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Computer-Aided Estimating Balances Out

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Estimating Software may be the technology that gives machinists a cutting edge.

Estimating with accurate project cost is essential if a manufacturer wishes to remain both competitive and profitable. The pitfalls are obvious. Estimate too high on a job, it might get snapped up by the competition. Estimate too low and kiss profit goodbye. The most competitive manufacturers are the ones that can take the seemingly countless decisions that affect a bid and factor them into a balanced estimate. One of the benefits of the current trend towards business automation is the ability to turn complicated estimating duties over to the capable hands of estimating software.

Estimating software facilitates the complex process planning that a company must conduct before arriving at a quote, a series that involves numerous options. For example, a company may decide upon one manufacturing method for an order that calls for only a few parts and another for an order that calls for many. The time in which an order must be completed also affects the process method. Estimating software highlights the best method available and indicates the cost differences between the methods. The option to select standard operating procedures is necessary to allow the company to standardize their methods. Computer-aided estimating also handles the complex determining process that is necessary to arrive at concrete material requirements. In addition, it automates the process of tracking down material prices and communicating with suppliers. One recent enhancement is the ability to use the Internet to search for the best material prices from a variety of material suppliers.

One particular aspect of estimating - the establishment of proper cycle times - is an advantage that computer-aided estimating has over traditional methods. It simplifies and shortens the process of determining the exact times consumed per cycle when performing specific machining functions. For example, finish turning must take into account rapid approach distances, clearance planes, tool change times, available horsepower and a host

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of other factors. Without these exact parameters, any job estimate would be little more than a guess, or the result of years of experience.

Beyond estimating the times and costs of the machining functions themselves, estimating software also factors in any labor costs that affect the final quote. In general, it minimizes the chance of miscommunication between internal parties regarding the terms of the quote. A good estimating software package will also generate customized quote letters, thereby circumventing the need to learn a separate software program for that purpose.

A clear benefit of computer-aided estimating is the consistency it lends operations. The estimating department will prepare estimates by referring to what the shop floor can produce. Confidence in the numbers that the estimating department sends to the shop will allow less room for second-guessing. This, in turn, will increase throughput.

Estimating software also lets facilities conduct "should costing" (determining what a part should cost), thereby validating their expenditures. Computer-aiding estimating allows a manufacturer to state what they believe a part should cost and the reasons why. By helping to supply concrete evidence of this estimate – in the form of routings, layout sheets and even cost-breakdown worksheets – manufacturers can convince their suppliers of their accuracy of their estimates. In addition, computer-aided estimating can help companies identify further business opportunities by utilizing the software's built-in reporting and sorting tools. For example, a company may find that jobs using stainless steel have a lower quote and order ratio than those made with another metal.

Of course, estimating software isn't cheap and its price tag is compounded with the cost of training those who will use it. As for the non-money related obstacles hindering the rapid adoption of computer-aided estimating, one would certainly be the fact that small shops and manufacturers are traditionally slow to leverage the advantage of software technology, at least in comparison to their peers in other industries. One of the key reasons cited for this is the perceived investment in terms of time, rather than the monetary investment. Currently, many manufacturers do not see computer-aided estimating as a core necessity for their company. Yet developing estimates and process plans, as well as providing customers with accurate prices, is essential to business. If a

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manufacturer cannot perform these functions in an efficient manner, their competitiveness is at stake.

Because of the perceived relative unimportance of estimating software, money is instead being invested in new machine tools and equipment. Manufacturers are adopting other technologies, such as CAD/CAM and administrative software, while ignoring the fact that their ability to estimate accurately precludes the manufacturing process. Before the rapid adoption of estimating software can occur, machine shop managers must come to understand that software is a tool just as any machine is a tool. Doing so could be the decision that turns the estimating department into a profit enhancer.