PRESSURE = (11/14) FORCE /AREA

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ABSTRACT :

Pressure is the force applied perpendicular to the surface of an object per unit area over which that force is distributed.

Force is an external effort in the form of push or pull, which produces or tries to produce motion in a body at rest or which stops or tries to stop a moving body, or which changes or tries to change the direction of motion of the body.

Rotation is motion and motion is rotation.

Rotation is the simultaneous motion on the vertical cycloid path as well as the horizontal straight line path. So this type of motion is the wave motion. Every point of a wheel moves vertically in a curved path to cover horizontally on a straight line path in a rotation . So every point of a body is a particle, which moves on a wave path.

If a force is applied on a wheel and that force simultaneously converts to the centripetal force as well as the centrifugal force then the wheel moves forward to cover some distance. So every point of the wheel moves vertically in a cycloid path by the centripetal force to cover horizontally on a straight line path by the centrifugal force.

The following laws are derived from the above fact as follows ,

LAW OF MOTION   ---------------------- Nrusingh's 1st law

(a) INERTIA OF REST : A body is at rest, until the applied force on it , converts to the centripetal force as well as the centrifugal force .

(b) INERTIA OF MOTION : A body is at motion, as long as the applied force on it , converts to the centripetal force as well as the centrifugal force .

The following law is derived from **Nrusingh's 1st law**

" THE FORCE OF ACTION IS ALWAYS EQUAL TO THE

SUM OF OPPOSITE REACTION AND ABSORPTION "   ---------- Nrusingh's 2nd law

This implies that

"**14** PARTS ACTION = 11 PARTS REACTION + 3 PARTS ABSORPTION "

i.e.   1 part action = (11/14) part reaction + (3/14) part absorption

The following law is derived from   **Nrusingh's   2nd law**

LAW :   THE ACCELERATION OF A BODY IS DIRECTLY PROPORTIONAL TO THE RESULTANT FORCE AND INVERSELY PROPORTIONAL TO ITS MASS .

Force = (11/14) mass * acceleration   -------- **Nrusingh's 3rd law**

The following laws are derived from **Nrusingh's 3rd law**

ENERGY = (11/14) MASS * (VELOCITY OF LIGHT)^2 ----- **Nrusingh's 4th law**

PRESSURE * VOLUME = (11/14) TEMPERATURE ------------ Nrusingh's   5th law
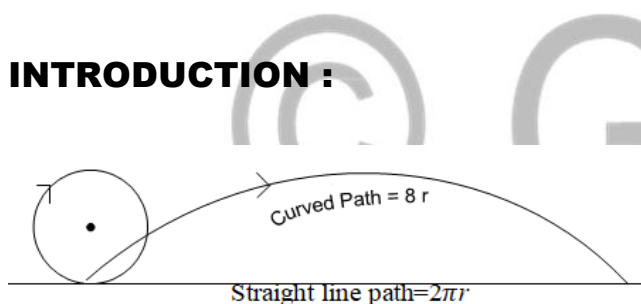
PRESSURE = (11/14) FORCE / AREA

where   **(11/14)   is the constant of proportionality**

KEY WORDS :

Pressure, Force, Area, Acceleration, Mass, Constant of proportionality, Absorption, Action, Reaction, Centripetal force ,Centrifugal force, Cycloid path and Straight line path.

INTRODUCTION :

Curved Path = 8 r

Straight line path=$2\pi r$

When a force is applied to a wheel so that the force is converted to centripetal force as well as centrifugal force then every point of the wheel moves vertically 8r length on a cycloid path by the centripetal force and Simultaneously the same point covers 2π r length horizontally on a straight line path by the centrifugal force.

Suppose s_1= length of the cycloid path and s_2 = length of the straight line path

So $s_1 = 8$ r and $s_2 = 2 \pi$ r

Here $8r > 2\pi r \implies s_1 > s_2$

Suppose v_1= Velocity of any point on the cycloid path $= \frac{ds_1}{dt}$

And $v_2 =$ Velocity of the same point on the straight line path $= \frac{ds_2}{dt}$

As $s_1 > s_2 \implies \frac{ds_1}{dt} > \frac{ds_2}{dt}$

So $v_1 > v_2 \implies mv_1 > mv_2$

$\implies m\frac{dv_1}{dt} > m\frac{dv_2}{dt} \implies ma_1 > ma_2$

$Hence \quad F_1 > F_2$

where $\frac{dv_1}{dt} = a_1$, $\frac{dv_2}{dt} = a_2$

$F_1 = ma_1$ and $F_2 = ma_2$

The magnitude of the centripetal force is equal to the magnitude of the centrifugal force.

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But $F_1 > F_2$

$\Rightarrow F_1 = F_2 +$ SOME ABSORBED FORCE

Here $F_1 =$ CENTRIPETAL FORCE

And $F_2 +$ SOME ABSORBED FORCE

$=$ CENTRIFUGAL FORCE

Now $F_1 = F_2 +$ SOME ABSORBED FORCE

$\Rightarrow$ ACTION FORCE $=$ REACTION FORCE

$+$ ABSORPTION FORCE

So ACTION $=$ REACTION + ABSORPTION

SUBJECT MATTER :

If a force is applied to a wheel so that the force is converted to centripetal force as well as centrifugal force , then every point of the wheel moves vertically **8r length** in a cycloid path by the centripetal force and simultaneously that same point covers $2\pi r$ **length** horizontally on a straight line path by the centrifugal force.

Hence $F_1 : F_2 =$

ACTION OF CENTRIPETAL FORCE :

REACTION OF CENTRIFUGAL FORCE

So $F_1 : F_2 = 8r : 2\pi r = 8 : 2\pi$

$= 8 : (2 * 22/7) = (8 * 7/7) : (2 * 22/7)$

$= 56/7 : 44/7 = 56 : 44 = 14 : 11$

This implies that,

" TO EVERY 14 PARTS OF ACTION , THERE IS 11 PARTS OF REACTION "

The magnitude of the centripetal force is equal to the magnitude of the centrifugal force. So each one of centripetal force as well as the centrifugal force must do equal amount of work ,

But here centripetal force does more work than the centrifugal force .

This implies that some amount of centrifugal force is absorbed on the road .

This implies that

14 PARTS ACTION = 11 PARTS REACTION + 3 PARTS ABSORPTION

Force is an external effort in the form of push or pull .

The law of force states that ,

THE ACCELERATION OF A BODY IS DIRECTLY PROPORTIONAL TO THE RESULTANT FORCE AND INVERSELY PROPORTIONAL TO ITS MASS

Suppose F = Resultant force , which makes the body to move ,

m = mass of the body and

a = acceleration of the body .

Mathematically , the above law can be expressed in the following two ways

(i) The acceleration of the body is directly proportional to the resultant Force

i.e. $a \propto F$ ----------------(1)

(ii) **The acceleration of the body is inversely proportional to its mass**

i.e. $a \propto (1/m)$ -----------------(2)

Combining the above two equations (1) and (2) , It is obvious that

The acceleration of the body is directly proportional to (Force / mass)

i.e. **a** ∝ **F** * **(1 / m) = (F / m)**

Its converse is also true

So **(Force / mass) is directly proportional to acceleration of the body i.e. (F / m) ∝ a**

This implies that ,

Force is directly proportional to (mass * acceleration)

i.e. **F** ∝ **(m * a)**

But **F** ∝ **(m * a)**

So **Force = k (mass * acceleration)**

----------------(3)

where k = Constant of proportionality

14 PARTS ACTION = 11 PARTS REACTION + 3 PARTS ABSORPTION

So **1 part action = (11/14) part reaction + (3/14) part absorption**

It is obvious that

The magnitude of 1 part of the centripetal force = The magnitude of 1 part of the centrifugal force

The above fact implies that ,

1 part of the centripetal force = (11/14) part of the centrifugal force used for motion + (3/14) part of the centrifugal force used for absorption .

Hence, when 1 part of the force is apllied to a wheel then the wheel moves by the (11/14) part of that force and simultaneously the rest (3/14) part of the force is absorbed on the road . The road absorbs (3/14) part of the force from,

The wheel means the wheel emits (3/14) part of the force out of 1 part of the applied force .

The above fact implies that, when any body works by 14 parts of the force simultaneously it emits 3 parts of the force out of that .

So **Emission of some force by a body = Absorption of same force by other body**

The above fact implies that ,

When 1 part of a force is applied to a wheel , then only (11/14) part of that force is used for the motion purpose and simultaneously the rest (3/14) part of that force is emitted by the wheel to the medium .

So the wheel moves by the (11/14) part of the applied force and simultaneously the rest (3/14) part of that force is absorbed by the medium .

If 1 part of a force is used then the **work is done by only (11/14) part of that force** and simultaneously the rest (3/14) part of the force is absorbed by the medium .

So for the working purpose of the force,

The **Constant of proportionality is k and the value of k = (11 / 14)**

But **Force = k (mass * acceleration)**

Putting the value of k = (11/14) in the equation (3)

Force = k (mass * acceleration)

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It is obtained that ,

Hence **F = (11/14) m * a**

    = **Resultant Force** ----------------(4)

The force per unit area makes the pressure. So **Pressure = Force / Area**

As force makes the pressure, So the value of equation (4) is used for the resultant pressure purpose .

This implies that ,

The force F = (11/14) m * a makes the resultant pressure ,

and the force F = (3/14) m * a makes the absorbing pressure .

Since

1 part action = (11/14) part reaction

+ (3/14) part absorption

=>**1 part action force = (11/14) part reaction force + (3/14) part absorption force** ------------------- **(5)**

  =>1 Action force – (3/14)Absorption force

          =(11/14)Reaction force

Hence dividing the equation (5) by the unit Area , It is obtained that

1 part (action force/Area) - (3/14) part (absorption force/Area) = (11/14)part (reaction force /Area)

 => **1 part action pressure - (3/14) part absorption pressure = (11/14) part reaction pressure**

So (11/14) part of the pressure is the working pressure ,

Out of 1 part of the pressure and the rest (3/14) part of the pressure is the absorbing pressure .

It is obtained that

Hence **(Resultant Force / Area)**

  = **(11/14)(mass * acceleration)/Area**

=> **Resultant Pressure**

   = **(11/14) Force/Area**

=> **Pressure = (11/14) Force/Area**

                ------------------ **(6)**

CONCLUSION :

It is obvious that ,

(11/14) part of the pressure is obtained out of 1 part of the pressure, If (3/14) part of the pressure is absorbed in the surrounding. This is the actual pressure, which works as the resultant pressure .

Hence **Pressure =**

(11/14)(mass*acceleration)/Area

= (11/14) Force/Area

=> **Pressure = (11/14) Force/Area**

Nrusingh's 5th law states that

PRESSURE * VOLUME

      = (11/14) TEMPERATURE

Hence this law is also valid for the fluid. The pressure, the temperature and the volume can be derived from the following law , **PRESSURE * VOLUME**

      = (11/14) TEMPERATURE

=>TEMPERATURE

= (14/11) PRESSURE * VOLUME

=>VOLUME

= (11/14) TEMPERATURE/ PRESSURE

=> PRESSURE =

(11/14) TEMPERATURE / VOLUME

-----------------------(7)

Combining the equations (6) and (7),

It is obtain that and

PRESSURE =

(11/14) TEMPERATURE / VOLUME

and Pressure =(11/14) Force/Area

=> (11/14) TEMPERATURE / VOLUME

= (11/14) Force/Area

=> TEMPERATURE / VOLUME

= Force/Area

=> Temperature * Area

= Force * Volume

=> Temperature =

Force * (Volume/Area)

=>Temperature = Force * distance

Since   (Volume / Area) = distance

(Volume / Area) is a distance in any

axis of X or Y or Z .

Because   Area = Length*Breadth ,

Volume =(Length*Breadth)*Height

= Area * Height

And Height is a distance in any axis of X

or Y or Z . Hence

Temperature = Force*distance

=>   Temperature = Work done

= Energy

Since Force * distance = Work done

And   Work done = Energy

So Temperature = Energy

Temperature is a type of energy associated with motion .Temperature is a measure of the average kinetic energy of the particles in an object .

It is obvious that

Temperature = Energy

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