ABSTRACT

PERFORATED MILL ROLL

A perforated mill roll facilitates the extraction of fluid created during the grinding of a fluid-containing material; for example, the extraction of sucrose juice from sugar cane. A perforated mill roll body (10) incorporates a plurality of fluid channel strings (20). Each fluid channel string (20) comprises a hollow fluid channel (30) defined by a channel wall member (32) which extends the length of the roll body (10). A plurality of fluid passage members (40) are affixed to the channel strings (20). Each fluid passage member (40) contains a radially extending fluid passage (50) which communicates with the outer periphery (70) of the mill roll body (10) and the fluid channel (30).

Cast iron or steel is cast around the fluid channel strings (20) to anchor them in position and to form the grinding surface of the mill roll. The mill roll body (10) has a hollow central bore (80) which enables the body to be sleeved on a cylindrical roller shaft in a milling unit.

(figure 1)