

# Coffee and conversation

## with Dr. Kurt Eder

**T**he ubiquity of Starbucks notwithstanding, the best cup of coffee I had in Shanghai was in the Austrian Pavilion at Wire China. Of course, the accompanying slice of Sachertorte might have had something to do with it but I think it was more because of the wide ranging conversation I had with Dr Kurt Eder.

Dr Eder founded and continues to run Eder Engineering, recognised throughout the world for its wire drawing die-tools and die-tool processing machines. However, for this article, we spoke to him in his capacity as president of the Austrian Wire & Cable Machinery Manufacturers Association (AWCMA/VÖDKM) to be able to gain insight into a number of issues facing our industry. We touched upon diverse topics such as the value of cooperation, intellectual property rights, the growing shortage of engineering talent, and what the markets look like from his perspective as the head of an active association whose members are always in the front line of commercial and technical challenges.

### What difference has having an association made?

Before the foundation of the association, most Austrian industrialists worked alone and without any support in seeking their fortune abroad. They would visit the same customers, one after the other, offering one or two products rather than a set of equipment or tools, whatever else might be needed in our industry niche. Potential synergies were being lost simply because we were not working together nor assisting customers together.

Once, during a meeting with a friend in the industry, another entrepreneur, I said



**Above:**  
Dr. Kurt Eder,  
president  
of AWCMA/  
VÖDKM

that I was fed up with the lack of communication and the missed opportunities to combine forces. This was more or less the beginning of the idea that we had to get together and talk things over. But when I broached the idea to the then president of the Austrian Federal Economic Chamber, this very experienced man told me, "You will never bring two entrepreneurs together because they are too egoistic, too much the lonely hunter."

He was wrong.

I contacted my colleagues in the beginning of 1988. That year six of us had decided to work together. We cooperated from the very beginning. Whenever one of us visited a customer abroad, he would also take his col-

leagues' catalogues. In the beginning there was some trepidation about frustrating the contacted customer by loading him with too much information. We were disabused of this notion very quickly. Customers would tell us that they were interested in other techniques of wire production and that often they had been looking for exactly that piece of equipment for a long time. So bringing each others' catalogues was more helpful than damaging.

By the next year, we had doubled our membership to 12. Today, there are 22 companies, which means that a hundred percent of the Austrian wire and cable machinery manufacturers are members. We speak with one voice. We organise technical symposia together and we participate in exhibitions and arrange trade missions. In short, we combine our forces and capabilities.

In 2006, we participated in two main exhibitions, one of which is the most important one, the pillar of all our events: *wire Düsseldorf*. In that event, the AWCMA took nearly over 2,800 sq. metres of space. That is our main event in so far as there all the 22 companies participated and brought their latest technical developments.

The other exhibition is *wire China*.

As far as trade missions are concerned, we had one in Russia in February. One week from now, I will be in Moscow presenting and introducing the Austrian association to the Russian wire and cable industry. And being selfish enough to talk about Eder Engineering as well. (Laughter)



### What's unique about the Austrian wire and cable machinery market?

We have plenty of wire manufacturers but cable manufacturing has become moribund because it has more or less been sacrificed to globalisation. The Siemens cable plant in Vienna which had taken over all the other big cable plants was itself closed down four years ago. Now we only have Gebauer & Griller who specialise in complete cable arrangements for the automobile industry and are triple certified by Mercedes Benz, BMW and Audi, and so on – just the *crème de la crème*. So there practically isn't a cable industry in Austria anymore which is why we have to concentrate on selling abroad.

Each of our members has at least a 95% export rate. We are in a situation very much like Switzerland in that we come from a small country but are highly technically developed and are thus forced to export. You know, if you are exporting, you must either be cheap or you must be among the best. And we have decided to be the latter. The quality of Austrian companies is very much on par with other Middle European countries

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like Germany and Switzerland. These are top quality suppliers – not the cheapest – but definitely among the best. All our member companies have the highest levels of technology because we invest a lot in research and development even if our profits are shrinking.

One thing that is very tricky for associations is competition among the member companies. We, at AWCMA, have managed this perfectly despite the fact that there are certain niches which do have competing products. We talk to one another and whenever one can offer the better level of quality, the other one concedes. That is how we keep the membership level at a very high rate.

We're very lucky in that there's very little overlap in our members' product categories. In this regard, we're luckier perhaps than the German association. In fact, if we consider the industry associations – the German, Italian and French – our association is definitely one of the most active ones. That is acknowledged even by Dr. Horst Birkman (head of the German VDKM), who is, shall I say, not an uncritical observer.



### Market overviews

Western Europe has lost a lot of its former importance. I would say that our major markets are the countries of the ex-Soviet Union, most parts of Asia and the Middle East. These are the territories we are concentrating on

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because these are where business is likely to be found. In the CIS countries or Eastern Europe in general, there is a huge demand for modernisation,

For us, North America has lost a lot of its former importance. They had a depression for a couple of years and to my understanding, the American association is not always well advised in making their plans for shows. As an example, they held Interwire in Atlanta that has been dead for years already. It's the same as holding Wire Singapore in Singapore which isn't industrial anymore. Atlanta had no business anymore. And Americans have this funny behaviour. They never send their top people down to the shows. It's mainly the middle management – and that's rather bad. They all know one another and they see each other every two years, it's all "Oh, hi!" and then up they disappear into the hospitality lounges and you hardly ever see them in the fairgrounds anymore. Perhaps they'll show up on one day to collect some catalogues to prove that they have been visiting.

So the American shows, in our opinion, are not efficient for us Europeans. They've also made a mistake in that had a chance to completely remake Interwire after holding in Atlanta for 15 years but didn't. They moved it to Cleveland, Ohio, which is undoubtedly a



much better place to hold a wire exhibition. But they chose the wrong time and set the event 18 days before the wire show in Russia opens. Exhibitors are now having problems guessing where the majority of visitors will go.

In America, the wire industry is still very low, steel is only slightly recovering. Its cable industry is paralysed whereas in Russia, it's booming. They have enough oil, they have enough money, and they have paid back all their debts much earlier than expected. So everybody will be going to Russia. Even if we would like to participate in both shows, it's simply not possible because we'd have to have twice the staff and twice the equipment to send to both at the same time.

It was the same situation with Wire India which took place very shortly after Wire China. I don't know what makes people decide to hold these shows so close together. Show organisers must be more careful because, throughout the years, our profits



have been shrinking a lot and we cannot just spend these declining profits on them.

Eastern Europe has traditionally been a very good market for Austrian companies because of the remains of the Austrian Hungarian Empire which ended in 1918. Austrians still have relatives on either side of the former Iron Curtain which has since been torn down and many of us speak Eastern European languages. Our mentality also to a certain degree, is influenced by Slavic blood so we often understand these countries' populations better than any other nation can and that eases the acceptance in private and business matters.

To my knowledge, very, very few of those who set up business in Eastern Europe have been confronted with ownership problems. We have a fundamental understanding of these countries and can deal with problems like bureaucracy and artificial obstacles. We certainly have fewer problems there than we do in China.

I only wish that the other companies I deal with were as reliable in paying as the Russians are. Some Russian companies even have a 100% pre-payment system which shows that they have a lot of trust in Austrian companies. This is because our relations go a long way back. In the case of my company, it goes back to 1956. We are already supplying second and third generation of wire company owners.

Tradition and reliability is essential in Russia, as well as being leak-proof whenever drinking vodka.

### How is the association dealing with the dropping prices for equipment?

The price of extrusion lines has gone down by 50% to what it was four years ago. This is just one among many examples.

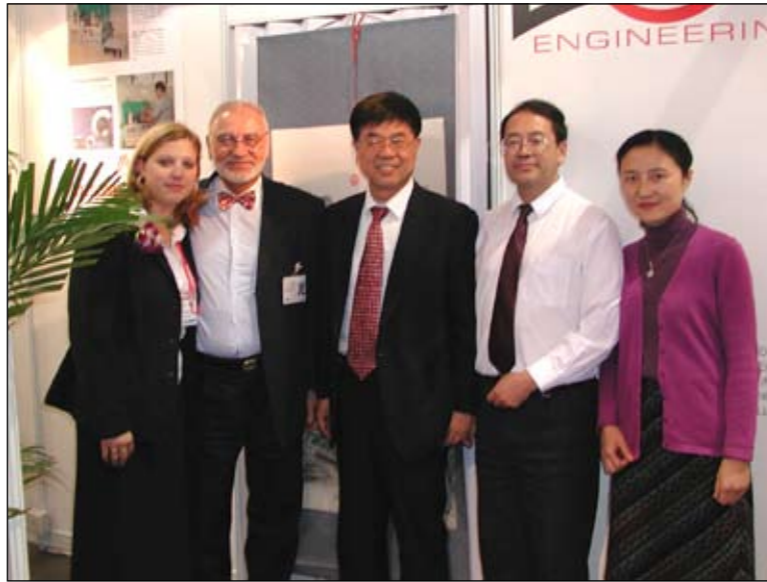
Technology is changing rapidly now, particularly when you look at the different places where these equipment are being produced. Production costs in China are lower than anywhere else. Some of the European companies have also tried to move to Eastern

Europe because of the lower wages and the lower costs of doing business in general.

On the other hand, outsourcing will not solve all of our problems because very often, you don't get the same level of product quality and you will then have to spend a great deal of money to provide after-sales service.

For our members, research and development has to remain in Austria. That is quite clear, particularly if manufacturing takes place in China. You would be very well advised not to hand out blueprints of the intelligent part of the design. Just have the mass articles produced here. In fact, most of the companies that have outsourced most of their production still do not assemble the machine completely in China. It's too risky.

I've been in China since 1976 when it was still a very closed country. My contacts were established through Albania, because that was the time when Chou En Lai and Enver Hoxha had good relations and were trying to keep the Soviets out. Eder Engineering sold a lot of equipment, and so did my colleagues, in the period between 1980 and 2000. Since 2000, however, our sales in China have been declining because of the copies and because of Chinese national pride. When



they find machinery made in China that looks similar to our equipment they tend to ignore whether it's of the same quality or has the same level of efficiency. Their prices are certainly just a fraction of ours because no R&D was required.

#### How can a company protect itself against this?

I have recently patented an innovation which assists in differentiating a copy from an original and that is just one of means of defence. We designed and developed it to protect dies which are under threat because even raw materials from General Electric and Sumitomo are now being counterfeited.

The invention, however, has a much wider range of application than this. What it does, first, is to help tell whether the raw material was genuinely sourced or not because once raw material is encased, you cannot tell whether it's genuine or counterfeit.

Second, it can implement the complete certificate of origin of a finished die-tool. This information cannot be overwritten because it's a closed system as far as software is concerned. We implant this in a very small microchip that is not available in the open market and which contains a specific code. This code indicates immediately: "This is a product from GE/Diamond Innovations, or a product from Sumitomo, or a product from Eder or somebody else."



## 'Exhibitors are now having problems guessing where the majority of visitors will go . . . It was the same situation with Wire India which took place very shortly after Wire China. What makes people decide to hold these shows so close together?'

Third, there is an open program where the end user can write all the usage details of these specific parts.

This innovation is fantastic for strategic industries like the aircraft, airspace, armaments, and so on. For example, all aircraft need to be re-certified after being in operation for so-many hours and parts will have to be replaced. Now there is an international mafia selling copied spare parts which costs 10% of a genuine one. The difference is shared between the counterfeiters and those who, fully knowing it's a fake, provide them with an original bill for the price of a genuine part.

If an airplane crashes and the insurance has to pay for this awful event, then one of the first checks they can do is to check whether genuine parts were used while it was being serviced and whether replacements were being done according to the recommended frequency. Usually, this information cannot be obtained anymore, but with this system it can.

With this invention, genuine parts can be differentiated from fake ones. It has much a wider range of applications than wire machinery or die-tools, but the idea was, in fact, brought about mainly because of pressure from China on this sector. They are mercilessly copying everything and have no respect for legal rights

or patents. They simply don't care.

Patent protection is not part the association's agenda. This is an individual agenda that must be solved company by company. Privately, of course, I can give assistance but this comes from Eder Engineering and not the association.

In Austria there is a specific department in the International Chamber of Commerce and they do have a blacklist of counterfeiting companies but even if you know who they are, these guys are very tricky and clever and will find a way around it. You can block them for a month, by the next month they will have set up another company doing the same thing. They have no reluctance about using genuine trade names.

#### Historically, which innovations from Austria do you think have had the greatest impact on the way wire or cable is manufactured?

There are many, particularly in stranding, extrusion and, last but not least, in the development of wire drawing dies and die tools. My company was the first in the world to make synthetic polycrystalline diamond (PCD) dies. We also were first to use PCD in stranding and compacting die tools for copper and aluminium. We were the first company in the world to made it possible to shape PCD for drawing of profiled wire, while formerly these profiled dies were only available made from tungsten carbide material.

The standard of technical education is very, very high, particularly the study of metallurgy, mining and plastics in Montan University in Leoben. This university initially was founded to study techniques for extracting resources like iron and coal from mountains, hence the name. If you qualify there, you could only be two thirds of the way through your education and companies would already be queuing to get you as an employee. Leoben, where it is located in the middle of Austria, is also a centre of the steel industry.



**Speaking of education, companies are complaining that fewer people are opting to study engineering, and fewer still want to specialise in wire and cable. Is the same true for Austrian companies?**

Generally speaking, there is a very obvious lack of technical engineers as young people train to study economics, law or other administrative courses instead of studying the technically more complex but much more interesting field of technology. I think that that is creating a bottleneck. If we have nobody developing products, there would be nothing for others to sell.

But this problem is not unique to Austria, it's a problem all over Europe. There is a scarcity of technicians and this should be part of the politicians' agenda. They should be encouraging young people to take technical courses, particularly girls, who should be encouraged to take on what are traditionally male professions. In Eastern Europe this was never a problem. In the early days, when I went to the Soviet Union, I was very surprised to find a lady chief engineer in a huge cable plant with some five or six thousand employees. That was absolutely normal for them. That women were much more emancipated might have been one of the benefits of the communist system.

What we do is to keep very close contact with the technical universities and we also organise seminars where our people can learn about new scientific processes which can be taken over to improve the quality and efficiency of our own products. That is very important because when you are in the front lines, you don't have time to go back to relearn theory or the details in scientific work.

**Do you think there is a limit to innovation in wire and cable manufacturing technologies? For instance, can somebody buy equipment and say, "That's it. That'll do for the next five, maybe ten years?"**

Markets and technologies change very quickly. Those who are not flexible and attentive are taking huge risks. Markets that were flourishing in the recent past have disappeared. For instance, Western Europe as a market is fading because companies, with a few exceptions, only order new equipment when their old equipment collapses. It's just replacement rather than real innovation.

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On the other hand, countries and even entire continents are modernising and investing to catch up with other areas that have already enjoyed technical progress for some time. For instance, for the last 20 years, we have been expecting South America to flourish. This never happened despite the size of its population and the richness of its resources. If we take Cuba as an example, we can see that it would need each and every thing for modernising their wire and cable industry. At the moment, they simply have no money. But when its politics changes, at whatever pace, and the US boycott is lifted, then this country will become open.

The same is true for nearly all of Latin America. There is a tremendous need for wire and cable in Latin America because of the enormous geographical distances that require a network of cable and wire

for construction, for transmitting electrical energy, for telecommunication and so on. That means that there is a large market waiting there while our industry chooses to focus on already available markets which have become increasingly conservative.

The wire and cable industry is permanently changing. Some years ago we had a very bad situation in the wire industry because the steel industry was entirely down. It started in the United States when the old mills around Pittsburgh were collapsing and that influenced the European steel market. Now there's a boom in steel and everybody is trying to get into it. In the meantime, in many countries the cable industry is weak.

The cyclical nature of our industry is a challenge that we all have to meet and should definitely be part of any industry association's agenda. An active association can deal with this problem much better than a single company can. It has more access to more decision makers and can gather more information about what is going on today and what might happen tomorrow. A single company can never gather as much data to make as good a forecast for its business.

**Speaking of forecasts, how do things look from your perspective?**

Wire is back to profit. Cable is getting much better. For the immediate future, let's say the next two or three years, wire will be a more profitable field of activity than cable. As far as optical fibre is concerned, there is an abundance of supply at the moment but the demand is already determined so there will be very little activity in that area.

The most promising sector is steel wire – everything from construction to stainless. Steel is being used in all aspects of our life. Any building being constructed nowadays cannot be built without the assistance of steel. The hangers from your laundry are made of steel wire. Nails are wire. Screws are wire. Wire is being used to fix broken legs . . . Wire is a very peculiar [???]. You never see it but it's



**'Wire is very peculiar. You never see it but it's everywhere and anywhere'**

everywhere and anywhere.

Because wire for any kind of fabrication is doing better than cable is, ferrous is presently doing better than non-ferrous. As we look at these developments very carefully, we will have to adapt, of course. There are people who leave their house in the morning in brilliant sunshine. In the afternoon, when they want to go back, it's raining cats and dogs. Because it was sunny they hadn't taken an umbrella with them. We try to have an umbrella with us all the time.

If you are sufficiently attentive, it's similar to watching the stock exchange. You get a feeling, sometimes from your belly, about how things will develop. Sometimes you are wrong but if you're lucky, then you will more often be right.

We favour meetings at least every two to three months in Austria, apart from meeting in the exhibitions where we have very little time to talk to one another. There's a word in German that describes it perfectly: Stammtisch. It's a round table meeting where we can exchange opinions and information. That kind of networking is very, very fruitful and helps us make decisions that are thought out and based mainly on data, not just intuition.





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BEMA's specializes in the manufacture of bow stranding machines and tubular stranders.



These stranders have specially constructed bearing strands which enable the machines to be positioned without foundations, greatly reducing the cost of installation and commissioning. BEMA also manufactures single- and double-twist bunchers with digital electronic controls.

**Cerazit Alserio (PLANSEE TIZIT)**  
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CERATIZIT offers a complete programme of hard materials and tools for wire and tube drawing as well as for fastener production. Its drawing tools guarantee high drawing speeds, good dimensional stability and the



ideal surface finish. The company also offers nail making tools that are cost effectiveness, easy to change, and highly stable.

**Dunst Maschinenbau & Fertigungstechnik**  
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Dunst has set standards in how the stranding and extrusion processes can be optimised, not only for the cable production but for specialised applications in other industries. Its production range includes complete cable and steel rope production lines, stranding machines, binding heads, extruders, payoffs and take-ups.

**Ebner Industrieofenbau**  
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EBNER-Industrieofenbau designs and fabricates industrial furnaces for the steel, copper-base metal and aluminium industries. Its patented HICON/H2 annealing technology offers significant advantages in heat treating metal wire through the use of hydrogen as process atmosphere as well as a powerful atmosphere circulation system. This results in the wire having the cleanest

surface finish and the most uniform mechanical properties.

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Eder Engineering is leader in advanced die-tool processing technology, enabling uninterrupted wire drawing processes, improved performances and distinctly higher tonnages of drawn wire through reconditioned dies. Its range includes semi- and fully-automatic machines for producing and reconditioning die tools made from tungsten carbide, and natural and synthetic diamonds.

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EVG specialises in the development and construction of machinery and plants for wire processing and steel reinforcing. Its wide production range includes welding plants that can completely automate the production of mesh, gratings and girders. The company also makes automatic stirrup benders and straightening and cutting machines for processing reinforcing steel.

**Filzmoser Maschinenbau**  
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Filzmoser provides solutions for the concrete



reinforcing steel industry such as flexible mesh welding systems that produce different shapes from various wire types of different diameters. The company also makes high-speed straightening and cutting machines and lattice girder welding systems as well as robotic systems for reinforcing the centres of floor slabs and cavity walls.

**Gebauer & Griller**  
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Griller & Co is a leading manufacturer of insulation machines



for winding wire production, particularly the polyimide insulating and sintering machine that processes the best and most expensive material. It also manufactures other equipment for the cable industry like payoffs and take-ups, rewinding units, and soapstone machines.

**IPT - Innovative Pultrusions Technologie Kunststoff Verarbeitungen**  
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IPT specialises in the production of FRP rods for optical cables as well as the "Top Cable" brand of optical fibre cable.

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Lenzing supplies plastic films and tapes that suit specific applications and satisfy the highest possible requirements for cable production. These include a variety of polypropylene and polytetrafluorethylene films, as well as tapes, yarns and laminates.

**MAG Maschinen und Apparatebau**  
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MAG guarantees trouble-free and profitable production from its range of machinery for magnet wire and wire processing. The company was first to offer horizontal and vertical machines for producing the widest range of magnet wires that varied in gauge, metal use, application and shape.

**MALI**  
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MALI is a leading wire and cable machinery manufacturer whose range includes machinery for stranding with or without backtwist, drum twist laying up, armouring and steel rope closing. These machines are manufactured for the production of copper- and aluminium wires, optical fibre cables, overhead transmission cables, ground cables and submarine cables.



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Medek & Schörner designs and builds marking machines for continuously produced goods such as wires, cables, tubing and sections. The Medek & Schörner product range includes a wide variety of marking equipment from simple marking heads to fully automated high performance systems for use in advanced production lines.

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Triboclean specialises in slowing down wear and tear in tools, screws, shapes and dies that come in contact with polymers. Moreover, its products are guaranteed to clean these tools thoroughly without damaging or further wearing them down.

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Unitek supplies modern cable manufacturing machinery, extrusion crossheads, tooling for all kinds of applications, automatic bypass units for crossheads, crosshead change systems and extruder adapters. The company also offers cleaning systems and customised solutions for cable manufacturing problems.

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voestalpine is a trusted supplier of raw materials to automotive and construction sub-supply companies as well as to fastener manufacturers. As a wire specialist, the company supplies wire rod for a wide variety of demanding applications like cold heading and cold extrusion wires, filler welding materials, chains, steel cord and springs. It also supplies pre-stressed steel.

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