

Careful planning decisions

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As most participants in the cement manufacturing industry are acutely aware there is a substantial array of considerations in regard to the development of a new cement plant. This article will focus on rationalising cost with risk-adjusted operating budgets in the planning phase of the project.

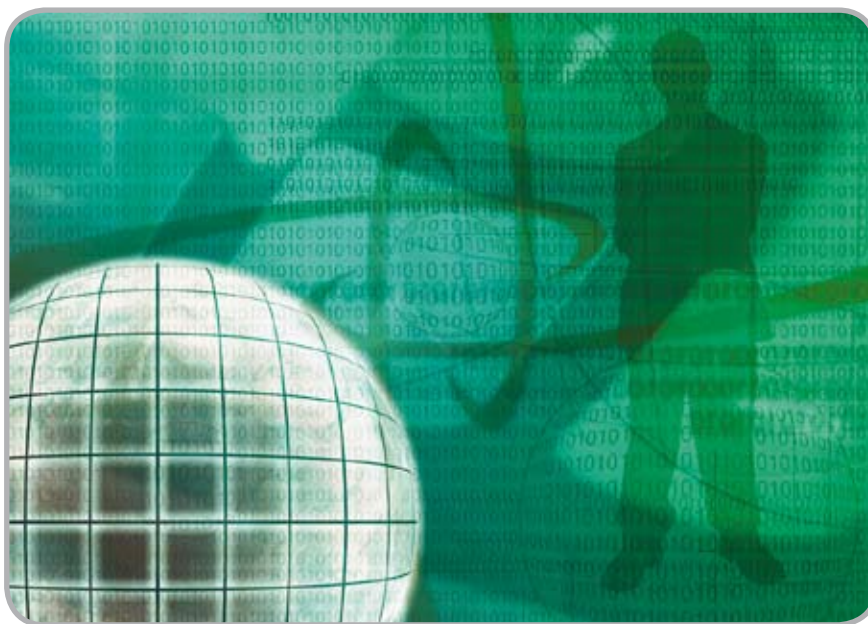
Many people in the cement industry understand that with regard to the underlying principal phases of developing new cement plant capacity, the main considerations are likely to include: feasibility studies, definition and conceptualisation of the scope of the project, proposal stage and contractual agreements, environmental regulations, design order and delivery management, civil design and construction, erection and installation, start-up commissioning, hand-over to the owner and compliance with performance warranties followed by production, maintenance and plant operations.

However, during the planning phases of a new cement plant, developers sometimes do not fully consider the notion that radical and dramatic volatility in cement markets can often occur in line with significant decline in demand as a result of an overall global recession. As we have seen, this may also include complex structural and regulatory problems in international financial markets that currently characterise many countries in the world.

Considering the 'what-if' and 'worst-case' scenarios

There are many scenarios to be contemplated during the various phases of cement plant development that may have been marginalised or even dismissed due to project oriented agendas. The disregard of potential negative perspectives, 'what-if' and 'worst-case' problematic areas can lead to poor planning. Project-oriented bias-laced attitudes and perspectives often gain momentum over other issues during the various phases of developing a new cement plant or expansion.

In relationship to the substantial long-term investment of capital there are necessary considerations to be made. It should be noted that attitudes to proceed with a brand-new facility or plant



expansion often override the notions that radical changes in the future can and do occur. There can be at times a tendency to forego in-depth risk analysis or assessment of the range of possible operational scenarios. Sometimes this oversight leads to foregoing the rationalisation of plant layout, design, equipment sizing and locations and other priorities regarding the most flexible and viable operational considerations.

Forecasting tends to ignore the full range of possibilities

Many times, especially during healthy and robust industry conditions, compromises that are made regarding commencing a project, or compromises in design, engineering or equipment specifications

evidence and denote that a given project must get under way regardless of the consequences of inadequate planning. Under such factors this oversight or refusal to consider future operational scenarios in nothing but generally positive future trends can and does result in catastrophic consequences such as being witnessed in not only some of the various markets of the cement industry, but many other sectors as well.

In forecasting trends, there is the temptation to ignore the range of possible



negative scenarios and to dismiss future risks in terms of what has and has not occurred in the past. Systematic, general and overall positive assessments of historical precedents are no longer viable under current conditions in many cement markets around the world. Also given the state of current financial and credit markets, the risk of failing to provide the appropriate financing structure in line with all potential ongoing operational scenarios could lead to very serious consequences. Budgeting or, as current industry conditions indicate, the lack of budgeting capacity for even routine maintenance and plant upgrade opportunities have driven home just how much pragmatism must be considered in light of new projects and project development and planning, as well as the terms and conditions of credit and the availability of working capital.

'Fast-tracking' and compromises

However, is it pragmatic to consider that the future operating conditions can and will be far different than the present or the past? Is it viable to consider that the future 'may be' different or even 'could possibly be different' from what the cement industry has experienced or are such considerations just so much folly that in-depth planning and considerations of all possible negative scenarios stand in the way of commencing a new project such as a greenfield plant or capacity expansion?

In developing new cement plants there are a myriad of considerations from the very outset of the project that constitute compromises. These frequently made compromises result in commencing a project and getting it implemented. However, compromises in plant design or construction can result in significant



operational challenges, which do not take into consideration the long-term life of a typical modern cement plant. Of course, such decisions regarding developments must be balanced and rationalised, but

in many cases the bias to develop a new plant, or to expand cement capacity overcomes the very real challenges that are imposed on future operating personnel that must cope with the operational trials that result from expedited 'fast-tracking' of projects and compromised priorities in the planning and construction phases of a new project.

Contingency planning

It is operational successes that generate future positive cash flows to pay for the capital-intensive nature of new cement plants. There are many cement industry participants that must not only contend with unforeseen and largely unprecedented declines in industry conditions, as well as a woeful contagion of financial sector dynamics, but must now





manage around plant layout design or equipment compromises that may have occurred during pre-project planning, due-diligence analysis and defensible conclusions.

Taken to an irrational and extreme degree, worst-case scenario planning would seemingly lead to the conclusion to forego any and all investment risk in light of developing new capacity. Aimless pontification of incessant analysis is to be avoided at all costs, just as the tendency to throw caution to the wind. Rather it should be more apparent now than in the recent past to realise the only thing that remains constant is change.

However, it is not important to merely plan for the expansion and contraction of industry conditions, it is important to realise that such cycles do occur, and it is vital that planning be incorporated as a disciplined aspect of all phases of new capacity development.

Contingency planning in light of new plant expansions must consider notions as: what is the worst thing that can happen? What are the combinations of things that can happen? Or what are the considerations regarding a worst-case scenario?

Cement plants as capital – intensive long-lived assets

Cement plants are developed so that high-quality cement supplies can be made available to the market, and that the owners and other constituencies benefit from the earnings of operations. Since cement plants are capital-intensive, long-

lived assets, many economic cycles will transpire over the typical life of a modern-designed and built cement plant. Accordingly, the cost of goods sold to generate earnings from operations will fluctuate, and factors such as

future political risk must be considered in some cases. Policy matters are now being seen to have a direct effect on plant operations and the notion that wrenching economic dynamics and swings not only can, but actually do occur. These influences can indeed remain broader and more profound than many want to admit, consider or more importantly, plan for.

Planning for contingencies as global demand increases

Investing in new cement plant capacity should be viewed from the perspective of operations and the risks to be considered in securing maximum operating results over the long-term, rather than an attitude of developing capacity as soon as possible, and to deal with pre-project compromises in design or equipment as the plant generates operating results in the future.

The future can have more risk than what was once conventional to consider.

Looking ahead, planning and developing new cement manufacturing capacity will certainly consider the scenarios that currently beleaguer some cement markets in the cement industry.

Global demand for cement will continue to increase. There are many potential cement markets that are still under-supplied and need locally-produced cement.

More plants will be developed in the future and more technological advances will continue to be made in the cement industry that will result in profound improvements in operations. However, contingency planning and redefining worst-case scenarios have taken on new meaning as many cement industry participants and constituents can attest.

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