ADM
ADVANCED DESIGN AND MANUFACTURING

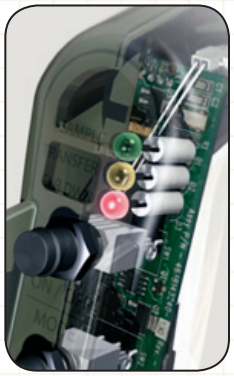
ENGINEERING DIRECTORATE

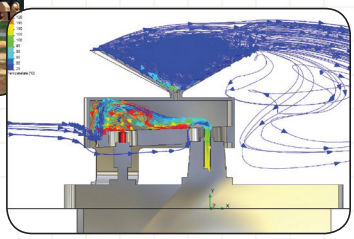
ECBC ENGINEERING
Design→Build→Test→Support

ECBC ENGINEERING PRODUCT DEVELOPMENT FACILITY ADVANCED DESIGN AND MANUFACTURING

ENGINEERING DESIGN AND ANALYSIS

The Edgewood Chemical Biological Center (ECBC) Engineering Directorate Advanced Design and Manufacturing (ADM)'s engineering design and analysis capability combines expertise in mechanical engineering, physical science and computational analysis. The focus is product development from concept through low-rate production with an emphasis on sound engineering principles and rapid response.





ENGINEERING DESIGN

ADM combines the necessary expertise to convey ideas into robust engineering designs utilizing the latest design and analysis tools.

ANALYSIS

Various analysis tools are utilized to validate designs and provide a cursory check prior to proceeding with manufacturing. Finite Element Analysis (FEA) tools are used to test the structural integrity of a virtual design to include impact, thermal, static and dynamic loading. Computational Fluid Dynamics (CFD) tools are used to test fluid flow and how it interacts within the virtual design.

RAPID PRODUCT DEVELOPMENT

ADM has the ability to respond quickly to an urgent requirement and provide the appropriate capability gap solution. We provide the necessary accelerated lifecycle support from concept through deployment and logistical support.

SYSTEM INTEGRATION

ADM combines world class engineering, state-of-the-art manufacturing and additional engineering services such as environmental testing/validation to provide an unbeatable comprehensive capability from concept to production with solutions that are ***better, cheaper, and faster.***

Features

- Focused network of organic and commercial partners
- Organized structure for rapid response ramp-up as required
- Lifecycle support for custom low-density items
- Integrated concept through product environment

Capabilities

- Conceptual design
- Certified SolidWorks professionals

Facilities Description

- 16,000 Square Foot Design Laboratory
- Robotic and Unmanned Vehicle Integration Laboratory

Software and Hardware

- SolidWorks/AutoCAD/ProEngineer
- CosmosWorks Finite Element Analysis (FEA)
- CosmosFlow Computational Fluid Dynamics (CFD)

For more information, please call **410.436.5542** or
e-mail **ecbc-adm@conus.army.mil**

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