During the past decades, Riedhammer has decisively influenced developments in industrial kiln and furnace engineering for ceramics. In 2003, the Sacmi Group based in Imola/IT first took a minority stake in Riedhammer, and in the following year took over the majority share in the company. Peter Riedhammer (PR), representing the third generation of the family, managed the company from 1975 – 2006 and then acted as an adviser to the management for a number of years. Marking the company’s 90th anniversary, we spoke to him and Matthias Uhl (MU), Managing Director at Riedhammer, on the changing direction of the company’s business activities.

Riedhammer has been part of the Sacmi Group/IT for ten years. What does this milestone in the company history mean for the company from today’s perspective?

PR: Looking back, I regard it as a stroke of luck that the Sacmi Group bought into Riedhammer and was also prepared to continue investing in the company in the first few years despite the poor business situation. To explain this, we need to take another look back into the company’s history. In the 1980s and 1990s Riedhammer was the technology leader in many areas. We were the kiln supplier to the tableware industry, where we played a key role in accelerating fast firing technology, including the introduction of roller kilns, the ferrites business segment was also going extremely well. We lost part of this to China on account of the relocation of production, and later also because of the price situation.

With regard to carbon ring pit furnaces, in contrast to the competitors, we went with a closed system and set ourselves apart from the competition with easy-to-control installations.

These projects, which ran 2 – 3 years, had an order volume of DM 10 – 20 million. Thanks to these projects, solid capacity utilization was given as a basis for kiln engineering for the ceramics industry. We only really built up the sanitaryware kiln segment in the 1990s. For technical ceramics we had developed a number of special installations. Overall we were very proud to be able to maintain a high level of in-house manufacturing. In those times with a seller’s market, we were able to achieve good results with this business practice. The customers were happy to buy very individual solutions in line with the best available technology. Riedhammer was in an excellent position with reference plants worldwide. Internally, however, for all the kilns and furnaces, the costs for an enormous number of design and manufacturing hours had to be paid for. This was no longer possible when the market changed from a seller’s market to a buyer’s market.

In the mid-1990s, in preparation for our 75th anniversary, I launched the “Riedhammer 75” programme. It was intended to introduce structural...
change in the company with aspects such as the extended workbench, flexibilization of the internal manufacturing, automation in ceramics manufacture, and development of modular concepts to be able to offer high-tech kiln concepts.

With regard to financing major projects, with the requirements of Basel II, it became increasingly difficult to be accepted as a contractor for bigger projects. I was forced to look for a strong partner on the market and rekindled old contacts. As a consequence of this, a common road with the Sacmi Group slowly became more concrete as the way ahead when Sacmi bought into Riedhammer in 2003 and took over the majority share in Riedhammer in 2004. Up to 2006 it was necessary to support Riedhammer and to invest.

**cfi:** How was the turnaround achieved with Sacmi?

**MU:** The already initiated standardization of the design of the kilns was realized very systematically and quickly. We outsourced production. This among other measures included the setting up of kiln manufacturing for the Asian market in China. This was originally based in Shanghai. Now production has been extended and relocated with 50 employees to Changshu, where a test kiln has also made available to customers for trials.

For outsourcing production in Germany a network of suitable partners had to be found who today are all within a certain radius of Nuremberg, meaning we only have to travel short distances for personal talks.

We also use Sacmi’s worldwide network – e.g. Sacmi do Brazil. In this way we can avoid the high import duties there.

It is especially worth mentioning how in 2005 Sacmi was prepared to invest in the takeover of the open-top system of ring pit furnaces from Alcan Alesa Engineering Ltd., even though Riedhammer was going through a difficult period at the time.

With Stefano Lanzoni we not only had a Managing Director from Imola at the Nuremberg location, but also a good mediator between the German and Italian business culture.

**cfi:** Why did it become important to switch from a closed to the open system?

**PR+MU:** Up to 1976 Riedhammer also offered an open-top system. Then we went over to the closed system because our four competitors stuck to an open system. We were able to set ourselves apart with easier to control and more efficient installations and steer clear of a price battle. But then the advances in control technology weakened this argument. Against that came the fact that the open furnace systems generated 30% more output and therefore the “death” of the closed crucible furnaces was on the cards. In addition, these furnaces are much more environmentally friendly because with little effort tar-free flue gases can be produced.

As Riedhammer had not realized an open-type system for 20 years, we were excluded from this market because we had no recent references. With the takeover of Alcan Alesa Engineering Ltd.’s range, this problem was solved. In the period 2009 – 2012 we undertook an order for and installed the biggest ring pit furnace in the history of Riedhammer. It was a turnkey project for an anode factory in Kasachstan with an order value of EUR 63 million.

You can see from this how these big projects can stabilize the cushion of orders in hand over a period of 2 – 3 years. Besides the order value for the equipment, such projects bring in another 2 – 3 million for engineering work. You can only implement big projects of this type today when you can present corresponding financing concepts.

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Germany) – technical ceramics now provides, after sanitaryware with around 45% turnover, the most important group of customers. Refractories accounts for 5 – 10% of the sales depending on the project. We have also been able to realize interesting orders for the rebuilding of kilns and furnaces. As we want to further extend this business of upgrading kilns and furnaces to the latest standards with regard to energy efficiency and environmental protection, we have bolstered our personnel in this sector with another specialist.  

cfi: So sanitaryware has become the biggest buyer segment. What aspects have resulted here through the fusion of the expertise of Sacmi and Riedhammer?

MU: Our experts started working closely with Sacmi Forni straight away. Here too the motto at first was to manufacture at a cheaper price. Contacts to the big, globally operating sanitaryware manufacturers, who hold a handsome share of the world production, that were already established under Riedhammer brought advantages for Sacmi, opening doors wider, for example, for Sacmi pressure casting technology. In the last three years Riedhammer has supplied 90% of the worldwide demand for sanitaryware kilns. An important argument is the energy saving of 46%, compared with the tunnel kilns of ten years ago. We achieve that, for instance, with low flue gas temperature and selective implementation of our company technologies EMS (Energy Management System) and EEE (Energy Efficient Engineering). Our product managers, however, not only advise customers in respect of savings in thermal processes; sometimes in cooperation with external specialists in energy consulting, the entire process chain is analysed and optimized. The goal is also to drastically reduce expensive refiring in sanitaryware. Here development in the modelling of sanitaryware products, which are then based on optimized model and mould design, plays an important part in producing a very high percentage of first-grade products without refiring. This represents an enormous saving in manufacturing costs. In the meantime, Riedhammer has not just integrated the Sacmi Forni sanitaryware kiln range, but is also in the position to offer integrated plants (i.e. with all manufacturing steps upstream and downstream of the kiln) with the Sacmi Group of companies. In the design, we not only look at the energy efficiency, but also material efficiency (e.g. process water circuit, recycling and minimization of overspray, elimination of rejects).  

cfi: How have you been able to position yourselves so successfully in technical ceramics?

MU: As Peter Riedhammer has explained, special solutions such as those demanded by technical ceramics, for example with regard to controlled atmosphere furnaces, have always been one of Riedhammer’s key strengths. It was more a matter of defining the segments of technical ceramics for us, and where we could best implement our strengths in industrial furnace engineering. This includes the steep rise in demand for honeycomb ceramics (DPF filters), where we, for example, have been able to score points, for instance, with Japanese manufacturers. With our possibilities to model the thermal processes in advance and to build very energy-efficient plants with the now third generation of our “low O2” technology, we have been able to make a name for ourselves in this very demanding market and are a sought-after partner worldwide. Other interesting topics are the battery powder market or the automotive segment in general. We have also supplied numerous installations for solar technology, but everyone knows about the rapid collapse in this industry.
Interviews

cfi: How do you rate the market opportunities in refractories?
MU: With compact, energy-efficient tunnel kiln concepts in lightweight design (only 65 m in length instead of 190 m) we have made key technological advances and built three installations in China for Refratechnik alone. The steel industry is the main buyer segment for refractories with almost 70%. China accounts for over 45% of the global steel production and is now in a phase of consolidation, which should have a positive effect in the mid-term. The Chinese government has already passed a charter that will demand more consideration of environmental aspects and advanced technology in future.
cfi: What can you say about the former cash cow, that is the tableware industry, and the new area of powder metallurgy?
MU: In tableware there has been a marked change in the behaviour of the consumers, they are attaching less importance to buying very fine porcelain, but more to cheaper products with a shorter design lifetime. In the tableware sector we have extensive know-how and with Sama and Sacmi, our colleagues in the Group, we can offer customers the entire process chain (upstream and downstream of the kiln) and provide comprehensive advice. In Germany we have successfully installed our first kiln for powder metallurgical products without any teething troubles. We will certainly collect further knowledge during the first year of operation. The trend here is to achieve higher material strengths in order to become more material efficient and produce lighter weight PM components. Here too, together with Sacmi, who is supplying the press systems, we foresee further positive development.
cfi: How do you see the anniversary year 2014 for Riedhammer?
MU: I am delighted that we will again occupy a hall on the grounds near our former production facilities. We are setting up a final assembly operation for equipment going especially into the automotive and automotive supplier industry, where the equipment will also undergo final acceptance. So it is an advantage that the site in the Klingenhofstrasse in Nuremberg, thanks to the kiln concept for mobile classics from Peter Riedhammer, could be preserved. Only with this partnership was and is this site cost viable. With regard to incoming enquiries, following a very quiet phase, I can now see an upturn. The financial year 2013 was at a similar level to 2012 in terms of turnover, which was the best ever year for our business. It is, however, all within the usual range of fluctuation in the industrial kiln and furnace engineering business. So I am looking optimistically into our anniversary year.
cfi: Thank you for talking to us. KS