Home (http://ipindia.nic.in/index.htm)
 About Us (http://ipindia.nic.in/about-us.htm)
 Who's Who (http://ipindia.nic.in/whos-who-page.htm)

 Policy & Programs (http://ipindia.nic.in/policy-pages.htm)
 Achievements (http://ipindia.nic.in/achievements-page.htm)

 RTI (http://ipindia.nic.in/right-to-information.htm)
 Feedback (https://ipindiaonline.gov.in/feedback)
 Sitemap (shttp://ipindia.nic.in/itemap.htm)

 Contact Us (http://ipindia.nic.in/contact-us.htm)
 Help Line (http://ipindia.nic.in/helpline-page.htm)





Skip to Main Content

INTELLECTUAL PROPERTY INDIA PATENTSI DESIGNSI TRADE MARKS GEOGRAPHICAL INDICIAL

(http://ipindia.nic.in/inc

Patent Search

Invention Title		MAGNETOFLOW SHIELD: A SYSTEM FOR CONTROLLING JEFFREY FLUID FLOW WITH MAGNETOHYDRODYNAMIC AND POROUS MEDIA INTERACTIONS					
Publication Number		13/2024					
Publication Date		29/03/2024					
Publication Type		INA					
Application Number		202441021453					
Application Filing Da	ate	20/03/2024					
Priority Number							
Priority Country							
Priority Date							
Field Of Invention		COMPUTER SCIENCE					
Classification (IPC)		G06Q0010060000, G06F0111100000, G06Q0010100000, H02K0044080000, B33Y0070000000					
Inventor							
Name	Addre	ISS In the second se	Country	Nat			
Dr. D. Rajani	Assista Prades	ant Professor, Department of Mathematics, Velagapudi Rama Krishna Siddhartha Engineering College, Vijayawada, Andhra sh, India, Pincode: 520007	India	Indi			
Dr. M. V. D. N. S.	Assista	ant Professor, Department of Mathematics, Velagapudi Rama Krishna Siddhartha Engineering College, Vijayawada, Andhra	India	Indi			

Madhavi	Pradesh, India, Pincode: 520007	maia	mai
Dr. Nellore Manoj Kumar	Independent Researcher, Founder & CEO, Infinite-Research Organization, B.O, 15-225, Gollapalem, Venkatagiri, Tirupati District, Andhra Pradesh, India, Pincode: 524132	India	Indi
Dr. Ajai Singh Yadav	Associate Professor, Department of Humanities and Applied Sciences, School of Management Sciences, Lucknow, Uttar Pradesh, India, Pincode: 226001	India	Indi
Dr. P. Srilatha	Associate Professor, Department of Mathematics, Institute of Aeronautical Engineering (A), Hyderabad, Telangana, India, Pincode: 500043	India	Indi
Dr. P. Ramesh Reddy	Assistant Professor & HoD, Department of Mathematics, Madanapalle Institute of Technology & Science, Madanapalle, Annamayya District, Andhra Pradesh, India, Pincode-517325	India	Indi

Applicant

Name	Address Rajani Assistant Professor, Department of Mathematics, Velagapudi Rama Krishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh, India, Pincode: 520007		y Nat Indi
Dr. D. Rajani			
Dr. M. V. D. N. S. Madhavi	Assistant Professor, Department of Mathematics, Velagapudi Rama Krishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh, India, Pincode: 520007	India	Indi
Dr. Nellore Manoj Kumar	Independent Researcher, Founder & CEO, Infinite-Research Organization, B.O, 15-225, Gollapalem, Venkatagiri, Tirupati District, Andhra Pradesh, India, Pincode: 524132	India	Indi
Dr. Ajai Singh Yadav	adav Associate Professor, Department of Humanities and Applied Sciences, School of Management Sciences, Lucknow, Uttar Pradesh, India, Pincode: 226001		Indi
Dr. P. Srilatha	Associate Professor, Department of Mathematics, Institute of Aeronautical Engineering (A), Hyderabad, Telangana, India, Pincode: 500043	India	Indi
Dr. P. Ramesh Reddy	Assistant Professor & HoD, Department of Mathematics, Madanapalle Institute of Technology & Science, Madanapalle, Annamayya District, Andhra Pradesh, India, Pincode-517325	India	Indi

4/9/25, 3:15 PM

Abstract:

The Magneto Flow Shield presents a novel system for controlling Jeffrey fluid flow through the synergistic integration of magnetohydrodynamic (MHD) principles and poro media interactions. By strategically applying magnetic fields and leveraging the inherent properties of porous materials, the system enables precise regulation of viscoelas dynamics. Through the manipulation of electromagnetic forces within the fluid and the modulation of flow patterns within porous media, the Magneto Flow Shield offers a versatile solution applicable across various engineering and scientific domains. This innovation holds promise for enhancing efficiency, sustainability, and performance in industries such as manufacturing, healthcare, environmental engineering, and geosciences. Its interdisciplinary nature fosters collaboration and innovation, driving advancements in fluid dynamics and control technology.

Complete Specification

Description:The proposed system, MagnetoFlow Shield, operates at the intersection of magnetohydrodynamics and porous media interactions, offering a pioneering solution for controlling Jeffrey fluid flow. Jeffrey fluids, characterized by viscoelastic properties, present unique challenges in conventional flow control mechanisms. The MagnetoFlow Shield harnesses magnetic fields to manipulate the flow behavior of Jeffrey fluids, exploiting their response to electromagnetic forces for precise control. By integrating porous media components into the system, it enhances its efficacy by leveraging the flow regulation capabilities inherent in such materials. This innovative approach enables fine-tuning of flow dynamics, mitigating turbulence, and optimizing fluid transport in various applications, from industrial processes to biomedical devices. The system's adaptability and efficiency make it a promising avenue for enhancing fluid handling techniques in diverse fields, paving the way for advancements fluid dynamics and process engineering.

Background of the proposed invention:

The MagnetoFlow Shield represents a cutting-edge innovation at the nexus of magnetohydrodynamics and porous media interactions, aimed at revolutionizing the contr and manipulation of Jeffrey fluid flow. To fully appreciate the significance of this proposed invention, it's imperative to delve into the background of Jeffrey fluids, magnetohydrodynamics, and porous media, as well as the existing challenges in controlling fluid flow.

Jeffrey fluids, named after Herbert Hover Jeffrey, are a class of non-Newtonian fluids distinguished by their viscoelastic behavior. These fluids exhibit a complex rheologic response, combining characteristics of both viscous fluids and elastic solids. Unlike Newtonian fluids, which obey a linear relationship between shear stress and shear ra Jeffrey fluids display shear thinning or thickening behavior depending on the shear rate, making their flow patterns inherently intricate and challenging to control. Traditional methods of fluid flow control often struggle to adequately manage leffrey fluids due to their unique rheological properties. While various techniques exist for

View Application Status

india.gov.in

Terms & conditions (http://ipindia.gov.in/terms-conditions.htm) Privacy Policy (http://ipindia.gov.in/privacy-policy.htm)

Copyright (http://ipindia.gov.in/copyright.htm) Hyperlinking Policy (http://ipindia.gov.in/hyperlinking-policy.htm)

Accessibility (http://ipindia.gov.in/accessibility.htm) Archive (http://ipindia.gov.in/archive.htm) Contact Us (http://ipindia.gov.in/contact-us.htm) Help (http://ipindia.gov.in/help.htm)

Content Owned, updated and maintained by Intellectual Property India, All Rights Reserved.

Page last updated on: 26/06/2019