

[54] METHOD AND APPARATUS FOR REMOTE MONITORING OF VALVES AND VALVE OPERATORS

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[58] Field of Search 73/168, 862.27, 862.28, 73/862.31, 862.32; 137/551; 251/129.11, 129.12; 318/729; 324/127, 142, 158 MG

References Cited

U.S. PATENT DOCUMENTS

4,029,122 6/1977 Jaegnus 137/551
4,123,009 10/1978 Kilpinen 241/30

4,321,529	3/1982	Simmonds et al.	324/83 R
4,333,118	6/1982	Comstedt et al.	361/30
4,342,649	9/1985	Charbonneau et al.	73/168
4,551,808	11/1985	Smith et al.	364/474
4,570,903	2/1986	Crass	251/129.12
4,831,873	5/1989	Charbonneau et al.	83/168
4,891,975	1/1990	Charbonneau et al.	73/168

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[57] ABSTRACT

A method and apparatus for providing a previously unattainable yet desirable function of monitoring at a remote location and/or in a remote (non-intrusive) manner the condition of a valve operator to signal a need for more thorough inspection and for possible maintenance of the valve or valve operator; the method and apparatus including the relating of power parameters such as motor power and motor power factor to the valve operator stem load, setting up a control value for the power parameter based on a maximum allowable operator thrust depletion; and periodically monitoring actual power parameter values at a remote location for comparison to the control value.

5 Claims, 3 Drawing Sheets

