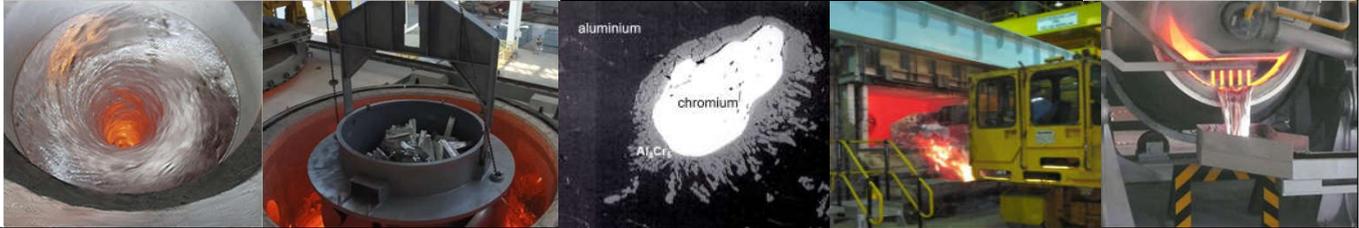


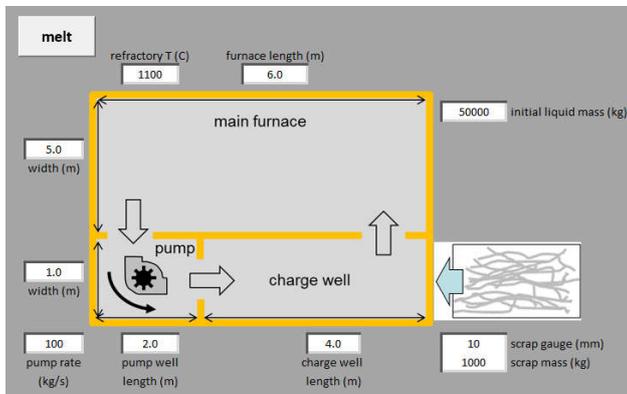
This live online training course is presented over six weekly sessions. It covers the decoating of coated scrap, melting furnace practices and dross formation and processing.



## A fresh approach

Many technical training courses start from basic principles, building towards a detailed analysis of the particular technology. This often leaves attendees floundering in a sea of concepts and equations, unsure how the physical basics relate to the actual workplace.

Our approach, based on extensive experience in delivering training courses to industry, overcomes these difficulties. We first provide an appreciation of what the various technologies are expected to deliver to their customers, and why it is important. Only then do we consider how everyday operations relate to the physical basics.



Most importantly we use workshops extensively. In these workshops attendees investigate the relationships between actuators they control (e.g. decoating atmosphere or furnace stirring) and the performance of each manufacturing stage. All workshops are computer based for the live online course.

After a comprehensive briefing, attendees undertake the workshops in their own time between sessions. Each new session starts with an interactive review of the findings from the previous workshop.

Such 'discovery-based learning' results in a deeper understanding, and better knowledge retention and usage in the workplace.

## Course structure

The course focuses on:

- melting, alloying, melt rate and energy efficiency
- melt loss and dross formation
- scrap processing and decoating.

Each weekly session is centred on a seminar delivered live, allowing hand raising and discussion.

Following the seminar, a related workshop is introduced, which attendees can tackle in their own time. This workshop is reviewed at the start of the next live session.

## Melting furnace operations

The key metrics for a melting furnace, melt rate and energy efficiency are introduced and investigated in terms of heat transfer principles. The applicability of dry hearth or submerged melting practices to different charge formats is discussed, and implications for performance analysed. Alloying options are compared and the principles of OES measurement explained.

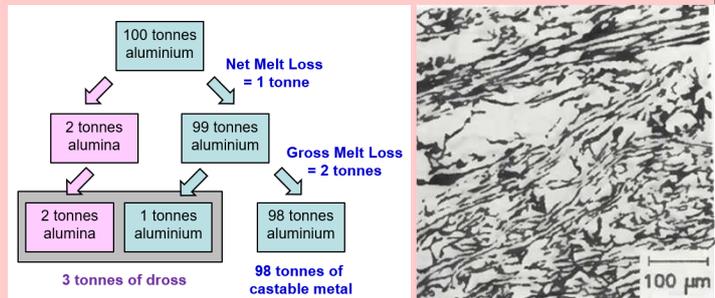


*"Content is current, relevant and expertly put together. Practical workshops at the end of each session bring theory and real-world problems together. I can recommend the TSC courses for every specialist working in the aluminium industry." F. Vlok, Hulamin Rolled Products*

## Course structure (cont.)

### Melt loss and dross

Net and gross melt loss are defined and related to dross formation. The costs relating to permanently lost (oxidised) aluminium and trapped aluminium, recoverable by dross processing, are quantified and compared to typical energy costs. The options for dross processing, and their relative efficiencies are considered.



### Scrap processing and decoating

The problems with processing thin coated manufacturing and post-consumer scrap are reviewed. These lead to the need for formal decoating prior to submerged melting to minimise melt loss and dross generation. The fundamental factors controlling the decoating process are investigated: process gas oxygen and humidity content, peak temperature and scrap exposure.

*“Would highly recommend this course to anyone who is looking to broaden their knowledge on furnace practices and metal treatment. The presenters are a great team and very knowledgeable and always happy to help”.*

*T. Bown, Hydro*

*“Such in-depth and yet so practical, these sessions! The TSC team is just incredibly knowledgeable. The best part is that they are ever ready to help you!! I was fortunate to attend three different courses with them around Metal Treatment and Cast House technology”.*

*S. Bhat, Foseco*

### Presenters

**Paul Evans** and **Ricky Ricks** were formerly directors of research and innovation for Alcan. They set up **tsc** to help clients develop their technology strategy, including knowledge management and technical training.

**David Humphreys** has managed remelts and casthouses in Alcan and Alcoa and has extensive technical and practical expertise.

### Registration

You may register online by following the details on the course website:

[www.training.tecstrat.com](http://www.training.tecstrat.com)

Alternatively, you may contact us directly at the email address: [enquiries@tecstrat.com](mailto:enquiries@tecstrat.com)

### Technology Strategy Consultants

Unit 16 Blackwell Business Park,  
Blackwell, Shipston-on-Stour, Warwickshire.  
CV36 4PE, UK

tel: +44 (0) 1608 682199  
email: [enquiries@tecstrat.com](mailto:enquiries@tecstrat.com)  
web: [www.tecstrat.com](http://www.tecstrat.com)