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(54) **POWER INJECTION CATHETERS AND METHOD OF INJECTING**

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(58) **Field of Classification Search**

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See application file for complete search history.

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(57) **ABSTRACT**

Power injection catheters for high flow rate delivery of fluids are disclosed. In one embodiment, a catheter may include a body defining one lumen and a plurality of extension tubes each comprising a lumen in fluid communication with the one lumen of the catheter body. Further, an extension tube may be configured for performing power injection and an extension tube may include a proximal valve. In another embodiment, a catheter may comprise a plurality of lumens and extension tubes, each of the extension tubes comprising a lumen in fluid communication with one lumen of the catheter body, respectively. At least one extension tube may be configured for performing power injection and at least one extension tube may include a proximal valve. Such catheters may include a pressure relief mechanism for preventing overpressurizing of the catheter. A method of injecting a fluid into a patient's body is disclosed.

21 Claims, 14 Drawing Sheets

