

CASE STUDY



CONSUMER GOODS MANUFACTURING

Over 40 years of experience in developing innovative high-quality products has entrenched this company as a leader in the bowling industry. This company's products are a result of extensive investments in highly skilled, multi-disciplined team members, state-of-the-art testing facilities and industry-leading production processes.



R&D QUALIFICATION

Despite bowling being a sport that appears simple, there is a huge effort that goes into development of balls, all of which have unique cores, different materials and even different finishes to provide the type of spin and ball dynamics that professionals and amateurs look for. This company used Pro Engineering CAD software during the conceptual design phase. Initial design ideas were evaluated, and the software enumerates components such as shape, densities, and specific gravities that form technical specifications of the product. The company evaluated different design alternatives in order to choose and refine the most appropriate product design. This phase of development was documented through engineering drawings, schematic designs, models, and other technical documentation.

Once the conceptual design was rendered, the Pro Engineering program went to the machine shop for the making of a master of the shape. Among the

HIGHLIGHTS

- **NEW PRODUCT DEVELOPMENT**
- **PROCESS IMPROVEMENTS**
- **MATERIALS AND FABRICATION**
- **NEARLY \$300,000 IN TOTAL ANNUAL NET BENEFIT**

design data reviewed were the radius of gyration between one axis and another, factors that are extremely important in the design and production of bowling balls.

Once the design was verified as feasible (which included more than five design iterations), the master was made in the shop and transferred to the R&D lab where urethane molds of the master shape were made. This initiated the process of making some balls (about 10 prototypes) for testing to validate the design and make improvements.

After successful testing in the lab, molds for production were built. The molds were sent to the lab where a few units were produced to ensure the molding met specifications. Development to this point was satisfactory, so a 90-ball test run was put into production. Upon completion of the 90-ball test run and validation that all requirements and specifications were met, production began.

RESULTS SPEAK FOR THEMSELVES

This sporting goods company has been a long term client of Source Advisors. Over the past decade, the company has been claiming a total combined federal and state tax credits of nearly \$300,000 per year.