

# PPI Ashland Facility Major Equipment Listing

## PRODUCTION FACILITY

Bacon Integrated Computer System with bar code: includes Quoting (JQS), Job Tracking (JTS) & Accounting (MAS-90). Philway has a 55,000 Sq. Ft. well equipped Facility.

## TCM (TOOLING-CAM-METHODS)

- 3 CAM Stations with Barco Software including DRC & File Server
- Excellon Model Opic III Digitizer
- Gerber Laser Photo Plotter
- Film Processor
- Douthitt Model BOX-X Exposure Frame
- Multi-line Technologies Film Punch
- Diazo Film Processing System
- 2 Concept 1000 Film Stabilization Cabinets

## MULTILAYER LAMINATING

- CESA (Controlled Environment Storage Area) includes Dehumidifier
- TMP Vacuum Hydraulic Press with Cooling Press and 30 x 30 in. platens, 150 ton, 4 openings
- TMP Hydraulic Press with Cooling Press and 30 x 30 in. platens, 100 ton, 4 openings
- Carter Eng. Company Model RS-232C Overarm Digital Micrometer
- Qualitek Eng. Co Hydraulic Depinner
- Jet Equipment Company Drill Press
- 12 Sets Multiline Universal Tooling Plates 20 x 23 in.
- 12 Sets Multiline Universal Tooling Plates 26 x 26 in.
- 2 Grieve Ovens (Model AB-500 Max Temp & Model S-350 Max Temp)

## CNC DRILLING & ROUTING

- Excellon System 2000 Drill w/5 spindles , Laser Tool Check and 21.9" x 30" panel size
- 2 Excellon Mark VI Drills
- 6 Excellon Mark V Drills
- Excellon EX200 Drill
- CNC Excellon Routing Machines include: EX110 (1-Spindle), Mark IV (4-Spindles), EX 300 (3-Spindles), Mark V (4-Spindles) & Mark V (4-Spindles).
- Fowler Depth Gauge
- Kennard Model 4031 Router Size 18 x 24"
- Glenbrook Technology Real Time X-Ray System RT-113
- 2 Hoffman Vacuum Systems
- 2 Spencer Vacuum Systems

## QAD (QUALITY ASSURANCE DEPT)

- Quality System DSCC MIL-PRF-31032 & ISO-9001:2000 Certified
- Complete Equipped Test Lab with Micro-Sectioning, Buehler Polishers, Struers Automatic Grind & Polish, Buehler Speed Press, Lecomat Pressure Vessel, 2-Unimet Nitron Metallurgical Microscopes, CMI 900 X-Ray Fluorescence (XRF) Thickness Measuring System, PTX-300 PTH Tester, MFX Surface Copper Thickness Tester & Grieve Laboratory Oven. Capabilities include Lot Conformance Inspection (LCI), Rework Simulation, Solderability, Ionic Contamination & Backlight Testing.
- Complete Final Inspection Dept with Calipers, Micrometers, Pin Gauges, Lighted Magnifiers, Dial Calipers, DoAll Granite Surface Plate, Verniers & Optical Comparator.
- Complete Measuring & Test Equipment Calibration Test Lab with DoAll Gauge Blocks, Certified Calibrated Test Standards & Record Keeping (Note: All M&TE are under Calibration System)
- Complete Receiving Inspection Dept with CRX Surface Copper Thickness Tester
- Complete Electrical Test Dept with 3 ATG 250V Electrical Testers, ECT 9090 Dual Access Top & Bottom Grid Tester, ECT Dual Access Top & Bottom Flying Probe Tester, Freed 1000V Megohmmeter & Slaughter AC-DC 2500V Hi-pot Testers (includes Evaluation and Diagnostics Station with 2 Vision Engineering Model TS-3 Stereo Microscopes)
- AOI Automatic Optical Inspection System with Evaluation and Diagnostics Station
- Unitek Model Unibond II Circuit Saver with Video Camera

## WET PROCESSES- (HASL, PLATING & ETCHING)

- **HASL includes:** 1-Horizontal & 2-Vertical HASL Machines with Talus Pre-Clean System
- **Plating Dept Includes:** NiAu TAB Conveyorized Plater, Baker Technology Automatic Electroless Cu Plating System with Desmear & Glass Etchback, Napco Automatic CuSn Electroplate System with Dual Rectifiers per Cell and Individual Controllers, Electroless Ni/Immersion Au (ENIG) Line & Immersion Ag (IS) Line.
- **Etching Dept Includes:** Chemcut High Speed Etcher with Solder Cleaner and Turbine Dryer Adapted for Conveying Thin Layers less than .006" & Chemcut Model 547 Resist Strip System
- **Misc includes:** Argus International Model HL 2400 SDB Cleaning Machine, Grieve Model 3.3.3 Industrial Oven, Conveyorized Solder Strip System, Advance Plasma System Model 1600 Desmear System with Automatic Computer Control, Oxide Treatment Line & Bilco Deburr Machine.

## CHEMISTRY LAB & WASTE WATER TREATMENT SYS

- Chemistry Lab includes: Perkin Elmer Model 3110 Atomic Absorption Unit, Mettler Model AE160 Analytical Balance, DTK Peer-2032, IBM PC A386-SX, 220 MB Computer, Thermotron Model SM 48 Mini Max Temperature/Humidity Chamber & Fully Equipped Analytical lab, Volumetric, Gravimetric, etc.
- Waste Water Treatment includes: Continuous Flow 120 GPM Waste Treatment System with sand filter (Precipitation), MacDermid MacGenerator Copper Plate Out System 120 Gal-250A

## PHOTO-IMAGING AND SCREENING

- Photo-Imaging includes: DuPont Yieldmaster ASL-24 Cut Sheet laminator, DuPont HRL-24 Hot Roll Laminator, DuPont SMVL-100 Dry Film Solder Mask Vacuum Laminator, DuPont PC-24 Printer/Exposure Unit, DuPont PC-30 Printer/Exposure Unit, Qualitek Engineering Universal Layer Punch, VCM Vertical Developer, Chemcut Model 547 Chemical Cleaning System for Inner Layers with Turbine Dryer & Grieve Oven Model SB-350
- Screening includes: Pumice Scrubber, 2-DP 1000 Automatic LPI Screeners, 2-Bassi Tunnel Ovens (2.0 Thermomatic), VCM Vertical Developer, ORC HMW 680 GW Exposure Unit (LPI) Hand Screening Equipment & Thermal Cured Bake Ovens
- AOI Automatic Optical Inspection System for Photo-tooling
- ORC Model HMW 201B 5KW Exposure Printer

## MISC EQUIPMENT

- Shear & Driller-Pinner
- Various Air Compressors
- Various Bake Ovens
- V-Groove Jump Scoring (Filotec KSM24)
- 1 Machine Shop
- Various Loaders & Accumulators
- Various Heat Exchangers

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