## Corporate Memberr

## **Kelsey-Hayes Company Automotive Group**

Kelsey-Hayes Company Automotive Group manufactures products for automotive, agricultural and industrial applications. The company provides whatever degree of manufacturing support its clients may need, working with them from product design and development through all phases of production, even to after-market distribution of service parts.

The company's numerous product lines include wheels, disk brakes, drum brakes, front-hub assemblies, spindle and wheel-bearing assemblies, electromechanical sensors, automotive-engine blocks and other engine components, iron castings, and precision aluminum-die castings. Kelsey-Hayes also produces a broad line of automotive-replacement parts for aftermarket distribution.

## Product Design/Engineering

Kelsey-Hayes Company can provide complete product-engineering capabilities. Its facilities include an R&D Center for applied research and an extensive engineering complex staffed by highly skilled engineering personnel. Design engineers work closely with manufacturing and process engineers to develop cost-effective product designs for high-volume as well as lowvolume production. They are supported by state-of-the-art equipment, such as CAD systems, and numerous hightechnology facilities for product development, design verification, prototype preparation and preproduction testing. Kelsev-Haves also offers design and engineering assistance on customer-initiated projects.

Strict quality-assurance criteria are applied throughout product design and development activities. The latest statistical techniques are used to assess quality levels. Continual materials-evaluation programs are employed and stress analysis is widely used in product qualification. An expanded Reliability Laboratory develops both equipment and techniques for checking product performance and also encourages quality-assurance people to take a greater role in the design qualifications of products as well as monitoring quality in manufacturing.

## **Manufacturing Capabilities**

Kelsey-Hayes has numerous manufacturing capabilities in fabricating, casting and machining. Its fabricating activities include such aluminum and steel-parts production processes as stamping, roll forming and forging. The company's casting capabilities are illustrated by its production of close-tolerance castings in iron and aluminum. And its machining activities cover low-to high-volume production requirements in iron, steel and aluminum components.

Integrated manufacturing capabilities in the U.S. and Canada enable Kelsey-Hayes Company to machine and finish product components, assemble the components, and perform on-line testing of the completed product for quality assurance. For example, disk-brake caliper components are machined, then assembled on multistation lines with on-line testing of each caliper assembly to assure the product's performance reliability.

Kelsey-Hayes is now using fiberreinforced plastic (FRP) to develop safety-critical automotive components with the lightweight and structural advantages FRP technology provides.

Headquartered in Romulus, MI, Kelsey-Hayes Company Automotive Group has operating plants in Jackson, Detroit, Milford and Brighton, MI; Sedalia, MO: Kingsway and Mt. Vernon, OH; and Philadelphia, Pa.

