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| Centerless grinding machine | Make: Officine Monzese Spa - Model: 510 - wheel speed m/s: 32 (6297 fpm) - rpm: 1200 | | |
| Grinding wheel | Specification: ZB | Dimensions mm. 508 x 250 x 254 (inches 20x10x10) | |
| Regulating wheel | Specification: A120V4R | Dimensions mm. 305 x 250 x 127 (inches 12x10x5) | |
| Dressing tool | Diamod tool bit | | |
| Work piece | Shaft for eletric motors | | |
| Material | UNI 35SMnPb10 | DIN | AISI/SAE 11L37 |
| Hardness | Cementation + hardening | | |
| Initial dimensions of work piece | Ø mm. 9,80 (.385") | Lenght mm. 115,00 (4,52") | |
| Final dimensions of work piece | Ø mm. 9,50 (.374") | Lenght mm. 115,00 (4,52") | |
| Stock removal | Total mm. 0,30 (.011") | Roughing removal | mm. 0,25 (.009") one pass |
| | | Finishing removal | mm. 0,05 (.002") one pass |
| Feed rate | Roughing | mt/min' 3,50 (137 ipm) | |
| | Finishing | mt/min' 3,00 (118 ipm) | |
| Dimensional tolerances | Straightness | mm. 0,005 (.00019") | |
| | Parallelism | mm. 0,005 (.00019") | |
| | Roundness | mm. 0,001 (.000089") | |
| Surface finish | Ra 0,11 | Rt 1,12 | Rz 0,90 |
| Dressing cycle | Dressing depth | mm. 0,020 (.0008") | |
| | Dressing speed | mm. 150/min' (5,80"/min) | |
| | Dressing frequency | every 2 hours | |
| | Reason of the dressing | restore surface and reduce Ra | |
| Coolant | Water soluble coolant with 7% semi-synthetic oil Ph 8 | | |
| Notes | <i>The life of this ZB grinding wheel has been 8 months, working 16 hours a day.</i> | | |