

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :19/07/2023

(21) Application No.202331048632 A

(43) Publication Date : 13/10/2023

(54) Title of the invention : SMART FLOW GOVERNING SYSTEM FOR DIELECTRIC CIRCULATION AND FILTRATION

(51) International classification	:C02F0001280000, C02F0009000000, C02F0001000000, C02F0001440000, C02F0001660000	(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD Address of Applicant :Dhanbad - 826004, Jharkhand, India Dhanbad ----- Name of Applicant : NA Address of Applicant : NA
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Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The invention relates to a smart flow governing system (200) for dielectric circulation and filtration, to achieve controlled uniform flow rate with digital monitoring. The flow system comprises of a diaphragm pump (205), a two-stage filtration unit, a flow rate regulating unit (101), an LED display screen and a power supply unit. To supply filtered dielectric, the two-stage filtration unit comprises of a polypropylene filter (203) to remove the suspended debris and an activated carbon filter for eradication of organic compounds and free radicals. The regulating unit (101) comprises a transistor-based circuit arrangement with potentiometer to generate uniform step regulation of dielectric flow rate with percentage power utilization monitoring in the LED display screen. The flow system can be assembled with variable size machine work tank with regulated flowrate to eradicate overflow and flooding challenges.

No. of Pages : 15 No. of Claims : 4