



Vision of the Future

To serve our customers well, we must constantly improve our products as well as services. The time-scale for a typical product development project can range from a few months to a year. In addition to this kind of “short-term” development work it is also necessary occasionally to break away from our regular daily routines and to take a look further towards the horizon.

Creating a vision of the future requires an open-minded approach with minimum strings attached to solutions applied in the existing product. To achieve this, it surely helps to involve an outsider into the process. An outsider can question existing solutions, raise discussion, facilitate search for new ways of doing things, all in all visualize the future.

At the end of 2007 this plan kicked into action when cooperation with a Pori based industrial design office apDESIGN commenced. First apDESIGN visualized how a future UPGAST® casting machine might look like and after this extended their work to include the entire UPGAST® line.

Good design, is a well thought out package that focuses on the product's aesthetics, usability, ergonomics, usefulness, market placement, seduction, psychology or even desire. Creating “good design” is not easy, but when achieved works of art and engineering, such as the Coke bottle or the VW Beetle are created.

Concept designs presented here concentrate on product styling. In the future we hope to utilise these designs to provide our customers with a product that combines both aesthetically pleasing qualities as well as perfected engineering.

Survey results

Impressive results from Original UPGAST® Spare part service survey.

Firstly, a big thank you to everyone who took part in the survey – we had an outstanding response rate of 37%!

Results show that respondents valued furnace design and quality of the end product the most. UPGAST OY staff was also highly rated. Out of all respondents, 70% fully agreed with the positive suggestions given in the survey. These included things like “Staff is friendly and polite”, “Staff can answer our questions” and “Service is professional”. Overall customers were delighted with the service but as always would prefer lower prices.

Wonderful news is also that almost 90% of respondents see their business growing in the next 12 months as well as in the next three years!

Source: Original UPGAST® Spare part service survey results 02/2008



SARKUYSAN President, Mr. Cayçi

Case: SARKUYSAN – Global operator relies on UPCAST®

SARKUYSAN Elektrolitik Bakır Sanayii ve Ticaret A.Ş. is one of the leading electrolytic copper wire and tube producers in Europe. Product range covers a wide spectrum of electrolytic copper wires with diameters down to 50 microns, including multiwire, bunched and stranded conductors (unilay and semi-concentric) wires, flat wires, tin and nickel plated wires and other high conductivity copper products.

- We have been cooperating with UPCAST OY (formerly Outokumpu Castform Oy) for 34 years, since 1974, when SARKUYSAN was just starting its operation, clarifies **Mr. Cayçi**, President at SARKUYSAN. He believes maintaining the mentality of growing gradually has attributed to the company's success in becoming the global organization it is now. Installing an UPCAST® line suited this mentality well as it had, not only lower annual capacity but also lower annual investment and operation costs compared to a CCR plant. Another

important factor in choosing an UPCAST® line, at the time, was the fact that other continuous casting technologies did not give quality guarantees.

UPCAST® - an easy choice

- As an engineering student in 1966, I received a scholarship to spend a five month summer training period at Outokumpu in Finland. During this time I became acquainted with UPCAST® technology. Considering all these aspects, UPCAST® was the obvious choice. We really knew what we were investing

CASE: Cumerio - Efficient Specialty rod manufacturer

Cumerio is one of the leading independent copper companies and the biggest specialty rod producer in Europe. In addition to copper smelting and refining they also transform copper into products for various applications going from ETP and OF wire rod to light alloyed copper rod and shapes.

Cumerio operates four (4) upwards casting installations, specialized in the production of low oxygen and low alloyed copper rod between 8 mm and 30 mm in diameter. For this article, we interviewed the manager responsible for these operations **Mr. Guido Verdyck**, Vertical Castings Manager at Cumerio's factory in Olen, Belgium.

UPCAST® - beating rising labor costs

When the UPCAST® line was commissioned at the end of 2000, rising labor costs were the cause of grey hairs. It was, and still is, important that the number of people needed on the installation is kept to a minimum. To achieve this, UPCAST OY and Cumerio technicians together, developed a system for automatic melt transfer from melting to holding

furnace. After installing this equipment at Cumerio, it became a standard feature in the UPCAST® system. The main reasons for choosing UPCAST® technology for the plant were:

- **Furnace technology**
- **Experience and professionalism of UPCAST OY personnel**
- **Possibility to upgrade the installation to a higher capacity**

According to Mr. Verdyck UPCAST® has met their expectations well. However Cumerio is using somewhat lower than nominal casting speeds. - We have very high quality standards for our products and thus want to keep an extra safety margin, Mr. Verdyck says.

One of the reasons why they chose an UPCAST® unit in the first place was its upgradeability. The initial installation had a production capacity of 8 000 TPA, which was expanded to 15 000 TPA in 2003. The unit is easy to operate – although the use of a channel type induction furnace requires some know-how and special maintenance. For Cumerio it is an advantage to have a copper refinery, which has allowed them to use special selected cathodes in the UPCAST® process. Good feed material plays a significant part in meeting customer requirements and cathode quality is an important factor in the reliability of the entire process.

OF rod for demanding applications

In addition to the UPCAST® unit, Cumerio also has two (2) Contirod lines for the production of ETP rod going from 8 mm up to 23 mm. - Because we can supply a broad range of wire rod to our customers, Cumerio holds a unique position compared to others. Together with our customer, we decide which rod is the most suitable for a specific application. In many cases, ETP rod produced on a continuous casting and rolling installation such as Contirod is sufficient for our customers. If our customer needs rod for more demanding applications, we can offer them our OF rod, Mr. Verdyck explains.

in when we bought our first installation, Mr. Cayçi confirms. Not surprisingly, the plant has met their expectations well.

Then and now

The first installation at SARKUYSAN was a 12,000 TPA capacity UPCAST® unit. Now they are running two separate lines with 16,000 TPA capacity each and casting various rod sizes. How have they arrived from the early days to this point?

- The UPCAST® plants came one after the other as per our capacity needs. In those days UPCAST® technology was not able to produce rod that was 8 mm in diameter so the 20 mm rod was cold rolled down to 8 mm for a number of years. In the mean time, wire drawing technology improved increasing the expectations on rod quality. It is a well-known fact that there is a risk of metallic inclusions during cold rolling causing the wire to break in the drawing stages. With the modernisation we executed in 1998 and 1999 we eliminated this mentioned risk, Mr. Cayçi describes. Now we have the capacity to cast 8 - 22 mm to survive in challenging markets. Mr. Cayçi raises a few points about UPCAST® technology that have made a real difference to the success of their business.

- **Upgradeability**
- **Superior drawability**
- **Reliability**

According to Mr. Cayçi, one of the very important and unique things about UPCAST® rod, besides good drawability, is its conductivity. Because of UPCAST® rod's higher conductivity values, compared to ETP rod, it is a sought after product in the electronics industry. In addition when producing copper alloys UPCAST® technology is the obvious choice. This is because in most cases the usage of CCR systems is extremely troublesome if not outright impossible.

Mr. Cayçi gives two thumbs up for UPCAST OY customer service.

- The customer service is good with quick response times in helping us find solutions to our problems.

The company exports its products to approximately 60 countries in Europe, America, Africa, Middle East and Far East. SARKUYSAN maintains its active role in the industry with success thanks to TSE-ISO-EN 9001/2000 and ISO/TS 16949 quality management system certificates.

PRODUCT RANGE

- Electrolytic Copper Products (Tough pitch / Oxygen Free)
- Rods
- Wire rods
- Wires (Bare Copper, Tin plated, Nickel plated)
- Mono wires
- Multiple wires
- Multiple wires on braiders
- Regular bunched wires
- Bunched and Stranded wires (Bare Copper, Tin plated, Nickel plated)
- Concentric
- Unilay
- Smooth Bunched
- Flat wires
- Profiles
- Centrifugally Cast Products (Bronze, Brass and Special Alloys)
- Copper Tubes

OF rod is used in high tech applications where the customer requires the specific characteristic of the OF rod such as

- **Resistance to hydrogen embrittlement**
- **Special wire for safety applications**
- **High fl exibility**

- An important part of our OF production is further processed in a continuous extrusion installation.

We can offer our customers a broad range of OF rod with various diameters and product qualities. Cumerio has a long tradition in casting different shapes and different qualities of low alloyed copper. This know-how combined with the excellent cathodes produced by Cumerio makes us a privileged player on a new and developing market, he adds.

Customer service at UPCAST OY, gets more positive feedback, this time delivering it is Mr. Verdyck. Contacts in general work well and a special thank you is given to UPCAST® User Meetings, where customers get a chance to meet other UPCAST® users in an informal environment.



Vertical Castings Manager at Cumerio, Mr. Guido Verdyck (on the left).

- Cumerio originated from the demerger of Umicore copper activities to a separate company
- First listed on Euronext Brussels in April 2005
- Headquarters in Brussels and industrial operations in Belgium, Bulgaria, Italy and Switzerland
- Employees around 1,450 people and has an approximate turnover of €3.4 billion
- In the beginning of 2008, takeover and integration process by Norddeutsche Affinerie began

Introducing UPCASt OY personnel – international reinforcements

Over 20 years of passion and experience



Juan Carlos Bodington, Technical Advisor

Juan Carlos Bodington joined the company in 1997. Prior to the move he had been employed at one of the Outokumpu Castform's customers where he gained 10 years of experience working with upward casting method. As a Technical Advisor, Juan Carlos, better known as Kalle takes care of the technical side of the business.

- As UPCASt OY is a relatively small company everyone has to take part in many different tasks. In my case it means doing also a bit of sales, marketing, services and lately some R&D, Kalle says.

Kalle is responsible for operations globally which means he is out of the office about half of his time. He mainly operates in the Americas, from Mexico to Chile. His home office is in Maracay, Venezuela.

Kalle's main duties include upgrades as well as solving process or service related problems. Kalle is always available for the customers but actual emergency calls are rare.

- Customers are our friends. When they join the UPCASt® family we take care of them as a team. The whole group is passionate about the work. - I think that is one of our most important assets. I am passionate about the technology and process. I'm also exci-

ted about the new developments as we are creating new solutions to cast different materials and shapes more economically, while maintaining the high quality end product.

The biggest project in Kalle's near future is related to his family. Kalle and his wife and two kids are moving to Spain before the summer of '08. That means his beloved hobby, sailing will continue in Spanish territory. Before that he needs to move the boats and everything else from South America to Europe. That'll keep him busy for a while.

Solving technical problems around the world

Hudai Kocabalkanli graduated with a degree in Metallurgical Engineering (Msc) from ITU (Istanbul Technical University) in 1982. After graduation he stayed at the University as an assistant for a year from where he transferred to SARKUYSAN. First three years he worked in R&D and then in the continuous casting department, where he took part in the implementation and operation of UPCASt®, Southwire and Contirod casting lines. At SARKUYSAN, Hudai also got familiar with wire drawing operations. When he left the company to join Outokumpu Castform Oy in 2001 he was the Continuous Casting Manager.

He finds his Technical Advisor's post at UPCASt OY interesting and enjoys travelling around the world and meeting people from different countries and cultures. - The best part of my work is to share experiences and knowledge with customers and colleagues and to see happy faces after my visits, Hudai declares.

Most of Hudai's customer visits are due to quality related problems, arising from improper operational parameters, low quality raw materials or unsuitable solidification parameters coming from various sources.

Hudai sees his job as secure for years to come as copper, he believes, will be used forever with no other metals ever replacing it. - Copper will be needed and used in many applications with more applications being invented in the future, Hudai visions.

Hudai considers himself very lucky to be part of the professional and knowledgeable UPCASt® team. Being part of the 'family' has gained him many new friends around the world.

To keep in shape, Hudai jogs and exercises regularly. He is also interested in history and different cultures, making reading one of his favourite pastimes. He is married and has two boys, who make sure he does not lay about.



Hudai Kocabalkanli, Technical Advisor

Events and exhibitions

You are welcome to visit us at our booth at the following exhibitions:



Wire Düsseldorf 2008
Düsseldorf, Germany
31 March - 4 April



The All China - International Wire and Cable Industry Trade Fair 2008
Shanghai, China,
23 - 26 September

Coming soon



5th UPCASt® User Meeting
Helsinki, Finland
2 - 4 September 2008

UPCASt OY Contacts

We offer superior service to the users of our UPCASt® technology worldwide. For more details, please contact us:

UPCASt OY
Kuparitie 10, P.O. Box 60
FI-28101 PORI, Finland

Please note, our e-mail addresses are:
firstname.surname@upcast.com
www.upcast.com