



CUSTOM EQUIPMENT DESIGN ENABLES PIE SHELL PRODUCTION AT 140 PPM

SITUATION:	The owner of a company that sells special equipment to the bakery industry needed to improve an existing mechanically driven pie shell spinning machine.
CRITICAL ISSUE:	The current changeover time and production speed needed to improve to 1-hour changeovers and 140 pie shells per minute.
REASONS:	The market place requires more speed, the ability to quickly change for more pie shell sizes, shapes, and types of crumbs being used.
VISION:	To redesign the machine so that it is more robust, has programmable settings, and offers variable cycle motions. The solution had to permit 2, 3, and 4-head versions.
PROVIDED:	Sterling Engineering Inc. designed a 4-head, 2-axis servo drive to address reciprocation and vertical spinner drive motions. The kinematics of the system was calculated and system-timing profiles were generated. The machine can be directly integrated in to new and old installations. The design incorporated bakery GMP and safety guidelines.
RESULT:	The machine is in production, and running at 140 pie shells per minute. The changeover time is 1 hour.
SEI PROJECT #:	8380 (129-DOC-011-(V1R1-CASE STUDY Pie Shell Spinner))