

Audits, Training & Brexit!

2017 marks the 5th anniversary of Innoval Technology being part of Danieli and, on a personal note, my 10th anniversary as our Managing Director.

The last five years have seen our product and process experts working alongside Danieli's engineers from the design stage of several new hot and cold mills, through to post commissioning support. This has included working with Danieli and Alcoa on a new step change technology; the Alcoa Micromill™ by Danieli. We're also excited to be a part of Danieli's Factory 4.0 where we will be developing digitalisation solutions for aluminium processes. This, together with our novel work at Brunel University, is keeping Innoval at the forefront of aluminium technology worldwide.



Much of our work involves technical auditing of 3rd party rolling mills and rolling plants. A client will ask us to independently assess their operations for a number of reasons. They might want to find out if they're capable of producing a new product to world class standards, or they might need to find additional capacity from equipment that is already fully loaded. A good example is our support to companies wanting to produce automotive sheet.

Clients often want a 'fresh set of expert eyes' to examine their processes and to tell them what can be achieved, ideally with little or no CAPEX spend. Together with a small team from the plant, we usually take about a week to analyse the whole production process from melting, through to rolling and finishing, and everything in between. The results then help our clients to make better informed decisions about process improvements, potential investments and market development. If this is something that you think you might benefit from, please get in touch.

Many of you, like us, will be following the unfolding story of Brexit with interest. Over 80% of our work is for aluminium rolling and extrusion companies, most of whom are outside the UK. The early impact of Brexit has been to weaken the value of the British Pound which has reduced our costs to overseas customers. Now is a good time to see how we can help you!

Training has always been a large part of what we do and, following on from the success of our Aluminium Rolling Technology Course, we have decided to introduce a second 'open' course. It will be about aluminium extruded products. The course will be aimed at end users of 6000-series extruded products. However, it will also benefit new hires or non-technical staff from extrusion companies. The first course, which will take place over 1.5 days in Banbury, is scheduled for May 2017. We hope to repeat it later in the year and for it to become a regular fixture on our calendar.

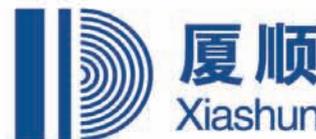
Finally, have you been reading our blog posts over the last year? We've posted around 50, covering topics from aluminium recycling to chatter problems on a rolling mill. You can find them on our web site at www.innovaltec.com/blog. As well as being informative, the blogs provide a good summary of the type of work we do and the breadth of our aluminium expertise.

*Dr Tom Farley,
Managing Director,
Innoval Technology Ltd*



Picture credit: Xiashun

Developing a deeper understanding of litho at Xiashun



In the 2015 edition of 'innform' we described some of the work we'd been doing with Xiashun Aluminium Foil Co., Ltd (Xiashun). Since then we've visited the site in Xiamen, China, several times and a successful partnership has grown between our two companies.

Xiashun is the largest manufacturer of high quality light-gauge aluminium foil in China and a global industry leader. Customers use their light-gauge aluminium foil in a wide variety of consumer products from milk cartons to cigarette packaging all over the world.



Dan Miller giving a lecture

Towards the end of 2016, three of Innoval's consultants visited Xiashun to undertake a series of training workshops in the sheet plant where high quality litho sheet is produced. The purpose of the training was to provide Xiashun's technical team with a deeper understanding of their product and key aspects of its processing route.

Dan Miller tackled the cold rolling process with several sessions from our Aluminium Rolling Technology Course. He covered mill vibration and flatness control amongst other topics.



High quality light-gauge aluminium foil

Gary Mahon provided product-specific training with lectures on the detailed metallurgy of lithographic sheet.

Vicente Martin completed the training with a series of lectures and workshops covering surface quality, lubrication and product testing.

The sessions also gave insights into the challenges posed by products not currently manufactured by Xiashun, but which they could make using their current equipment.



Coils ready to be shipped

"Being able to tap into Innoval's vast knowledge helps us to move ahead quicker than we would otherwise. We value that their consultants are able to share product expertise as well as process knowledge. The Innoval team are very approachable too and this helps greatly with the mentoring of our staff."

Jacky Wang, Manager, R&D and Technology Department at Xiashun Aluminium Foil Co., Ltd

To find out more about our product and process training and how it could benefit you, please contact us at enquiries@innovaltec.com

REALITY: closing the loop with end-of-life vehicle recycling

After the success of both the REALCAR and REALCAR2 projects, in which we participated as project partners, a third project has been announced. This is called REALITY or Recycled Aluminium through Innovative Technology.

The 3 year project will focus on sorting and recycling aluminium from end-of-life vehicles and turning it into automotive sheet and structural castings. The project partners are Jaguar Land Rover, Axion Recycling, Novelis Automotive UK, Norton Aluminium, Innoval Technology, Brunel University London and the University of Warwick.

This exciting project will see end-of-life vehicles shredded and the resultant mixed alloy scrap automatically sorted using state of the art sensing and sorting technologies. The recovered wrought AA5xxx and AA6xxx alloys will be supplied for coil production and the recovered cast alloys for high pressure vacuum diecasting. Our role will be to carry out evaluation and characterisation of both the resultant sheet and cast product forms.

For more information please contact Prof. Geoff Scamans at geoff.scamans@innovaltec.com



Zorba, the non-ferrous fraction of shredded cars



The body structure of the Jaguar F-PACE comprises 80 per cent aluminium

Constellium uses Innoval to supplement their in-house expertise



Production of Crash Management Systems (CMS)
©G rard Uf ras for Constellium

Innoval is a technical partner to a range of large, multinational companies who have extensive technology teams. These companies want someone they can trust with their highly confidential developments, someone they can rely on to find creative solutions to problems and with whom they can build close working relationships. One such company is Constellium.

Constellium produces advanced alloys and cutting-edge technological solutions for markets as diverse as aerospace, automotive, construction, packaging, renewable energy and transportation. The company's 23 production facilities in Europe, China and the United States specialise in rolled products, extrusions and automotive structures.

Over recent years the Operational Excellence and Technology team of Constellium's extrusion divisions has called upon our diverse range of skills. Some examples of how we've supported Constellium are described here.

Gary Mahon has visited many Constellium plants to provide temperature management training to press operators and die correctors. The training consisted of a combination of classroom presentations and coaching sessions at the press. Amongst other things, the operators learnt about speed improvement using billet temperature and available pressure to optimise the extrusion cycle. Gary also took part in benchmarking the presses and carried out waste time measurements in order to improve productivity.

Carrying on the theme of waste time, Helen Forrest used various Lean Improvement techniques to analyse the packing operations in several of Constellium's plants. Helen worked with teams of operators and technicians to identify wasteful activities. They then looked at how they could change the way they worked in order to eliminate the waste and become more efficient. Sometimes this meant a complete reorganisation of the packing area but, crucially, with little or no CAPEX spend.

"It was great to be able to call on people with hands-on extrusion experience when we needed them. Innoval has made an important contribution to the productivity improvements Constellium's AS&I division has achieved in recent years, and I know I can rely on them to supplement our in-house teams."

Martin Jarrett, Director, Operational Excellence & Technology at Constellium

If you can see an opportunity to supplement your in-house knowledge with our world-class aluminium expertise, please contact us at enquiries@innovaltec.com



Aluminium extrusion production
 Hubert Raguet for Constellium



Organised packing material storage at Constellium Levice



Less time wasted looking for materials!

AL INVEST prepares to get the most out of their new separator



If you're installing a new piece of machinery, you probably want to get the most out of your investment from day one. This means optimising the set up for your products, and training your operators so that they really understand the process. This is exactly what AL INVEST Břidličná, a.s., (AL INVEST) did when they commissioned their new separator last year.

AL INVEST is a manufacturer of aluminium packaging materials and rolled products. Their product portfolio ranges from foil for packaging, through household foil and aluminium containers, to Profal and corrugated sheets for architectural applications.

Dan Miller and Vicente Martin travelled to AL INVEST's site in the Bruntál region of the Czech Republic to run a separator training course. Separators, as the name suggests, part the two sheets of foil which have been rolled together during the final rolling pass. They also trim edges and slit the parent coil into smaller ones.

AL INVEST was in the process of commissioning a new separator and the engineering team wanted to understand how to set up the machine to get the optimum quality and productivity from it. They also wanted to increase their understanding of what was required from the incoming material in order to get the best results from their new machine.

Over two days, Vicente and Dan covered a range of topics to do with both the separator and the product. Dan's sessions included the rolling and slitting processes, as well as the use of interleaf oil. Vicente talked about coil structure and handling, surface defects and product quality. He also included a section on the annealing operation and how it removes residual oil after separating.



Coils of aluminium foil at the end of the separator

After the training course, and whilst back in the UK, Vicente and Dan continued to give help and advice to the team at AL INVEST.

"We appreciated the complex theoretical perspective of the course. It helped us to understand the process better which will help us to improve quality and productivity."

Václav Pospíšil, Head of Technology at AL INVEST Břidličná, a.s.

If you're about to install some new equipment and you want to make sure you get the most out of it, we can help.

Please contact us at enquiries@innovaltec.com with details of your investment.

More News... More News... More News...

Gary wins bronze for England

In February Innoval's Director, Dr. Gary Mahon, represented England at the first ever Masters Indoor Hockey World Cup in Krefeld, Germany. After an intense four days of play, England won the bronze medal in the M50 category!



Dr. Gary Mahon

A new face on reception

We're pleased to welcome Alison Arrowsmith as the newest member of Innoval. Alison works alongside Julie Hodgkins in our Administration team.



Alison Arrowsmith



Full marks in Client Survey!

Thank you to everyone who took the time to complete our recent Client Survey. Over half of all the companies we worked with in 2016 responded, and 100% of them said they'd recommend us!