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Venkob's Theory of Energy – Force

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Abstract: *Energy (E) is the most commonly used concept in day today life. It is one of the important thing we are using in our life. These are so many types of forms in energy. Ex: kinetic energy potential energy, electrical energy etc… And another important concept we are using in our life I.e. Force. Yes, it is also a useful thing in our life force is defined as a change in a particle's momentum. These two important accepts are related to each other. The concept of force is closely related to energy. Force can be seen as something which changes the energy of a system or particle. This paper provided a new theory based on the concepts energy (E) & force (F) by relating then in which we can see that now the energy depends on the force and force on energy vice versa.*

Keywords: *Energy (E) – force (F)'venkob's constant (v_m),force of a particle (f) ,nuclear force-energy*

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I. Introduction

The concept of energy is central to the physics and the expressions for energy can be written for every physics system. When all form of energy e.g. heat, mechanical energy, electrical energy etc… are counted, it turns out that energy is converted. The general law of conservation of energy is true for all forces and for kind of transformation b/w different form of energy. The law of conservation of energy is thought to be valied across all domains of nature, from the microscopic to macroscopic. It is routinely applied in the analysis of atomic, nuclear and elementary partical. Force concept is also very important in physics. There are 4 fundamental force in nature. In this paper we are going to see the relation between force and energy. In case of particles force and energy are interrelated to each other. When particles experience the force due to that force the energy of particle will changes. This paper & theory is on the studies of newton's force law electromagnetic force and Einstein's mass energy equivalence theory.

Statement- equation and explanation: -
The energy force are interrelated to each other. The energy depends upon force & force depends upon energy. this theory says that

Statement:- "The square of energy of a particle is directly proportional to the net force exerted or experienced by that particle."

According to the statement.$E^2 \alpha F$
$\mathbf{E^2 = F v_m}$

Where v_m is the venkob's constant and its value is equal to 1.987×10^{-25} Jm

If F=0, net force experienced by the particle is equal to zero then energy of that particle remains same i.e. no gaining of energy (E=0).
Net external force may be contact with particles or unconstant with particles (ex: electrostatic force, magnetic force, etc.….)

II. Explanation And Results

When a particle is moving with velocity (v) and having mass (m) that shows dual nature i.e wave like & particle like.

According to de-Broglie
$\lambda = h/p$ **--- 1**

When a particle experience a net external force then the ratio of its force and its momentum is equal to it's frequency .

$\frac{F}{p}$ = □ (*frequency*) **if** $\frac{1}{t} = \frac{1}{T}$

∴ ***F*** **=** ***p*** □

∴ ***P*** **=** ***F/*** □

Put ***P*****=** $^{F/p}$ **in --------1**

$$\square = \frac{\mathbf{h}}{\mathbf{F/}\ \square}$$

E **=** ***F*** □

$$\frac{Fhc}{E} = E \quad | \quad \because E = hc/\square$$

$E^2 = F\,hc$

Since h and c are constants

∴ E^2 □

$\frac{}{F}$

$E^2 = FV_m$

Where V_m =venkob's constant. Its value = **1.987 × 10^{-25} Jm.**

* **Another way to get E^2 □ F:-**

Thanks to the Albert Einstein to gave the special theory of the relativity use know that mass and energy are equivalent and related by famous formula

$$E=mc^2$$

$$E=pc \qquad \text{----------1}$$

According to the Newton's second law then force of particle is

F=ma

Since F=dv/dt or simply v/t

Then F=mvt ---------- 2

If use consider time taken by the particle is considered us time period then equation two becomes

F=mv □ **---------- 3**

According to max plank the energy is equal to the hν where h- plank's constant

E=h □ **---------- 4**

Now carefully observe energy is depends upon momentum according to Einstein & also frequency according to planck's equation 1 and 4 respectively.

To get p&v in one equation use have to multiply equation 1 & 4 right to right & left to left side

E× E= PC h □

E^2= p □**hc**

Now substitute equation in above equation then E^2= Fhc

Here both n & C are the constant values so

$\mathbf{E^2 \square F}$
$\mathbf{E^2 = Fv_m}$

Where v_m= venkob's constant & its value = 1.987×10^{-25} Jm

Like this energy and force both related to each other. According to newton's first law "Everybody or particle continues to be in its state of rest or of uniform motion unless compelled by some external force to act on it". Then the total energy of that partial will remain same but if body or particle gets accelerates then there is a net external force on the body & due to this external force the particle gains energy because

2α

according to this theory E F this is not only in Newtonian force this can be seen in electrostatic force of attraction or repulsion & magnetic force between particle. Within quantum field theory(qft) the energy of a particle depends on its interaction with other particles. Such an interaction is a quantum mechanical generalization of a classical force and albert the classical and quantum cases share certain features there are crucial differences. To describe the four fundamental forces use have two theories general relativity which is a theory of gravitation (GR) and the standard model of particle physics(sm) which is a theory of electromagnetic,strong and weak interactions classical force laws (coulomb, newton) arise as low energy limits of these non-classical theories. The standard model (sm) is formulated in the framework of quantum field theory (QFT) and as such one describes particle in terms of fields. The energy and force of the particle depends on the presence of other fields. The concept of force is generalized in such a way that one now talks about particle decay particles decay into others according to certain laws with a certain probability that can be calculated.

***Applications:-**

This theory is applicable whenever a particle gets accelerated experiences a net external force then we can find easily how much energy gained ley that particle due to the force exerted on it. This theory is applicable to all forces. i.e. coulomb's force, magnetic force etc.… In coulombic force, electrostatic force the charged particle exerts force on each other's whether it may be attractive or repulsive force. Coulomb said that there is a force of attraction & repulsion between particles due to their charges. Like charges repulse & unlike charges particle. It gains energy due to force experienced by another particle whether it may be attractive or repulsive. We know that in a metal conductor electrons suffer collisions with the heavy ions.But after collision, they experiences same speed & same energy because of electric force experienced ley them. When some potential difference is applied across the two ends of a metal conductor an electric field is set up inside the conductor. Under the influence of electric field, each free electron experiences a force of
F= qe then according to this theory the energy gained by the fee e equal to

E/v_m=qe

Where V_m= venkob's constant.
E=qe Vm

The electrons in metal conductor suffer frequent collisions against the fixed ions and lose their energy After each collision the electrons are again gained the energy due to the force which is equal to QE and again lose the gained energy in the next collision Of particles experiences magnetic force which is equal to F= QVB then also particle gains energy due to this force I.e. F =qVB according to theory

$\mathbf{E/v_m = qvB}$

E=qvBVm
Where V_m= venkob's constant.

We can apply it in nuclear reactions also when a particle get bombarded with high speed or we accelerated them they gains energy due to the external force (F=ma) & collides with nucleus with sufficient energy. when it collides with a force then they releasing of energy it force is more energy is more if force is less, energy also less because $E^{2\alpha}$ F

When we accelerated the particles in cyclostome they experience the force (F=ma) and hence they gained energy due to that force In secondary emission also we can use their theory. Some examples and values are given below.

Force exerted on particle F in (N)	**0.5×10^{25}**	**5.52×10^{-13}**	**3.2×10^{-14}**	**9×10^{-5}**	**1**	**5×10^{5}**
Energy gained by the particle E in (J)	**1**	**3.313×10^{-19}**	**7.97×10^{-20}**	**4.22×10^{-15}**	**4.45×10^{-13}**	**3.15×10^{-10}**

This can be applied in nuclear force and binding energy concept i.e square of the binding i.e square of the binding energy is directly proportional to nuclear force $(B.E)^2$ α Nuclear force

III. Conclusion

This theory is mainly based on the studies of Einstein's mass-energy equivalence theory, Newton's laws of motion. De- Broglie hypothesis is & plank theory and force. i.e. how energy is depends upon force. how the energy gains due to force etc..... energy is converted into many forms. Force is responsible for that. i.e if body in rest then its energy (according to Einstein) $E= mc^2$, when we apply force on it then its energy will be $E^2=FV$;V=Venkob's constant. That energy transfers into many forms. Finally it shows that energy and force are directly related to each other.

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