

LOOK TO THE FUTURE WITH 'FRAMING AGREEMENTS'

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The world's forging and foundry companies are experiencing an unprecedented boom in demand. Big cement companies and cement plant makers are altering their purchasing practices to deal with longer lead times and the increasing unavailability of certain key items. The French forge and foundry SfarSteel is expecting to enter into a number of 'framing agreements' which will ensure long-term continuity of supply for key clients.

In the last three years, the industrial world of raw materials has witnessed a period of rapid growth. Three principal causes explain this trend:

- The 'China Effect'. Already well-documented elsewhere, the huge Chinese market has sucked in vast quantities of materials and process plant as China seeks to develop her basic industries.

- The 'Energy Effect'. Fears about the reliability of Russian natural gas supplies coupled with the perceived instability of certain of the world's oil-producing nations have been enough to push many governments to re-examine their sources of energy. The result has been an almost totally unforeseen renewal of interest in nuclear energy, and a spurt of growth in the worldwide petrochemical and gas-processing industries.

- The 'Globalisation Effect'. The last three years have also witnessed a series of global rationalisations not only in the cement sector, but also in steel, aluminium, and mining industries. As these new giants seek to integrate their widespread facilities, there has been a move to the closure of inefficient local plant and re-investment in bigger facilities.

Bulging order books

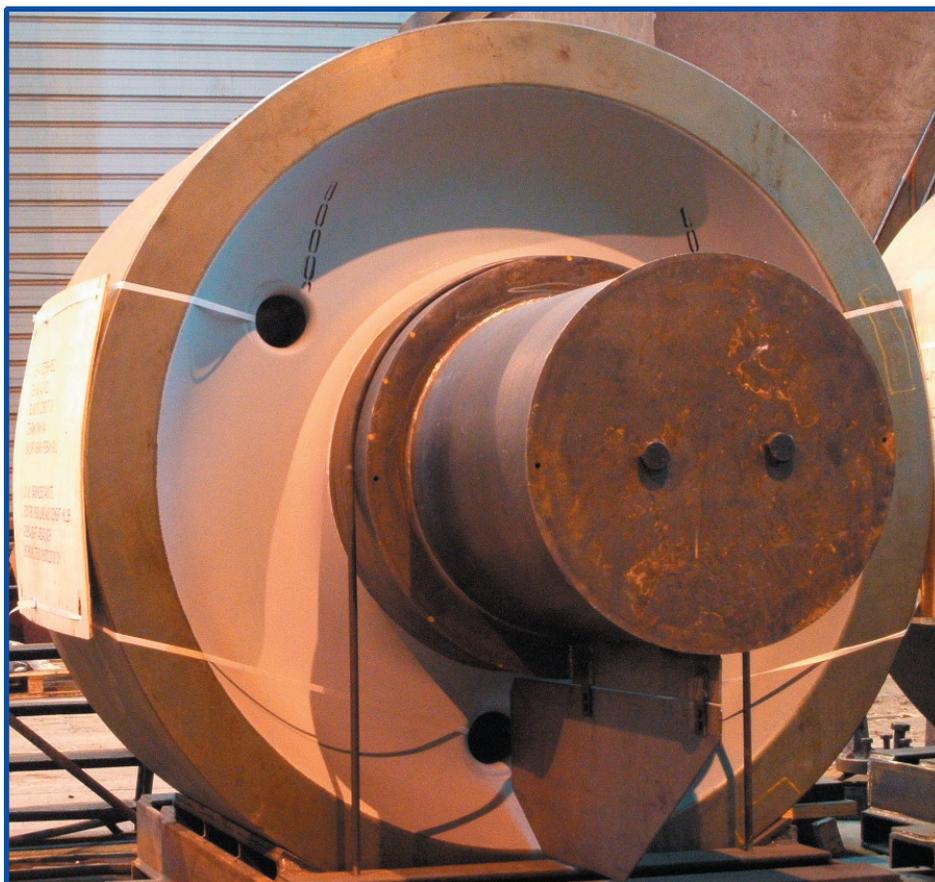
As a consequence, the world's plant engineering companies who work for the cement, steel and energy industries are now overflowing with orders, and are busily recruiting new workers. At the next level down in the pecking order, traditional manufacturers of steel forgings and castings are struggling to keep pace with booming order books.

The important feature to note is that this increase in orders is com-

ing from all industries.

In the last 25 years, steel forges and foundries have had a precarious existence as each successive boom in demand has given way to a slump. Most of these companies have survived by having a range of customers in different industries, so that as orders have dried up from one area, another industrial sector has entered a period of growth.

However, for the first time in recent memory, this simultaneous increase in demand across different industrial activities means that the makers of these traditional products are finding themselves extremely busy.



Delivery times become longer

In an open market, longer lead times result from rapidly increasing demand. Large volumes of new orders are squeezing the production schedules of the forging and foundry industries, with the inevitable result for the cement industry of the lengthening of delivery cycles. For certain large items such as tyres and rollers, the market lead times are becoming so extended that there is a knock-on effect onto the project cycles of the cement plant makers.

Furthermore the current trend is for lead times to extend further. As a result, these key components will start to be available only at a premium.

How to deal with these shortages?

For the operators of the cement works, the prospect of lengthening delivery times for forged and cast spares is a serious problem, since even the loss of production from one plant due to the non-availability of a spare tyre or roller would be very damaging both to profits and prestige. The widely recognised scarcity of large kiln tyres has served as a storm warning compelling the cement producers to assess the status of all their other critical forged and cast spares. Certain of the cement groups are revamping their purchasing strategies. The realisation that it is essential to guarantee forging and foundry capacity is giving added urgency to these efforts.

Against this background of high activity, the world's 'Big Five' are currently placing increasing emphasis on purchasing which is both centralised and global in scale. Lafarge, Cemex, Holcim, Heidelberg and Italcementi have been relentless in their overseas expansion, and now each of the groups is trying to benefit from this increased size.

The autonomy of individual cement plants to purchase tyres, rollers etc will be drastically reduced. Instead, these large groups are establishing a small number of well-resourced global sourcing facilities. Increasingly, these offices have a global intelligence capability for spotting technical and market trends, and concentrate on the ruthless cutting back of local spares inventories. However, this drive to reduce the capital tied-up in expensive spares can only be safely carried out if a cement group is confident in the availability of forges and foundries to supply timely replacements.

What about the cement plant makers?

The problem for the cement plant makers is that they have very large order books in a market where spare forging and casting capacity is disappearing. Their prime concern is to ensure security of supply of key forged and cast products in order to guarantee the delivery of projects to their customers within an acceptable timescale. Although usually much more centralised and more knowledgeable of international purchasing practices than the cement companies, they are being forced to compete with their clients in searching for raw material suppliers. For this reason, the establishment of 'framing agreements' with forges and foundries is also high on the agenda of the cement plant engineering companies.

Partnership agreements

Taking kiln tyres and support rollers as an example, there is a trend within the big cement groups towards the creation of group-wide databases which list both the number and condition of pieces in current use, and the number of spares available. Profiting from this priceless data, these emboldened global sourcing offices are expected to set up long-term written understandings which will place the cement plant makers and the forges and foundries in two corners of a triangular 'framing agreement'. In return for the certainty of regular orders, these partners will be expected to guarantee capacity to the cement company, thus removing the risk of very long lead times. An additional benefit to all parties will be the emphasis placed on the sharing of technical developments between the partners.



Location of SfarSteel's headquarters in France.

SFARSTEEL - CONSTANT UPDATING OF SCHEDULES TO KEEP PACE WITH DEMAND

SfarSteel is a world-leading supplier of machined castings and forgings used in the production of cement, manufacturing assemblies for vertical mills (grinding rollers and pressure levers) and in kilns (kiln tyres and kiln support rollers). The surging demand for these critical products is compelling the company to constantly update the production schedule to offer optimum deliveries to clients.

SFARSTEEL - KILN SUPPORT ROLLERS Looking in detail at one product line, the demand for forged steel support rollers has doubled in each of the last two years (see chart 1). Part of this success is due to the fact that unlike other suppliers, SfarSteel has unlimited size capabilities for forging and machining these items, and can even offer individual rolls up to 100t if necessary.



Above: Two kiln tyres.

The design of the roller is a tried and tested one, with the 'flat sided' and 'hollow faced' designs being the main variants. SfarSteel always supplies rollers with a forged tyre heat-shrink fitted onto a forged shaft. The steel

Below and right: Support rollers.



engineering companies, who are being obliged to anticipate shortages of key forged and cast components by ensuring supplies in long-term 'frame agreements'.

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materials used are unchanging, being typically 42 CrMo4, 36Mn5 etc.

However, one headache for the cement industry generally is that pairs of support rollers are invariably a unique size. At the time of the specification of a new cement facility, a client will define the output of the plant in thousands of tonnes of product per day. The kiln designer will then match the size of the kiln and associated rollers/drive motors to this exact requirement, not wishing to specify any extra weight of material which is not strictly needed.

At least for the next few years, it is likely that this 'uniqueness' in dimension of pairs of support rollers

