

- **Acceptable Quality Limit (AQL):** A statistical sampling process based on lot size that is the worst tolerable process average ratio that is still considered acceptable.
- **Bill of Material (BOM):** Itemized list describing each component and quantity in the device. The "recipe". Can be used for costing.
- **Chinese New Year (CNY):** Most important of traditional Chinese holidays. Occurs on the first day of the first month in the Chinese calendar. Factories typically shut down for two weeks.
- **Compression Molding:** Process similar to a waffle iron where rubber is vulcanized into flexible components. An example is the rubber buttons on a remote control. Less dimensionally accurate and less expensive than injection molding.
- **Coordinate Measuring Machine (CMM):** Precise 3D probe measuring machine used to measure accurately components for comparison with dimensional specs.
- **Cost of Goods Sold (COGS):** The price of the product at the shipping dock, including material, labor, profit, overhead, scrap, etc.
- **Deco:** Generic term for all types of decoration (tampo, spray, electroplating, etc).
- **Die Bonding:** An automated process where microscopic wires are bonded between the IC and the PCBA pads. A layer of epoxy is placed over the IC for protection. Used to save the cost of the IC plastic packaging and pins.
- **Draft:** Measured in degrees (typ 0.5 - 2.0), the slope of a plastic vertical wall required to release it from the tool without scratching. Depends on material, aesthetics and texture.
- **Ejector Pins:** Typically round pins that push a part out of the mold. Will leave round witness lines, typically on cavity side of part.
- **Electrostatic Discharge (ESD):** Typically, 4kV - 8kV done as part of a sample based design verification test process.
- **Engineering Prototype (EP):** First complete assembly of molded parts and PCBA built by trained engineers (i.e. not on a production line). Goal is to build a functioning prototype. May include printing and aesthetics.
- **Ex-Factory (XF):** Date at which finished goods leave the factory loading dock. Goods are transferred overland to container yard (either Hong Kong or YanTian) where they are transferred to the boat and become FOB. XF is often the trigger date for billing.
- **Family Mold:** A mold insert that contains multiple parts, which must all be of the same material and color.
- **Final Engineering Prototype (FEP):** Final saleable product including all features, functionality, deco and packaging. Built by trained engineers.
- **Final Inspection:** Final audit performed usually by the customer of the finished goods according to pre-defined specifications on an AQL basis. Failed goods need to be reworked.
- **Finished Goods Inventory (FGI):** Packaged goods stored at the factory.

- **First Pass Yield:** A statistic indicating the number of goods produced divided by the number of total units going into the process. A measure of quality.
- **First Shots (FS):** Milestone where initial plastic parts are created from a new tool. Parts will not include texture or polish. Often may be "short" (incomplete fill). Will be measured for dimensional accuracy using CMM.
- **Flash:** Thin film of resin that escapes at the parting line. An indication of a worn mold or too small of a press.
- **Freight on Board (FOB):** Goods transferred onto Container Ship.
- **Gate:** Passage through which the resin is injected into the mold insert to form the part. Will typically leave a remnant that requires trimming.
- **Go / No-go Gauge:** Typically two brass gauges: one oversized and one undersized to measure a components dimensional tolerance.
- **In-Circuit Tester (ICT):** Also called a "Bed of Nails". Spring-loaded pins connect with test points on the PCBA to measure continuity, polarity and component values as part of in-process testing.
- **Injection Molding:** Process by which a plastic part is made through injecting plastic resin under high temperature and pressure into a void that is the negative shape of the desired part.
- **Insert:** Part of the tool that is the negative space of the actual component. Available in different materials and structures depending on the resin and surface finish.
- **Life Test:** Quality test to measure duration and failure modes.
- **Mold Base:** Large mechanical block that holds the mold insert, ejector plate and pins, etc.
- **Pilot Production (PP):** Conversion from FEP to a product built on an assembly line or cell.
- **Printed Circuit Board (PCB):** Bare board. Usually outsourced.
- **Printed Circuit Board Assembly (PCBA):** Stuffed PCB. Usually done in-house at the factory.
- **Production Ramp:** Gradual increase in weekly production up to steady state capacity, which is often limited by tooling capacity.
- **Production Start (PS):** Initial production. Often will only run a few days each week during ramp.
- **Regrind:** A process where the left over material from the molding process (runners and sprue) is ground up and mixed with the virgin resin as a cost savings measure. The percentage of regrind should be specified on a part-by-part basis in the quality plan.
- **Repetitive Motion Test (RMT):** Automated or manual cycle test used for mechanical components.
- **Resin / Melt:** Plastic that is injected into the tool to be transformed into the desired component. Typical resins are ABS, PC, PP, POM and PE.
- **Rounds:** Allows melt to flow smoothly without shearing in the tool.

- **Runner:** Plumbing to move melt from sprue to gate. Also used to transfer melt from sprue to multiple cavities.
- **Silk Screen:** Process where paint is squeegeed over a piece of silk mounted in a frame and covered with a negative mask of the pattern. Useful for large, flat areas.
- **Slide / Pull:** Mechanical components that slide relative to the tool pull direction allowing undercut parts to be ejected from the tool.
- **Spray Painting:** Spray painting process where negative area is masked off using an electrolytic mask. Less precise than tampon, but suitable for larger area fills.
- **Sprue:** Passage through which melted resin is injected into mold base.
- **Statistic Process Control (SPC):** A statistical method to monitor and control a process to ensure that it operates at its full potential to produce conforming product.
- **Surface Mount Technology (SMT):** Lead-less components soldered directly on the PCB by a highly automated process. Typically cheaper and more accurate than Through Hole. Not all components come in a SMT package.
- **Tampon:** Transfer printing process where paint is squeezed over an etched metal slide and then transferred via a "jelly head" to a component. Can achieve very high resolution and suitable for use on slightly rounded surfaces.
- **Texture:** Pattern applied to a molded part. Can be specified from the Yick Sang book.
- **Through-Hole:** Traditional electrical components that are inserted through a PCB, soldered, and trimmed.
- **Tool Plan:** File itemizing which parts and quantities are in each tool.
- **Tool Release:** Milestone where the CAD files are transferred from Engineering to the Mold Shop for review, drafts and rounds and eventually tooling.
- **Tool Start (TS):** Milestone where the tooling production begins. Mold base ordered. Insert material selected based on resin, surface finish, life requirements, etc. Tooling design to place the parting line, slides, cooling, sprue, runners, ejection pins, multi cavity balancing etc. Often "MoldFlow" software is used to insure a complete fill, etc. Once the tool design is complete, the insert is machined via CNC or EDM.
- **Ultrasonic Welding (U/S):** Assembly process where high frequency vibrations are used to melt mating parts and form a strong bond.
- **Witness Lines:** Fine, typically undesirable, lines created by a pull or mold modification.
- **Work in Progress (WIP):** Components and sub-components.