

PULVERISED SOLID FUEL BURNER

ABSTRACT OF THE DISCLOSURE

5 A burner includes a first oxidant conduit to transmit a first stream of an oxidant; a
solid fuel conduit having an outtake and surrounding the first oxidant conduit, thereby
forming a first annulus to transmit a mixture of a transport gas and particles of a solid
fuel; a second oxidant conduit surrounding the solid fuel conduit, thereby forming a
second annulus to transmit a second stream of the oxidant or an other oxidant; and
10 means for segregating the mixture proximate the outtake into a lean fraction stream and
a dense fraction stream. The first stream of the oxidant exiting the first oxidant conduit
combines during combustion with the lean fraction stream, thereby forming an inner
combustion zone adjacent the outtake, and the second stream of the oxidant, or the
other oxidant, exiting the second oxidant conduit combines during combustion with the
dense fraction stream, thereby forming an outer combustion zone.

15 FIGURE 1

20 06784 USA.DOC