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SWITCHING FLUID FLOW BY DIVERSION

ABSTRACT

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A flow of fluid is switched on and off by diverting the flow to an alternative path. In a preferred application an abrasive cutting jet, formed by a flow of abrasive slurry fed via a conduit 5 to a cutting jet nozzle 6, is switched on and off by diverting the flow at a three way changeover valve 1 to a conduit 8 and bypass nozzle 9. Valves 18, 20 control the connection of a flow of clean auxiliary water to respective outlet ports 4, 7 of the changeover valve 1 to reduce pressure differentials during operation of the changeover valve and to provide clean backflows which hydraulically divert the flow of abrasive slurry at the changeover valve and allow the changeover valve to open and close on a clean, largely abrasive-free flow.

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15 Figure 1