

# MILLING PERFORMANCE REPORT

|                                  |                           |                          |  |                         |
|----------------------------------|---------------------------|--------------------------|--|-------------------------|
| CUSTOMER:                        | DATE:                     | ENGINEER:                |  |                         |
| LOCATION:                        | MATERIAL:                 | CUSTOMER ENGINEER:       |  |                         |
| PART NUMBER:<br><b>Fuel Plug</b> | CONDITION:<br><b>OK</b>   | OPERATOR:<br><b>Mike</b> |  |                         |
| OPERATION:<br><b>10</b>          | HARDNESS:<br><b>20 RC</b> | REPORT#<br><b>3</b>      | MACHINE TYPE:<br><b>Live Tool Lath</b> | MACHINE HP:<br><b>5</b> |

NOTES:

| PERFORMANCE / COST DATA        | PRESENT        | TEST 1            | TEST 2  | TEST 3  |
|--------------------------------|----------------|-------------------|---------|---------|
| MANUFACTURER                   | Hanita         | Carbide Grinding  |         |         |
| MILL CATALOG NUMBER            | Variable Helix | Gorilla Mill      |         |         |
| INSERT                         | End Mill       | End Mill          |         |         |
| GRADE                          | TiALN          | TiALN             |         |         |
| CUTTER DIAMETER (INCHES)       | 0.3125         | 0.3125            |         |         |
| CUTTING SPEED (RPM)            | 1833           | 2444              |         |         |
| CUTTING SPEED (SFM)            | 150            | 200               |         |         |
| NUMBER OF INSERTS PER CUTTER   | 4              | 4                 |         |         |
| CHIP LOAD PER INSERT (CPT)     | 0.001          | 0.0015            |         |         |
| FEED RATE (IPM)                | 7.332          | 14.664            |         |         |
| FEED PER REV. (IPR)            | 0.004          | 0.006             |         |         |
| FINISH (R.M.S.)                | 125            | 125               |         |         |
| MAX. WIDTH OF CUT(W.O.C.) INCH | 0.3125         | 0.3125            |         |         |
| MAX DEPTH OF CUT (D.O.C.) INCH | 0.21           | 0.21              |         |         |
| LENGTH OF CUT IN INCHES        | 5              | 5                 |         |         |
| CUTTING TIME PER PIECE / MIN.  | 0.682          | 0.341             |         |         |
| PIECES PER EDGE                | 200            | 360               |         |         |
| TOOL LIFE PER EDGE / MIN.      | 136            | 123               | #VALUE! | #VALUE! |
| CUTTING EDGES PER INSERT       | 1              | 1                 |         |         |
| PIECES PER INSERT              | 200            | 360               |         |         |
| REASON FOR INDEXING INSERTS    | Burr           | Burr              |         |         |
| TYPE OF COOLANT                | Semi Syn.      | Semi Syn.         |         |         |
| TIME PER CUTTER CHANGE / MIN.  | 10             | 10                |         |         |
| CHANGE COST PER PIECE          | \$0.08         | \$0.05            |         |         |
| INSERT COST (PURCHASE QTY.)    | \$23.32        | \$18.66           |         |         |
| INSERT COST PER PIECE          | \$0.12         | \$0.05            |         |         |
| MACHINE HOURLY COST (BURDEN)   | \$100.00       | \$100.00          |         |         |
| MACHINE COST PER MINUTE        | \$1.67         | \$1.67            |         |         |
| MACHINE COST PER PIECE         | \$1.14         | \$0.57            |         |         |
| TOTAL COST PER PIECE           | \$1.34         | \$0.67            |         |         |
| EST. ANNUAL PRODUCTION         | 6,000          | 6,000             |         |         |
| EST. ANNUAL COST               | \$8,019.02     | \$3,998.49        |         |         |
| <b>EST. ANNUAL SAVINGS</b>     |                | <b>\$4,020.53</b> |         |         |