



G00002



162162

SPRAY COOLING METHOD AND APPARATUS

5

ABSTRACT

A spray module has a body and a cavity with a sliding plate within it. Incoming control signals move the sliding plate between an open position, in which holes in the plate align with holes in the body, to allow cooling spraying to occur, and
10 a closed position, in which no spraying occurs. A plurality of these spray modules are removably mounted in parallel, one in front of the other, in a spray chamber. Each module has its body holes directed at one or more heat sources on a circuit board or some such, the circuit boards being placed between adjacent spray modules. Separate temperature sensors detect the temperatures of different heat
15 sources. Based on these detected temperatures, a controller selectively sends signals to specific spray modules to spray those heat sources whose temperature is too high. Sprayed coolant from all the spray modules falls to the gravimetric bottom of the spray chamber in whichever orientation the chamber is in and is collected, condensed and sent back to the spray modules.

20

FIGURE 1