

Title (en)
IMPROVEMENTS IN OR RELATING TO GRINDING

Title (de)
VERBESSERUNGEN IN/ODER IM VERBAND MIT SCHLEIFBEARBEITUNG

Title (fr)
AMELIORATIONS DU MEULAGE OU S'Y RAPPORTANT

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Application
EP 95906426 A 19950125

Priority
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Abstract (en)
[origin: GB2285937A] A method and apparatus for grinding a cam (12) with a cam lobe is provided. Rotation of the cam (12) is synchronised with the infeed/outfeed movement of a grinding wheel (10). Control means measures the relative rotational and lateral positions of the cam (12) and grinding wheel (10). The movement of the grinding wheel (10) relative to the cam (12) is controlled to roughly grind a desired cam profile. Finish Grinding may be by way of grinding wheels or abrasive belt. Surface hardening may be applied to the ground cam before the finish grinding step. Rotation of the cam and operation of the cam/grinding wheel infeed/outfeed are synchronised so that the grinding wheel 10 first contacts the workpiece eg. a camshaft 12 ahead of the peak 14 of the cam lobe and as infeed continues the radius of the peak is attained at the intended position of the peak as it becomes aligned with the grinding wheel with rotation of the workpiece, and the wheel breaks contact with the ground face of the cam at or after the peak becomes aligned with the wheel for a second time but before the third such alignment. A grinding machine for carrying out the method comprises first position sensor to determine the distance between the longitudinal axis of the workpiece and the nearest point thereto on the surface of the grinding wheel, second position sensor to determine the angular position of the rotating workpiece, and a control responsive to signals from the sensors to control the infeed/outfeed drive. Finish grinding may be by grinding wheel or abrasive belt. Before finish grinding the ground cam may be surface hardened. <IMAGE>

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