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Knowledge-Based Machining with DS PLM Delivers Quick Returns

To overcome the economic pressures of downsized staffs and the recession-driven competition to produce parts faster and at lower cost, companies increasingly are turning to knowledge-based machining (KBM).

KBM enables improved use of high-value machine tools, helps reduce production part cycle times, advances Lean Manufacturing initiatives, and helps improve external supplier audit results. Successful knowledge-based machining initiatives can result in ROI in excess of 200%, with the potential for first-year payback.

PROTECTING YOUR GREATEST ASSET - KNOWLEDGE

Knowledge-based machining with CATIA defines manufacturing processes and captures company-specific information about the materials, geometries, tooling paths, machining speeds and feeds, fixturing, holding devices and strategies required to manufacture parts. Once cataloged in CATIA, these processes leverage all of an organization's resources, technology and best practices to ensure manufacturing

needs are addressed in the most cost-effective and productive manner.

A commonly referenced industry statistic indicates that 5-7% of a corporation's knowledge is lost every year because the people who know it leave the company. Knowledge-based machining with CATIA ensures that all of the required parameters for each machining operation are captured as pre-defined best practice methods. Once the standards are established, creating tool paths can be done automatically, saving time and money and raising quality to unprecedented levels.

Knowledge-based machining also minimizes the "gap" between design and manufacturing. People who have never generated an NC program in their life can step through the application interface and create successful programs. The software intuits the toolpath directly from the design, accomplishing in minutes what an NC programmer would take hours to achieve. Once the toolpath is complete, a visual simulation can be run for formal verification by an expert prior to production.

GETTING MORE OUT OF YOUR WORKFORCE

Knowledge-based machining with CATIA also helps improve contract programming by providing contractors with a company's specific processes and tool catalogs to ensure machining consistency. The work contractors perform can be made to fall within an organization's standards.

It is not uncommon to see 20-50% improvements in programming time following the incorporation of process catalogs and knowledge-based machining. Although many NC programmers fear this, improved efficiencies can be a lifesaver for resource-strapped companies in times of economic slowdown. When economic recovery occurs, the most strategic companies capture the time saved for higher-value work.]

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