

ARNOLD GAUGE



ASME CAREER FAIR

MARCH 7TH, 2017

UNIVERSITY OF CINCINNATI

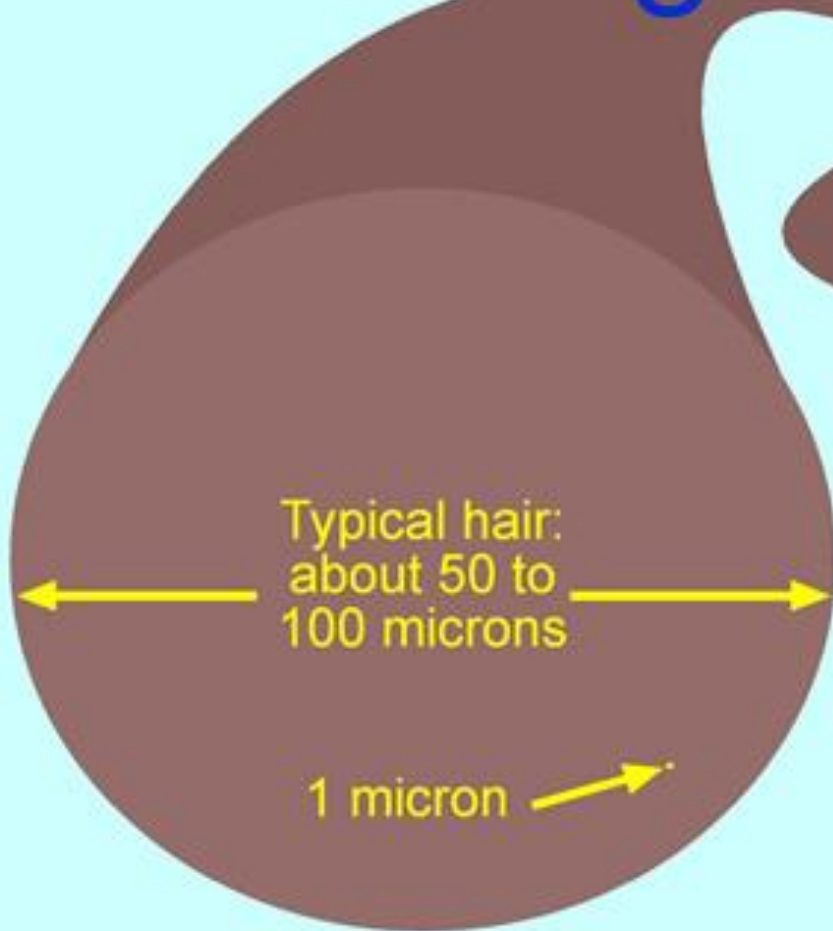
ABOUT US – ARNOLD GAUGE

- FOUNDED IN 1918
- FOUNDED BY A QUALITY ENGINEER WHO WORKED FOR HENRY FORD
 - INVENTED A MEASUREMENT PRODUCT THAT WE STILL SELL TODAY!
 - SOLD 80,000 OVER THE YEARS
- LOCATED IN WEST CHESTER/FAIRFIELD – ROUTE 4 AND I-275
- CUSTOMER BASE:
 - AUTOMOTIVE PRIME & TIER 1 (HONDA, TOYOTA, FORD, MAGNA, BOSCH, VALEO, ETC.)
 - AEROSPACE PRIME & TIER 1 (GE, ROLLS ROYCE, ETC.)
- TODAY, WE USE LASER, VISION, PROBES, CONTACT, AIR, ROBOT, 3D PRINTING ETC

WE MEASURE PARTS TO SUB-MICRON LEVELS!

WHAT IS A MICRON?

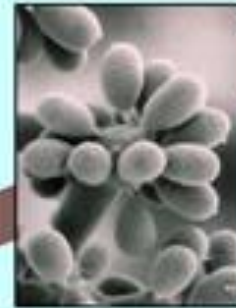
How big is a micron?



μm = micrometer
(= 0.000039 inch)



Paper clip (wire):
about 1000 microns



Common spores:
about 2 to 10 microns



Pastry flour:
50 to 100 microns



Bacteria:
about 1-3 microns



Small pollen grains:
about 10 to 20 microns



Tobacco smoke:
about 0.1 to 1 microns
(respirable range)

TYPICAL PROJECT – ARNOLD GAUGE



[Sample Project Video on Youtube](#)

DESIGN ENGINEER JOB DESCRIPTION – 1

- DESIGNING/DETAILING
 - DESIGN AND DETAIL COMPONENTS IN 3D AUTODESK INVENTOR
 - CREATE BLUEPRINTS FOR MECHANICAL COMPONENTS
 - SPECIFY APPROPRIATE COMPONENTS FROM KEY VENDORS
 - MISUMI, MCMASTER-CARR, THK, KEYENCE, SMC, PARKER-HANNIFIN, ETC.
 - ANSWER QUESTIONS FROM VENDORS AND CUSTOMERS
 - IN CAD, REVERSE ENGINEER EXISTING CUSTOMER AND IN-HOUSE COMPONENTS
 - ASSIST IN QUOTING NEW PROJECTS

DESIGN ENGINEER JOB DESCRIPTION – 2

- ASSEMBLY
 - QUALITY CONTROL PRODUCTS USING MICROMETERS, CALIPERS, ETC.
 - ASSEMBLE USING FASTENERS, BRACKETS, BUSHINGS, LOCTITE, ETC.
 - FIX CLEARANCE AND ALIGNMENT ISSUES
 - FABRICATE / FIX SMALL PARTS USING A MILL, LATHE, DRILL PRESS, ETC.
 - RUN AND CONFIGURE PNEUMATIC TUBING, VALVES, CYLINDERS, ETC.
 - WIRE PROXIMITY SWITCHES, LASERS, ETC.
 - INSTALL AND PROGRAM PROBES, LASERS, VISION SYSTEMS, COMPUTERS, ETC.
 - PERFORM GAGE TESTING (GR&R)
 - WRITE OPERATOR AND MAINTENANCE INSTRUCTION MANUALS FOR GAGES

DESIGN ENGINEER SKILLS / KNOWLEDGE

- 3D CAD, PREFERABLY AUTODESK INVENTOR. SOLIDWORKS, CATIA, ETC. IS FINE
- BLUEPRINT READING & CREATION, GD&T
- UNDERSTANDING OF MACHINING PROCESSES AND OPERATIONS
- ABILITY TO PRIORITIZE OWN WIDE-RANGING WORK LOAD AND WORK INDEPENDENTLY
- KNOWLEDGE OF MS OFFICE APPS: WORD, EXCEL, POWERPOINT.
- MACHINE SHOP EXPERIENCE A BIG PLUS!

IDEAL CANDIDATE:
50% MECHANICAL DESIGN ENGINEER &
50% CAR MECHANIC

OTHER THOUGHTS

- SMALL BUSINESS (PROS AND CONS)
- CURRENT UC CO-OPS (DANIELLE DOUGHERTY, MAURICE JONES)
 - YOU WILL HAVE RESPONSIBILITY
 - YOU WILL GET YOUR HANDS DIRTY
 - YOU WILL LEARN
 - WE HAVE FUN, BUT DO BIG THINGS
 - EVERY DAY IS DIFFERENT
- WE HAVE CATS IN THE OFFICE!

SNOWBALL & ARNIE



ANY QUESTIONS?

