



Generic ERP verses Cast Metal Specific ERP

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The Synchro team have designed four generations of integrated ERP/MRP (Production Control) management Information systems, specific to the foundry and cast metal industry. As specialists with a unique set of skills (cast metal system requirements and software design) and as market leaders, we hold a profound responsibility to the industry we serve. Below I have outlined a few of the critical differences between generic ERP systems and Cast Metal specific.

Production flow

Generic systems do not tackle production flow in a foundry specific way, for example they do not allow for internal rework that tracks separate WIP (work in progress) to their dependent processes, allowing for flexible routing and capacity monitoring that can change under none-specific circumstances. They tend to have single manufacturing methods and where they do track shop floor movement they don't usually allow for multiple mechanisms of manufacture for the same part (making samples and experimental routing a nightmare). This idea also extends to customer returns and part rectification which can have a marked effect on capacity planning.

Parts break up and assembly

The breakup of what is essentially one part into multiple parts at a specific stage in production and the automatic identification of these parts is a serious issue with generic systems. In a generic manufacturing model most items consume other items, with cast metal manufactures the initial stages of production usually require grouping (by mould/box size etc) and initial manufacturing requirement is not a one for one basis, Synchro handles not only generic assemblies but also the more complicated batch and break up requirements of the early production processes.

Batch splitting and parallel running

When an item is planned for production each process stage should be capable of being batch controlled and split out onto parallel processes each having its own capacity tolerances. Larger companies using generic systems for this solution end up creating outside 'supporting' applications to deal with this and a myriad of other issues.

Batch traceability

Some of the better generic systems have the ability to track codes or identities against individual items in production (most don't) but they usually lack the integration as understood by cast metal specific software. They never automatically link to industry specific equipment (for example importing of spectrograph analysis or tensile test results) because they don't understand what the data means or how it relates to the items being produced and therefore certification, traceability, and automation of documentation in the same area is none existent. The only way around this is again, more external 'supporting' systems.

Material inventory and costing

Consumption of inventory is usually covered by most generic systems (even where they don't differentiate between purchased inventory, manufactured inventory, and non-stock services) and sometimes they even link to cost of sales in a very basic way. Because Synchro is cast metal specific it understands that materials consumed are not always costed at the purchased rate and can vary dependent on where they are consumed in production. Synchro can make adjustments to metal usage dependent upon scrap levels and planned manufacturing inflation, this in turn references purchasing price (which because Synchro knows not all purchased material is good material) can be inflated by actual wastage information. Generic ERP systems are incapable of this type of manipulation simple because they don't have the specific cast metal information in order to tie it into their systems.



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Tooling and dependent scheduling

The scheduling of dependent tooling (including patterns), usage, and its varying condition, will overstretch generic systems that don't understand the relationship between part and tooling. For example if you monitor a tool it is reasonable to assume that the usage at its production usage is being taken into account. Even if the generic system can take into account tool usage it will not know how a part 'breaks up', and therefore its usage will be based upon the overall manufactured requirement (or worse still the order quantity). It will not understand the usage is per mould/box/plate etc and therefore the information it provides is of little use, unless you are prepared once again to support it with external systems...

Drawing and issue control

The ability to move production from one customer requirement to another can be very tricky within generic systems. They don't always know about change control, drawing revisions, or changes in manufacturing methodology and don't enforce control of such. This is usually ignored (which is a real problem) or fixed to an inflexible method of not allowing the movement in the first place which tends to force operators to allocate false amounts into and out of inventory in order to 'get around' the problem. Synchro knows the difference between issues, materials, varying production methods, and provides options for how the cast metal company need to operate.

Quality control

Understanding the cast metal industry, Synchro has native functionality to stop sales orders, production booking, shipping, tooling usage etc when problems arise, not only on a capacity reporting basis but actual stops that can be controlled by production, pattern stores, sales, and so on. Every aspect of WIP booking, scrap, internal rework, customer returns, subcontracting, and inventory control are all controlled with data collection and analysis built towards gathering quality control information for Cast Metal Industry analysis. Collating this data in one place makes sense and provides the information needed to make informed decisions. Within generic systems some of this data can be collected and some manual stops applied but the information used to backup these decisions is usually held on external quality systems...

Technical support

Although not within the remit of the software system itself, technical support is arguably perhaps the most important difference. When challenges occur (as they often do) explaining the detail of shop floor processing to technical support employees (dedicated to providing answers to 'generic' questions) is not the most efficient way to deal with an urgent situation, industry knowledge and speedy resolution are both essential.

In Conclusion

If you are cast metal manufacturer looking for a replacement ERP system, make sure you choose an industry specific one. If you are being forced into using a generic system because your company belongs to a group make sure they understand the reasons why their systems will not work in your company and that using the right system will not only provide better control but also will work hand in hand with them at group level. And finally, if you are trying to save money by selecting a generic system consider two things, firstly how much time and money are you going to spend constructing and maintaining the external systems you will need to support the generic system, and secondly have you looked into the price of a specific system? Synchro is the best cast metal software for the industry, has no huge upfront fees, and costs less than most generic system to run...

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