



Beaumont

Revolutionizing Injection Molding



Sylvania sees \$30K annual savings after runner redesign

"MeltFlipper® technology reduced the dimensional variation from 0.2 mm down to 0.05 mm"

-Osram Sylvania

Osram Sylvania, a supplier of automotive components, approached

Beaumont with quality problems regarding a 4-cavity parting line inject mold. The parts were insert molded with expensive metal components. The mold was part of a multi-million dollar automated work cell. The customer discovered that cavities 1 and 3 were dimensionally identical, but dimensionally different from cavities 2 and 4. The dimensional variation was 0.2 mm in the critical feature



of the part (Figure 1), causing a 50% scrap rate and much higher production costs.

Beaumont redesigned the runner to allow for MeltFlipper® technology. After incorporating of MeltFlipper®, instead of high-sheared material flowing down the right side of two cavities, and down the left side of the other two cavities (Figure 2), the high-sheared laminates now flowed equally through both sides of the part to create balance within each cavity (Figure 3). Material and process conditions became consistent on both sides of each part; thereby, resulting in a mold that produced identical parts from each cavity.

PROJECT DESCRIPTION:

- 4-cavity parting line inject
- Automotive air sensor
- Insert molding

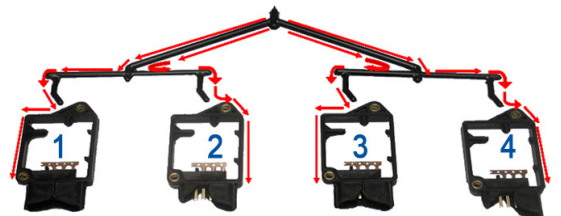
Figure 1: Arrows indicate critical dimensions



PROBLEMS:

- 0.2 mm dimensional variation in critical part feature
- 50% scrap rate
- 100% inspection rate
- Intra-cavity shear imbalance
- Poor efficiencies
- Artificially imbalanced

Figure 2: Red arrows indicate the intra-cavity flow imbalance



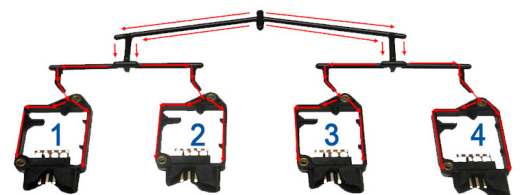
SOLUTION:

- MeltFlipper® Technology installed to manage flow into and within cavities
- Redesign of runner to eliminate artificial balance

BENEFITS/SAVINGS:

- \$30,560 annual savings
- Dimensional variation reduced from 0.2 mm to 0.05 mm
- Eliminated 100% inspection
- Increased efficiencies

Figure 3: Red arrows indicate symmetrical and balanced



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