

Title (en)

Apparatus and method for let down of a high pressure abrasive slurry.

Title (de)

Vorrichtung und Verfahren zum Absinken des Druckes eines Hochdruck-Schmiergelbreis.

Title (fr)

Dispositif et procédé pour réduire la pression d'une boue abrasive à haute pression.

Publication

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Application

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Priority

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Abstract (en)

A novel apparatus having a first let-down valve (10) in direct fluid communication with a deceleration zone (20) and the deceleration zone (20) in direct fluid communication with a second let down valve (30) permits elimination of a gas/liquid separation apparatus. In alternative embodiments the apparatus can be modified for addition of a quench liquid or cooling with a heat exchanger. By allowing the slurry to pass through successive let-down stages as a foam or foamy liquid, higher allowable flow velocities can be achieved. In operation, high pressure slurry will be flashed through a first valve (10) and reduced to an intermediate pressure. The slurry will exit from the first valve (10) at a very high velocity as a foam or foamy liquid and directly enter the deceleration zone (20). In the deceleration zone (20) the slurry will first contact other slurry so that by the time it reaches the walls (21) of the deceleration zone (20) its velocity will be low enough to avoid erosion. From the deceleration zone (20) the slurry will pass through a second valve (30) with a further decrease in pressure. It is possible to pass the slurry through many valves with a deceleration zone between the valves.

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