

Analysing the aluminium industry

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1. How are things going at Thermo Fisher Scientific?

It is an exciting time right now at Thermo Fisher Scientific. We recently launched our Thermo Scientific™ ARL iSpark™ OES based Elemental Analyzer. It represents the next generation of elemental analysis with more flexibility than our previous models, yet retains the accuracy and reliability customers have expected from the Thermo Scientific brand. Later this year, we will also release a new IR based sensor for the measurement of coatings on flat sheet.

This sensor will compliment the full array of non-contact dimensional sensors already available to aluminium sheet producers. Toward the end of 2013, we also received another order for our Thermo Scientific™ SIPRO™, a simultaneous profile system for the hot mill. With the fastest full profile measurement and cross strip resolution in the world, it brings a wealth of dimensional data to process engineers.

2. What are your views on the current state of the global aluminium industry?

As part of an integrated global organization that provides both services and instruments to the aluminium industry, we are always impressed with the drive to maximize the potential of aluminium. As our customers develop new applications, using more elaborate alloys and tighter dimensional tolerances, we are there with them to provide the solutions to help them achieve their goals.

Recently, the drive to increase fuel economy in motor vehicles has resulted in some high profile opportunities for aluminium producers. The drive for maximizing fuel economy is not limited to the ground. The aviation industry continues to consume a wide variety of aluminium products. Along with the ever-growing number of annual air passengers, we expect positive market conditions for both the near and long term.

3. In your opinion, what are the big issues affecting the aluminium industry today?



“OUR VISION HAS ALWAYS BEEN TO ENABLE OUR CUSTOMERS TO MAKE THE WORLD HEALTHIER, CLEANER AND SAFER.”

Access to low cost energy is always an important issue to aluminium producers, although recently with the extraction of large volumes of natural gas in North America and potentially elsewhere in the world, this is less an issue of concern, but an issue of opportunity. Another issue in the minds of all aluminium suppliers is the need to differentiate their product in the marketplace.

Brand protection and reputation are essential in retaining customers as well as growing into new markets. The ability to supply a product with the consistent chemistry required for the mechanical properties and uniform dimensions make a

big difference to aluminium consumers. Those manufacturers operate on extremely tight margins, and their profitability depends on consistent aluminium products. If they perceive any concerns, they will find another supplier in the market. An issue on the horizon for the aluminium industry will come from the increased aluminium usage in transportation.

With a larger percentage of aluminium in automobiles, there will be more aluminium to recycle at the end of the vehicle life. This will create challenges for maintaining the chemical composition of alloys and the need for reliable sensors for scrap sorting and re-melting.

“WE FEEL WE ARE WELL POSITIONED IN ALL ASPECTS OF CUSTOMER CONTACT, FROM KNOWLEDGEABLE SALES PERSONNEL, TO EXPERIENCED SERVICE ENGINEERS.”

4. Where in the world are you busiest at present?

With our base of operations in Europe, corporate headquarters in the US, and service and sales facilities in 29 countries around the world, we see activity in many areas. However, China continues to be the area of largest growth. Even as it pulls back from the double digit growth of the past decade, there are still plenty of opportunities for us. We feel we are well positioned in all aspects of customer contact, from knowledgeable sales personnel, to experienced service engineers.

5. What products are proving the most lucrative?

We feel that each of our products brings exceptional value to our customers. As an industry leader in instrumentation and sensors, we seek to develop partnerships to maximize the value of our customer's products for both the near and long term. When our partners do well, we are able to share in that success through repeat business, product support agreements and other aftermarket services.

6. How quickly has Thermo Fisher Scientific responded to 'green politics' in terms of helping to make the process more environmentally friendly?

Our vision has always been to enable our customers to make the world healthier, cleaner and safer. Thermo Scientific products provide essential process information to reduce raw material waste, optimize production parameters and assure quality standards are met the first time. Aluminium producers are able to realize not only material savings, but energy and waste stream management savings as well. For example, our Thermo Scientific™ PROSIS™ Oil Film Sensor measures the thickness of oil or lubricant on flat aluminium sheets.

The feedback from this innovative sensor guides operators to apply the ideal amount of oil to meet the needs of the aluminium customer, without over-coating. In the past, concern for “dry-spots” on the sheet would lead to production practices where more oil than necessary would be applied, and that excess oil would drip onto the mill floor – both in the rolling mill and at the customer site. This created a waste stream as well as a slip hazard that had to be managed. Now aluminium producers can realize a process that is healthier, cleaner, safer and more environmentally friendly.

7. What are the big trends in value-added production and where is Thermo Fisher Scientific leading the way?

For commodity products, value is found in consistency and profitability depends on high speed production and overall mill yield.

Our high-speed x-ray gauges provide real-time feedback signals for sheet thickness control and our automated elemental analyzers assure consistent sample preparation and handling, which in turn assures consistent product quality. Reliability stems from regulated processes and our ISO 9001 certified factories follow documented procedures that include inspections and management ownership.

Consistency is also very important in the speciality alloy segment, where accuracy of chemical content is a critical factor. Particularly in the aerospace applications, where the mechanical stress of repeated cycling can cause cracking to occur if the melt contains unwanted elements.

“OUR SERVICE AND SUPPORT TEAM INCLUDES CARING, CUSTOMER FOCUSED INDIVIDUALS WITH UNPARALLELED EXPERIENCE.”

8. Where do you see the most innovation in terms of production technologies – primary, secondary, or further downstream?

The application engineers seem to find new uses for aluminium on a daily basis. While this often requires some out-of-the-box vision, the innovation often falls to the metallurgist to make vision a reality. I once read that early metallurgists were revered as magicians for their ability to manipulate earth and fire to create materials with extraordinary properties.

The royalty during those times would take extraordinary measures to keep secret any new developments within their kingdoms.

While the fundamentals of aluminium production are well known, those companies whose research teams achieve the reality envisioned by their customers still guard those secrets closely.

Quite honestly, as I sit here on an airplane with its aluminium fuselage, typing on my laptop with its light weight aluminium components, with a beverage poured from an aluminium can, I can only wonder what future applications will be considered for aluminium products and when those magical metallurgists will make them a reality.

9. Do you see Thermo Fisher Scientific as an innovator within the industry?

Absolutely. Our elemental analyzers are often the first to see the newest metallurgical “magic trick”. The partnership we have with many of our customers leads them to contact us when they need a measurement solution. Regular dialogue with research teams at their facility or in the meeting rooms at professional society conferences keeps our engineers looking in the future.

Our support of these societies is unwavering. We strongly believe that a healthy, innovative aluminium industry will create opportunities for both partners.

10. Are there any research and development projects in place?

Certainly, but like the royalty of long ago, we'll keep those secrets well guarded.

11. How do you view Thermo Fisher Scientific's development over the short-to-mid term in relation to the global aluminium industry?

Thermo Fisher Scientific is an optimistic company. Our opportunities for development and growth are well aligned with the markets we serve. The upside

potential for aluminium growth in automobiles, aerospace and other new markets will also translate to growth for us. Being part of a large diversified organization provides a broad base of stability that allowed us to weather the turbulent years in the past. This in turn provided our aluminium customers with confidence knowing we would be there to answer the phone if they needed support for older equipment, or provide flexible leasing conditions for new equipment needed.

12. What does Thermo Fisher Scientific have in store for 2014?

Our service and support team includes caring, customer focused individuals with unparalleled experience. We have invested in a comprehensive cross-training program to provide deep local product and applications expertise to our installed base. As we continue to roll out our innovative products, like the ARL iSpark, SIPRO and PROSIS, customers can expect their Thermo Scientific service engineer to deliver the same focus and dedication as the physicists and engineers of our research and application teams. ■

Contact

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