AXIAL FLOW COMPRESSOR

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REFLECTION TASK

- The reason for rise in velocity in rotor blade of axial flow compressor

  a. Pressure energy converted into kinetic energy

  b. rotational motion of rotor raises the kinetic energy

  c. the momentum of flow increases kinetic energy

  d. skin friction, drag increases kinetic energy.

- **The answer is**

  b. rotational motion of rotor raises the kinetic energy

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1. The isentropic efficiency of axial flow compressor stage is higher than machine isentropic efficiency for the reason of

a. The inlet temperature per stage keeps on raising which is responsible for rise in stage temperature

b. the pressure ratio keeps on raising per stage raises the stage efficiency

c. The isentropic compression temperature difference is more due to divergence of pressure line causes the rise in stage efficiency

d. none of the above

Ans- c. The isentropic compression temperature difference is more due to divergence of pressure line causes the rise in stage efficiency

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2. The stagnation temperature of axial flow compressor is higher than static temperature for the reason

a. The velocity of the fluid reduces to zero causing rise in pressure and temperature.

b. The skin friction and eddies causes rise in total temperature

c. the decrease in density causes the rise in temperature

d. none of the above

Ans: a. The velocity of the fluid reduces to zero causing rise in pressure and temperature.

Thank you