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## Patent Search

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| Invention Title         | ARTIFICIAL INTELLIGENCE BASED TECHNIQUE FOR FAULT ALARMS AND POWER PERFORMANCE ANALYSIS IN HYBRID ELECTRIC VEHICLE HYDRAULIC TECHNOLOGY |
| Publication Number      | 24/2023   |
| Publication Date        | 16/06/2023  |
| Publication Type        | INA   |
| Application Number      | 202341035297  |
| Application Filing Date | 19/05/2023  |
| Priority Number         |   |
| Priority Country        |   |
| Priority Date           |   |
| Field Of Invention      | ELECTRONICS   |
| Classification (IPC)    | B60K 064450, B60W 200000, G05B 230200, G06F 121027, G06N 200000   |

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#### Abstract:

Artificial intelligence based technique for fault alarms and power performance analysis in hybrid electric vehicles based on hydraulic technology is the proposed invention focuses on analyzing the framework of artificial intelligence based technique for fault alarms and power performance analysis in hybrid electric vehicles. It aims at studying the hydraulic technology in hybrid electric vehicles.

#### Complete Specification

Description:[0001] Background description includes information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.

[0002] A hybrid electric vehicle (HEV) is a type of hybrid vehicle that combines a conventional internal combustion engine (ICE) system with an electric propulsion (hybrid vehicle drivetrain). The presence of the electric powertrain is intended to achieve either better fuel economy than a conventional vehicle or better performance. There is a variety of HEV types and the degree to which each function as an electric vehicle (EV) also varies. The most common form of HEV is the hybrid electric car, although hybrid electric trucks (pickups and tractors), buses, boats and aircraft also exist.

[0003] A number of different types of Hybrid electric vehicle analysis systems that are known in the prior art. For example, the following patents are provided for illustrative purposes and are all incorporated by reference.

[0004] Fault Alarms and Power Performance in Hybrid Electric Vehicles Based on Hydraulic Technology:- In order to improve the fault alarm effect on the power performance of hydraulic hybrid electric vehicles (HEV), this paper proposes a fault alarm method for hybrid electric vehicle power performance based on hydraulic technology, builds a hybrid electric vehicle power system model, uses hydraulic technology to extract the characteristic signals of key components, uses support vector machines to build a hybrid electric vehicle classifier, and obtains the fault alarm results for dynamic performance based on hydraulic technology. The results show that the proposed method can improve real-time diagnosis and alarm for engine faults in HEV, and the fault can be diagnosed after 5 s of injection, thus ensuring the dynamic stability of HEV.

[0005] The role of artificial intelligence in the mass adoption of electric vehicles:- The electrification of mass transportation is hailed as a solution for reducing global

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Page last updated on: 26/06/2019