

Microelectronics

# Lockheed-Martin Cryogenic Engineering



## OVERVIEW

Lockheed-Martin selected IES to provide comprehensive General Contracting services as one of eight complete design teams to serve their Sunnyvale and Palo Alto campuses.

IES has designed and built more cryogenic systems than any other contractor, supporting various large-scale satellite and space vehicle test facilities.

## PROJECT DETAILS

- Design, install and replace of extensive vacuum jacketed liquid piping supply, distribution and venting systems as well as cryogenic pumps.
- Design and install natural convection and forced draft vaporizers to support up to 26,000 SCFM gaseous delivery systems.
- Design and install new cryogenic nitrogen and helium tanks.
- Design new high-pressure helium system for Naval building.
- Replace existing 150 CFM liquid Nitrogen thermal units with new 650 CFM units, including new 4 inch vacuum jacketed pipe and 1200 AMP electric service.

## IES SOLUTIONS

- Established overall site safety and performance improvements for existing cryogenic systems.
- Developed and authored Lockheed's Standards for all future Cryogenic and Gaseous System installations site wide.
- Innovative design for new vent systems with purge tanks facilitating safe discharge of liquid nitrogen, improving personnel safety and facilities preservation.

## LOCATION

Sunnyvale and Palo Alto, California

## TEAM (PARTNERS)

Architect: TDS Architects

Structural: Peoples Associates

## PROJECT DURATION

2007 - 2009

## PROJECT VALUATION

\$50,000,000 - \$100,000,000

## ABOUT IES

Integrated Engineering Services (IES) is an established firm providing innovative and cost-effective solutions to meet your complex engineering, design and operational needs.

When experience, knowledge and innovation matter most.