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Your partner in test and manufacturing equipment.

# IES Systems, Inc.



IES Systems, Inc. is a partnership with five members. They are pictured above: (left to right) Mark Brucoli, Rob McAndrew, Dave Wigal, Kevin Shar, Bill Yobi.

# IES Systems Corporate Information

## Ownership

*The principals are:*

Mark Brucoli – President (SE)

Rob McAndrew– VP (ME) / Board Secretary

Bill Yobi – VP (EE)

Dave Wigal – VP (EE)

Kevin Shar – VP (EE)

All of the shareholders are active in product development, design and field operations; as mentors, and sometimes lead designers, to support our engineering staff.

# IES Systems Customer Success Strategy:

The strategy to bolster our customer's success is achieved by analyzing the customer's requests, and observing their current process, so suggestions for process improvement may be made.

IES has developed a vast base of process engineering knowledge from our work experience in many different industries, and we work to apply all of that knowledge to a project. This ensures that the goals of the project are achieved, and in a timely manner.

Our field service technicians are well trained, and usually one of the partners of the company. This is a huge benefit for the customer, as they will be talking and working with IES representatives that have the authority to make decisions, and resolve problems in the field, which ultimately reduces your downtime.

Telephone support is always free of charge when you deal with IES, and we strive to resolve your problems quickly, with the least cost.

# Engineering Staff

## Software Engineering Department

6 Software engineers on staff

Mark Brucoli – Department Leader

5 Staff engineers

## Electrical Engineering Department

8 Electrical engineers on staff

Bill Yobi – Department Leader

5 Senior / 2 Staff engineers

## Mechanical Engineering Department

6 Mechanical engineers on staff

Ron Fekety – ME Dept. Manager

3 Senior / 2 Staff engineers

# Engineering Design Tools

AutoCAD – 2D design

Solidworks – 3D design

AutoDesk Inventor 2017

Microsoft Office

Adobe Acrobat

RoboGUIDE – 3D robotic simulation

WinOLPC – PC based editor for FANUC robot programs

C Software programming

PLC programming (multiple manufacturers)

LabVIEW certified associate developers on site



## Project Engineering Tools

Microsoft Schedule 2003~2007~2016

Weekly status updates and schedule reviews to monitor project tracking

# Manufacturing Staff

Production Manager – Jim O'Neil

## Machine Shop

6 Machinists on staff

Average of 15 + years experience each

## Assembly Department

6 Precision Assemblers on staff

Average of 15 + years experience each

## Panel Wiring Department

8 Machine Tool Wirers on staff

Average of 8+ years experience each

## Support Staff

Purchasing Agent – John Conway

20 years experience

Technical Assistant – Cindy Thomas

10 years experience

## Part Time Staff

IES Systems has up to 9 part time employees for short production runs, or light manufacturing assistance

## Total Employment

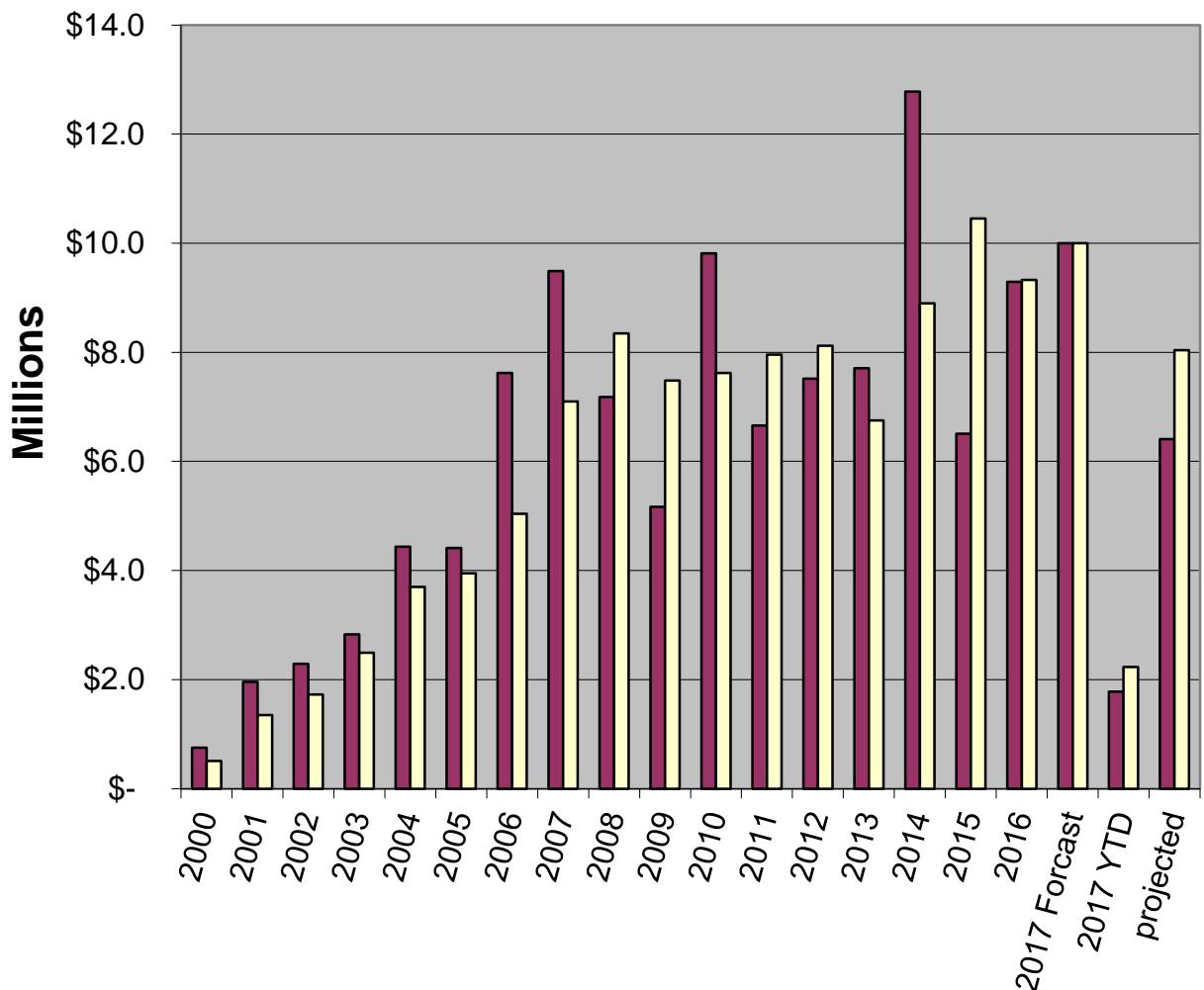
IES Systems has 51 full time employees. The company started with 6 employees over 18 years ago.



# Sales History

## IES Systems Sales / Shipping data

IES Systems by Year



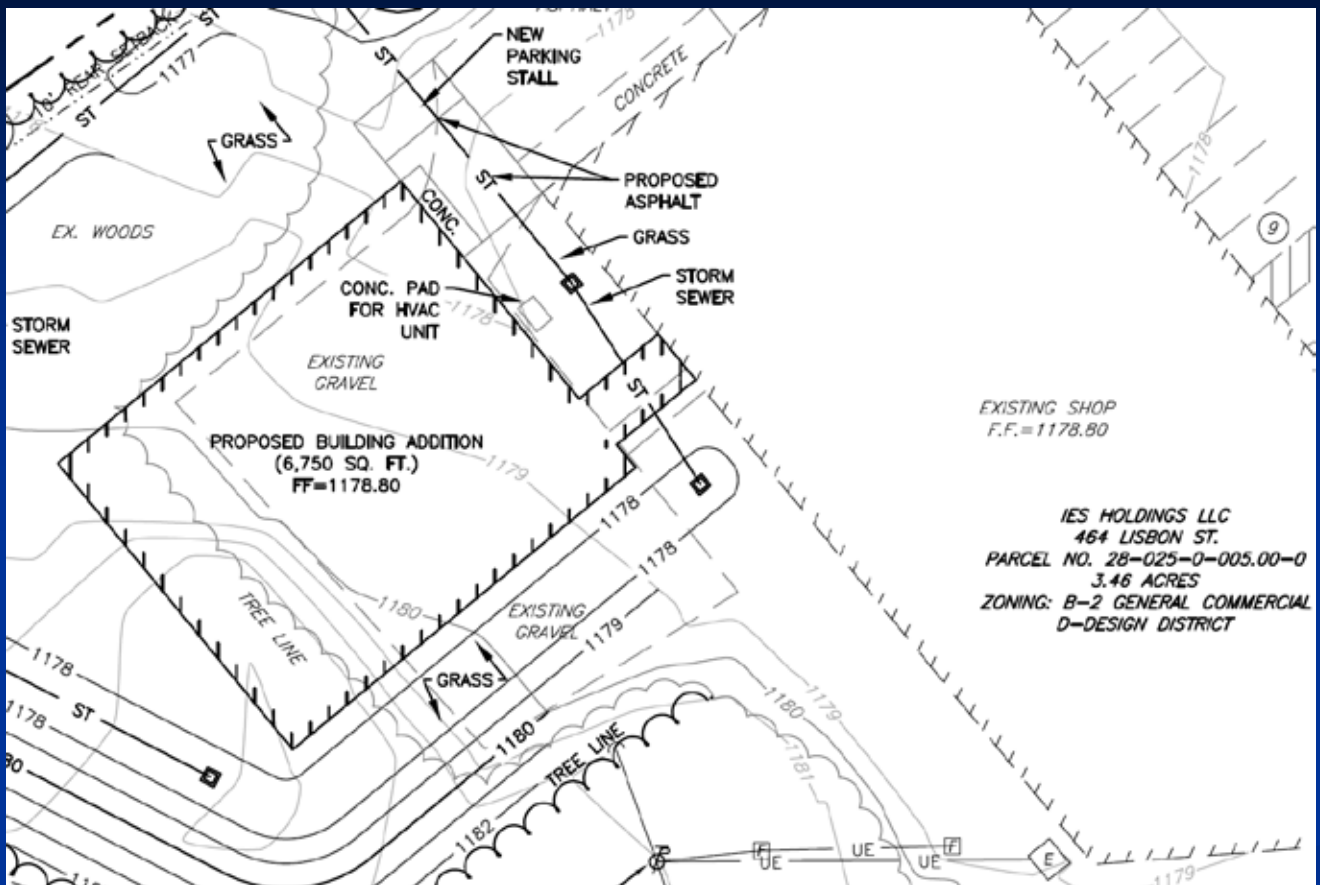
# IES Systems Facilities 2000 ~ 2016



IES Systems, Inc. has 5000 sq ft of office space, and 22,000 sq ft of manufacturing space, in a modern and climate controlled environment.



# IES Systems Facilities Expansion 2017



IES Systems, Inc. has commenced construction of a 6750 sq. ft. addition to be placed in service 5/30/2017.

75ft X 90ft X 21ft ceiling, climate controlled.



# IES Systems Facilities Expansion 2017



# IES Systems Machine Shop



2014 HAAS VF2-SS CNC Mill 30 x 40 Table 30hp Spindle

2013 HAAS VF2-SS CNC Mill 30 x 40 Table 30hp Spindle

2010 HAAS SL-10 CNC Lathe 10" Swing 15hp Spindle

2008 HAAS TM3 CNC Mill 16 x 40 Table 10hp Spindle

2004 HAAS VF4 CNC Mill 20 x 50 Table 20hp Spindle

2002 HAAS TM1 CNC Mill 16 x 30 Table 7.5hp Spindle

Manual Mills / Lathes / Saws / Weld Shop

# IES Systems Assembly Shop



Extensive line of hand tools and mechanic tools

Sheet Metal Brake

Sheet Metal Shear

350 amp MIG welder

2 sets torches

Extensive line of precision inspection tools

Wave Soldering Machine



# IES Systems Test Lab



480 V, 1000 A Test Power

50Hz MG Set for International Power Testing

Nicolet Oscilloscopes

Yokagawa Oscilloscopes

Various Power Meters

Metrology Shunts & Meters

IES Systems, Inc. has been awarded the 2005 Governor's Excellence in Exporting Award from Ohio Governor Bob Taft.



IES Systems, Inc. is a Level 1 Integrator for FANUC Robotics.



IES Systems, Inc. is an Automation Integrator for HUSKY Injection Molding Systems.





# Installed Equipment Locations

IES Systems has equipment installed at the following locations:

San German Puerto Rico

Arecibo Puerto Rico

Vega Alta Puerto Rico

Humacao Puerto Rico

India

Italy

Poland

Hong Kong

Burlington Iowa

Netherlands

South Korea

Middlefield, Ohio

Pittsburgh, PA

Plainville, CT

Norcross, GA

Asheville, NC

# Installed Equipment Locations (continued)

Clinton Iowa

Fort Smith Arkansas

Vergennes Vermont

Pittsburgh Pa.

Cleveland Ohio

Columbus Ohio

Horseheads NY

Calgary Canada

Reynosa Mexico

Juarez Mexico

Tijuana Mexico

Tlaxcala Mexico

Brazil

China

Dubai (United Arab Emirates)

Jordan

England (UK)

# AFCI / GFCI Test Equipment Photos



*Top left:* 3 Station High Speed AFCI Test Set

*Top Right:* Typical modular pallet style fixture for AFCI Test Set. Allows for testing multiple products in one test set.

*Bottom:* Palletized AFCI Test Set



# Automated Thermal Calibration Test Equipment



06/24/2005

# Automated Test Equipment Photos





# Automated Test Equipment Photos



# Rotary Thermal Calibration Test Equipment

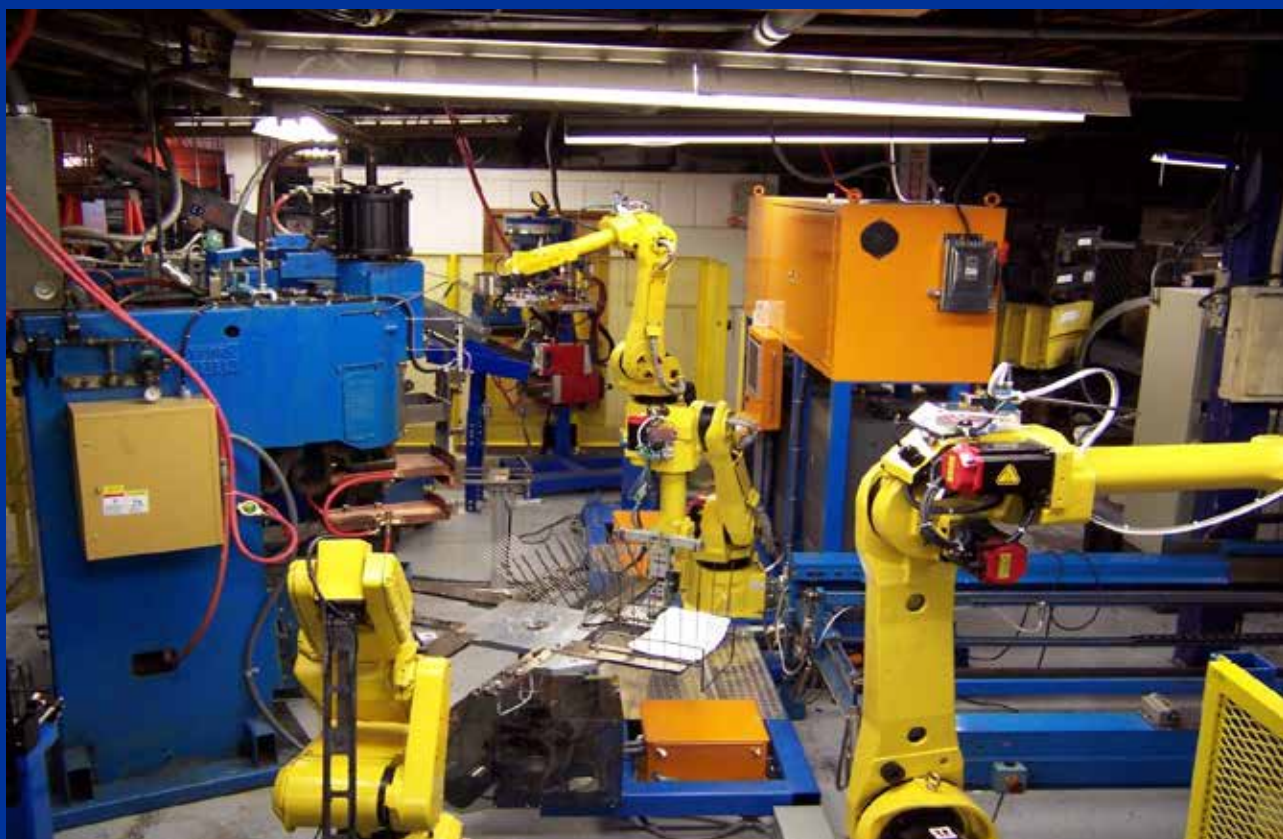


# Robotic Assembly Cells





# Robotic Assembly Cells



# Electronic Test Equipment Photos





# PC Board Level Test Equipment Photos



Functional Automated Test System:  
Functionally tests loaded PC boards using a  
typical bed of nails fixture pictured below.



Trip unit programmer / tester



AFCI PC Board Tester for  
molded case circuit breaker

# Aerospace Component Test Equipment Photos



PC Board HASS  
Test Set



Actuator HASS  
Test Set



Actuator ESS Test Set



TAC-TOM Actuator Electro-Mechanical Test Set

HASS: Highly  
Accelerated Stress  
Screening

ESS: Environmental  
Stress Screening

# Electric Motor Test Equipment Photos



84mm ECM Dynamometer Test Set



Core Loss Tester



160mm 2 Speed Motor Automated Tester



3 Phase Voltage Source

# Production Equipment Photos



2 Station Induction Brazing Machine



Automatic Tapping Machine



Stator Brazing Machine



Fuse Silver Element Punch & Forming Machine



Contact Arm Torque Setting Machine



# Laser Marking Equipment Photos



Manual Load Laser Marking System  
100w YAG Laser



2 Station Shuttle Laser  
Marking 50w YAG Laser



Automatic Laser Marking System. Product is conveyed thru marking chamber. 50w YAG