

## Coating Cost Analysis

Simple Cost Analysis For Cost Reduction In A  
GC Low Level Sulfur Analysis

|                                                    | SilcoTek Coating | Alternative (Uncoated<br>Stainless Steel Fitting) | Comment/Assumption                                                                                                                                     |
|----------------------------------------------------|------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cost Factors</b>                                |                  |                                                   |                                                                                                                                                        |
| Price                                              | 46.49            | 25.00                                             | 21.79 + 25 for SS fitting                                                                                                                              |
| PO cost                                            | 200.00           | 100.00                                            | Range \$100 to \$200                                                                                                                                   |
| Shipping                                           | 15.00            | 15.00                                             | UPS Ground Cross Country. Assume more for international shipment, less for local delivery.                                                             |
| Lead Time Cost                                     | 0.75             | 0.00                                              | LT (wks) x price x .015 1 week for SilcoTek                                                                                                            |
| Purchasing Integration                             | 0.00             | 0.00                                              | assume no PO training just a single order                                                                                                              |
| Engineering evaluation                             | 300.00           | 0.00                                              | 2 hrs @ \$150.00/hr                                                                                                                                    |
| Quality evaluation/audit approval                  | 0.00             | 0.00                                              | Quality review can range from a simple review of the quality system and policy to a full blown audit. Assumed minimal review for one fitting purchase. |
| Retooling                                          |                  |                                                   |                                                                                                                                                        |
| <b>Total Cost</b>                                  | <b>562.24</b>    | <b>140.00</b>                                     |                                                                                                                                                        |
| <b>Benefit Factors</b>                             |                  |                                                   |                                                                                                                                                        |
| Labor savings/ Direct labor efficiency improvement | 15,600.00        | 0.00                                              | 1 more test per day @ 45 min per run est. @ \$80.00/hr fringed direct labor. \$60/per day x 260 days per year.                                         |
| Machine efficiency                                 |                  | 0.00                                              | If the machine can run longer without downtime consider efficiency improvement.                                                                        |
| Capital equipment                                  |                  |                                                   | If machines are running at capacity, improved throughput may avoid additional capital investment                                                       |
| Throughput or sales increase                       | 32,500.00        | 0.00                                              | 1 more test per day x 260 work days @ \$125 per test.                                                                                                  |
| Yield improvement                                  |                  |                                                   | larger operations may base improvement metric on yield rather than sales increase.                                                                     |
| Maintenance (overhead cost reduction)              | 3,380.00         | 0.00                                              | less troubleshooting maintenance will reduce indirect/overhead labor cost, 10 min per day @ \$80.00. \$13 x 260                                        |

|                                                                        |           |      |                                                                                                                                                                                                                    |
|------------------------------------------------------------------------|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Delivery improvement                                                   |           |      | There may be incentives for improved delivery.                                                                                                                                                                     |
| Sales increase, quality/reliability                                    |           |      | Sales or production increase due to new business derived from improved quality.                                                                                                                                    |
| Sales increase, lead time                                              |           |      | Potential for additional fees related to improved performance or expedite value add fee.                                                                                                                           |
| Sales increase, product features                                       |           |      | If coated product improves performance or value vs. competitor or achieves new performance specification.                                                                                                          |
| Raw material savings                                                   |           |      | Potential for less rework related to raw materials                                                                                                                                                                 |
| Waste disposal cost reduction                                          |           |      | Explore potential incentives for reduced waste. Or reduced hazardous waste generation.                                                                                                                             |
| Rework cost reduction                                                  |           |      | May split rework from direct labor savings especially if there is a dedicated rework line.                                                                                                                         |
| Overhead cost reduction (Supervision)                                  |           |      | Supervision cost may come into play for larger operations.                                                                                                                                                         |
| Overhead cost reduction (Utilities)                                    |           |      | Any related utility savings due to improved performance.                                                                                                                                                           |
| Overtime reduction                                                     |           |      | May split overtime from direct labor savings if there is a specific overtime reduction objective or metric.                                                                                                        |
| FG Inventory cost saving, (fast lead, improved yield= lower inventory) |           |      | If your lead-time or yield is improved, you may reduce finished goods inventory.                                                                                                                                   |
| Quality returns                                                        |           |      | Cost of replacing failed product or related penalties                                                                                                                                                              |
| Return customer loyalty                                                |           |      | Estimated improved customer loyalty. May be a year over year measure of lost customers.                                                                                                                            |
| Troubleshooting cost reduction (Engineering)                           |           |      | May roll this measure into overhead cost reduction (supervision) or break out if engineering intensive product or organization.                                                                                    |
| Regulatory compliance cost                                             |           |      | Consider if regulatory compliance is a factor either for implementing coating or in use of coating in emission monitoring. Consider reduction in violations, or regulatory approval cost.                          |
| Total Benefit                                                          | 51,480.00 | 0.00 |                                                                                                                                                                                                                    |
|                                                                        |           |      |                                                                                                                                                                                                                    |
| Net Result                                                             | 50,917.76 |      | Compared vs. alternative which in this case was using the baseline material, 304 stainless steel. Net result is relative to the alternative material, but can also compare to current practice or current process. |