

[54] **METHOD AND DEVICE FOR REGULATING THE TEMPERATURE OF ROTATING GRINDING ROLLS HAVING A HOLLOW INTERIOR**

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[58] **Field of Search**..... 165/89, 104, 105, 165/106; 241/66, 67; 72/200, 201

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[57] **ABSTRACT**

The hollow interior of the rolls contains heat equalizing media which can have both a liquid phase and a vapor phase, the hollow interior being only partly filled with the medium in the liquid phase. During operation, locally undefined heat concentrations of the roll, on the inner surface of the roll, are reduced by evaporation of the liquid heat equalizing medium, and the heat content of the resultant vapor is transmitted to points of the roll whose instantaneous temperature is lower than the mean operating temperature of the roll, by condensation of the vapor at these points. The condensation or evaporation temperature of the heat equalizing media is between the maximum and minimum operating temperatures at the static operating pressure prevailing in the interior of the rolls, and the absolute static pressure may be varied. The media, present in two phases of the interior of the roll, is excited into two oppositely directed eddy currents. Grinding rolls used with the invention have end walls to which there are connected tubular shaft ends having bores communicating with the hollow interior of the roll, and at least one shaft end is used for filling the liquid medium into the roll. A flow restriction may be provided between a tubular shaft end and the interior of the roll.

12 Claims, 6 Drawing Figures

