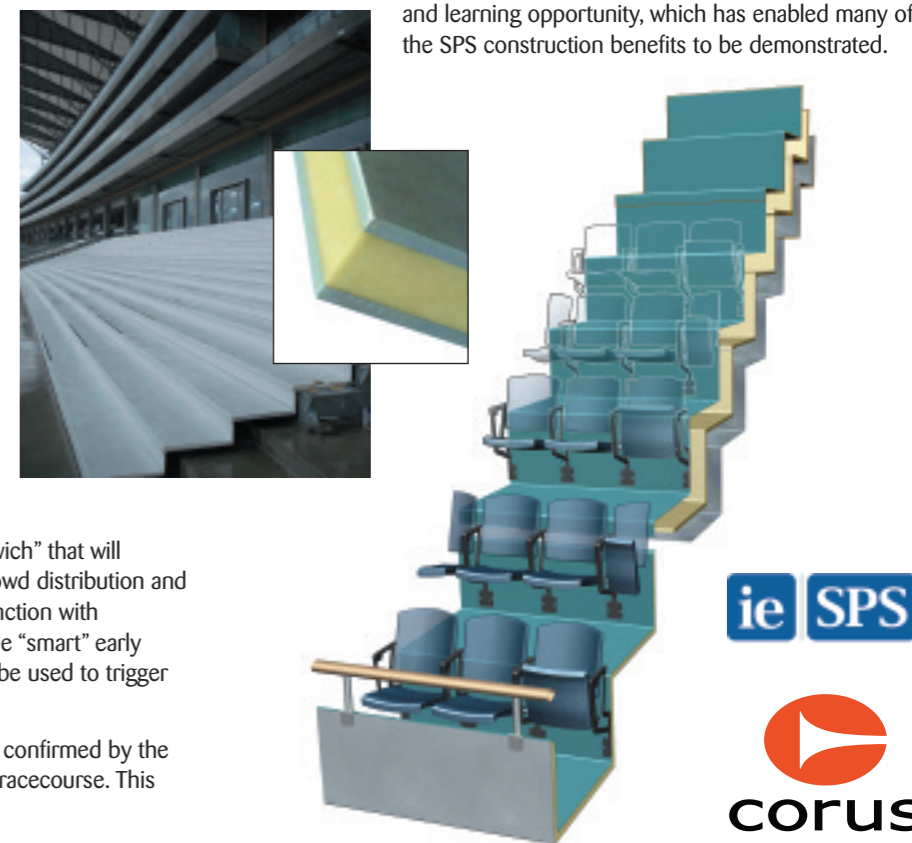
SPS is a composite material invented by Intelligent Engineering Ltd and comprises two steel plates separated by an elastomer core that is injected between them.

The system, which is being developed for use in the construction of sports stadia, is to undergo full scale structural, static and dynamic load testing and fire testing. It is expected to achieve Buildings Research Establishment Certification (BREC) in August this year. This will confirm the SPS material as an excellent alternative to reinforced concrete for use in stadia construction and achieves a key milestone in gaining widespread acceptance of the system.

In addition to the benefits from reduced construction time, high stiffness to weight ratio, simpler fabrication and improved system versatility, research work undertaken at Swinden Technology Centre has established that it will be possible to provide improved crowd safety features than those of traditional construction. This can be achieved by installing sensor systems within the composite “sandwich” that will provide real time data to enable the monitoring of crowd distribution and movement. Working either independently or in conjunction with traditional CCTV and observer systems this will provide “smart” early warning of impending crowd safety issues and could be used to trigger automatic crowd management measures.

The advantages of the SPS system have already been confirmed by the successful installation of a raised concourse at Ascot racecourse. This

required a specially designed SPS riser system to be produced and installed on top of the existing concrete grandstand in order to improve line of sight. The contract, undertaken by IE, avoided major time consuming construction work that would otherwise have been necessary to modify the existing reinforced concrete stand and was successfully completed within tight time constraints required by the client. It has provided an ideal full scale fabrication development and learning opportunity, which has enabled many of the SPS construction benefits to be demonstrated.



The Advanced Metals Technology Initiative (AMTI) Seminar



26th June 2007, The Innovation Technology Centre, the Advanced Manufacturing Park, Sheffield.

Hear how this project gave real benefits to those companies involved and how your company can benefit from the technologies developed.

The event starts at 9.00am and will end with lunch at 12.00 noon.

The seminar will consist of presentations by the partners; NAMTEC, Cti, TWI and BLSY and case studies from companies involved in each

of the areas covered by the project. There will also be an exhibition area with products and technologies displayed.

There will be an opportunity to tour the facilities at Cti and TWI during the afternoon.

Places are limited for this event and will be allocated on a “first come” basis.

[Download details and registration form from www.namtec.co.uk](http://www.namtec.co.uk)