



## DELAWARE MANUFACTURING EXTENSION PARTNERSHIP (DEMEP)

Delaware Manufacturing Extension Partnership (DEMEP) is a federally and state funded non-profit organization committed to helping Delaware's manufacturers improve their global competitiveness. DEMEP is a National Institute of Standards and Technology (NIST) accredited Center that uses a comprehensive holistic approach to business improvement. The Delaware MEP operates as a recipient through Delaware Technical Community College in partnership with the U.S Department of Commerce, NIST, the Delaware Office of Economic Development, and the Delaware State and local Chambers of Commerce.

Through these partnerships DEMEP draws its resources from local and national universities, community colleges, research institutions, private consultants and a network of over 60 MEP centers nationwide. With these unique relationships, the Delaware MEP can provide its clients confidential access to their industries best practices, processes and business improvement methodologies. DEMEP and the nationwide NIST MEP network have developed a collection of tools, products and services customized to meet the unique needs of Delaware's Manufacturers.

## ECONOMIC IMPACT

MEP Center impacts are based on clients surveyed in FY2023



**\$18.6 Million**

Total Increased/Retained Sales



**239**

Total Increased/Retained Jobs



**\$18.4 Million**

New Client Investments



**\$2.7 Million**

Cost Savings

## CONTACT US



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**DEMEP** Delaware  
Manufacturing  
Extension  
Partnership

## ZACROS AMERICA CONTINUES TO GROW

**ABOUT ZACROS AMERICA INC..** Zacros America, Inc., was founded in 2012 as a subsidiary of ZACROS, also known as Fujimori Kogyo, a Japanese converter of flexible films and packaging established in 1914. In 2014, Zacros America acquired the former Hedwin Corporation. The manufacturing facility was moved from Baltimore, Maryland to Newark, Delaware in 2017. Starting January 1, 2020, Zacros America Hedwin Division changed to Zacros America, Inc. to optimize business to serve customers. Products range from a protective film for cell phones and computers to a medical injection solution bag. ZACROS group has 14 manufacturing facilities in 6 countries: Japan, the US, Taiwan, Indonesia, Malaysia, Thailand, and China. Zacros America focuses on environmental solutions, providing flexible packaging for liquids. Their main products are CUBITAINER® and flexible pouches. We have Newark, Delaware, and Reno, Nevada manufacturing facilities in the United States.

**THE CHALLENGE.** Four of the ten highest produced SKUs in Zacros were not profitable or marginally profitable with current processing. Zacros produces on seven production lines, six of which use one methodology for packaging forming and one that is unique. The unique line produces the same type of material with a 33% faster cycle time. Production and engineering both had assumptions of where that faster cycle time came from, but no conclusive evidence existed of the actual cause or how to use that information to speed up our other lines. The company turned to DEMEP, part of the MEP National Network™, for help.

**MEP CENTER'S ROLE.** A Zacros Process Engineer and Sales Manager attended a DEMEP Lean Six Sigma class for furthering education, and the decision was made to use this opportunity to tackle this long-term issue with the Lean Six Sigma project. Using the tools from the Lean Six Sigma class and with help from the instructors, the Zacros team and DEMEP staff used a variety of Lean Six Sigma tools and the D-M-A-I-C (define, measure, analyze, improve, control) process to identify the actual cause of the reduced cycle time of the faster process. The results from using the Lean Six Sigma tools proved to be neither the production nor the engineering group's original solutions. The proper part of the forming process that led to faster processing was identified through statistical analysis. Upgraded equipment was ordered and installed on a slower machine to prove the case.

**"My biggest takeaway from the Lean Six Sigma training and the outcome of this project is to not have a solution in mind when working a project. Most assumptions that groups had regarding the "solution" were outright incorrect or at best marginally important when the data was viewed with the tools from the class and using the D-M-A-I-C process. The value of the class and partnering with DEMEP far surpassed our expectations.**

-Ryan MacAulay, Senior Manager of Sales and Procurement



## RESULTS



The four SKUs cycle time was significantly reduced by an average of **33.1%**



**18.9%** average cost reduction across the four SKUs on that production line.

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