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CONSULTER

Consulting

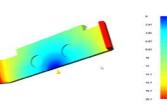
For

Plastics Industry

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Intelligent R & D and Manufacturing

With increasing demands being placed on manufacturers by the market and by regulatory agencies, it is critical to establish a **robust product development process** that incorporates sound engineering. This can be achieved by incorporating a **Systematic Approach** to developing a new product. This type of logical and scientific approach has always produced tangible benefits in terms of cost reduction, **reduced time to market**, and minimal rework

12 STEPS TO SIX SIGMA*

TRADITIONAL APPROACH TO PRODUCT DESIGN & DEVELOPMENT



Result: Cost Overruns and significant increase in Time to Market

SYSTEMATIC APPROACH MATERIAL STRUCTURAL PART DESIGN SELECTION ANALYSIS MOLD FLOW RAPID DESIGN ANALYSIS PROTOTYPE REVIEW I TOOLING SINGLE DESIGN REVIEW PROTOCOL CAVITY TOLERENCE MOLD COOLING ANALYSIS PROTOTYPE ANALYSIS MOLD SAMPLING MOLD FINAL PART PILOT RUN EVALUTION & CONSTRUCTION DOE/CPK STUDY ACCEPTANCE PHASE

• A Systematic Approach to developing new products in the shortest possible time

COMPANY PROFILE

Consultek is a fully integrated Management and Technical consulting team for the Plastics industry with over twenty-five years of hand-on experience and strong Plastics Engineering educational background. We specialize in rapid prototyping, intricate and high volume complex tooling, offshore tooling, material selection, testing, injection molding, automation, and new product design and development.

Perhaps your organization can utilize our expertise, knowledge and experience to enhance, improve the operation or troubleshoot a specific problem, carry out a cost reduction project or simply assess the feasibility of a new endeavor.

If you are planning to expand, relocate or vertically integrate your operation we can certainly accomplish the task. We have extensive experience in optimizing work force, space, facilities and equipment. We can also design and set up new operations, take prototypes to high volume production and fast track projects.

FROM CONCEPT TO COMPLETION

- CONCEPT
- PRODUCT DESIGN/DEVELOPMENT
- CAD, CAM, MOLDFLOW ANALYSIS
- RAPID PROTOTYPING
- DEVELOPING TEST PROCEDURES
- QUALIFYING DESIGN CONCEPTS
- MATERIAL SELECTION
- PRODUCTION TOOLING
- CAPABILITY STUDIES
- MANUFACTURING FEASIBILITY ANALYSIS
- IN-HOUSE VS. OUTSOURCING STUDY
- AGENCY APPROVALS AND LISTING
- SET-UP MANUFACTURING OPERATION
- VENDOR SELECTION AND QUALIFICATION
- HIRING AND TRAINING PERSONNEL
- QA AND TESTING PROTOCOLS
- ASSEMBLY, SECONDARY OPERATIONS
- PACKAGING AND SHIPPING
- COMPLETION

Curriculum Vitae

Performance Engineered Products, Inc. Pomona, Ca 1981 to 1998

President/Cofounder

Started Custom Injection Molding business in 1981 and expanded to 27 machines, \$ 8 million in revenue. Responsible for running the entire manufacturing operation with 105 employees including client contact, job Quotations, proposals, coordinating projects and presentation of reports. Developed computer program for Plastics molding operation. Researched and Developed major cost saving programs for customers. Responsibilities included developing and training personnel, writing standard operating procedures, obtaining certifications, negotiating major contracts, and developing business plans for growth and expansion.

Rain Bird Corporation 1978 to 1981 Senior Plastics Engineer

1973 to 1978

Nibco Inc. Elkhart, IN Plastics Engineer

Technical and Management Expertise

Failure Analysis/ Expert witness Reliability Assessment Overall Plastics Manufacturing Operations Management Business evaluation, study, analyze, recommend and implement Design and Setup manufacturing facilities Product and Tooling Design and Development Project Management, Material contract negotiations Material Selection and Specifications Quality Assurance, Testing, SPC/SQC, ISO 9000

EDUCATION

University of Massachusetts, Lowell, B.S. Plastics Engineering University of Massachusetts, Lowell, M.S. Plastics Engineering

PROFESSIONAL AFFILIATIONS

SPE, Senior Member. SPI, Professional Member, SPI Board Member, SPE Board Member.Past President of Northern Indiana SPE chapter.Served as publications chairman, and Board member of So. Cal. SPE chapter.

BIBLIOGRAPHY

Vishu H. Shah, *Handbook of Plastics Testing Technology, Second* edition, John Wiley & Sons, New York, 1998 Contributing Author, *Handbook of Material Selection,* John Wiley & sons, New York, 2002 Vishu H. Shah, *Handbook of Identification Analysis of Plastics*, Plastics Design Library, Publication Date, 2005

TEACHING

CAL POLY POMONA, Extended University, Instructor, Plastics Engineering Certificate Program, 2003/2004

UC Riverside, Instructor, Plastics Product Design & Tooling, 2002

Cerritos College, "Plastics Materials & Processes" 1999

SPI, Baja Symposium, "Identification of Plastics & How to interpret data sheets"

SME Technical Seminar, "Testing and Evaluation of Plastics"

SPI Symposium "Plastics A to Z"

SPE, Seminars Micromolding, Energy Efficiency, Scientific Injection Molding

RELATED WORK EXPERIENCE

- Consulting service to a major Dental Company. The projects ranged from assistance with material selection, mold flow analysis, tooling and molding issues, rapid prototyping of new products, failure analysis, tooling procurement, vendor evaluation, and educational seminars.
- Consulting project for a leading bionic and pain management technology firm to develop specialized Injection molding process for proprietary over-molded urethane parts.
- Consulting project for a medical company involving research and development of a micro molded part. Assist in procuring tooling and prototype parts and evaluate processing techniques.
- Consulting service to a Fortune 500 office products company to assist with tooling procurement specifications, product improvement, and evaluation of molding shops in Mexico.
- Consulting service to a medium size Injection Molder to evaluate, recommend, procure and implement ERP/MRP system suitable for manufacturing operation. Provided training as needed.
- Consulting service to a major irrigation company concerning PVC molding problems. The project entailed studying, analyzing, and recommending tooling and process changes to reduce nonconformance. Recommend And Qualify alternate material. Assist with development of PVC hot runner tooling. Assist with DOE and correlation study to establish settings for optimum process and establish process control "P" dimension.
- Consulting service to a medical company specializing in blood filtration. The projects required determining possible

cause for premature failure of a critical component using established failure analysis techniques, evaluate tooling and process related problems, recommend and implement changes.

- Consulting service to a medical company to design and develop Drugs of abuse test cup and other allied products. Provided technical assistance in all phases of design, material selection, prototyping, tooling, vendor selection, assembly, qualifying, and manufacturing.
- Provided consulting to a conveyor component manufacturer in the area of molding and extrusion, recruit, hire and train production manager, set up tooling, material and process standards, established standard operating procedures, procure new tooling, debug and qualify new molds, assist engineering with product design etc.
- Provided consulting to a medical product marketing company to assist in development of a drug testing Cup and electronic Reader. Provided technical assistance in all phases of design, material selection, prototyping, tooling, vendor selection, assembly, qualifying, and manufacturing.
- Consulting service to a non-profitable molder in El Paso, Texas specializing in automotive lens molding. Observing, studying, and analyzing the financial statements, overall plant operation, management team competency, prepare report, recommend changes.
- Consulting and expert witness services to several attorneys in the cases involving product failures, product liability, personal injury etc.
- Technical and training seminars on variety of subjects ranging from Material selection, Processing, Testing and Evaluation, Product design, Plant operation and management, Failure analysis, Automation.