



# *Steam turbine*

**produced by: Korynenko Mykyta,  
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# Summary

- What is the turbine?
- What is the principle of steam turbine?
- Types of steam turbines.

# Principle of steam turbine:

- The steam energy is converted mechanical work by expansion through the turbine.
- Expansion takes place through a series of fixed blades(nozzles) and moving blades.
- In each row fixed blade and moving blade are called stage.



# What exactly is the turbine?

Turbine is an engine that converts energy of fluid into mechanical energy

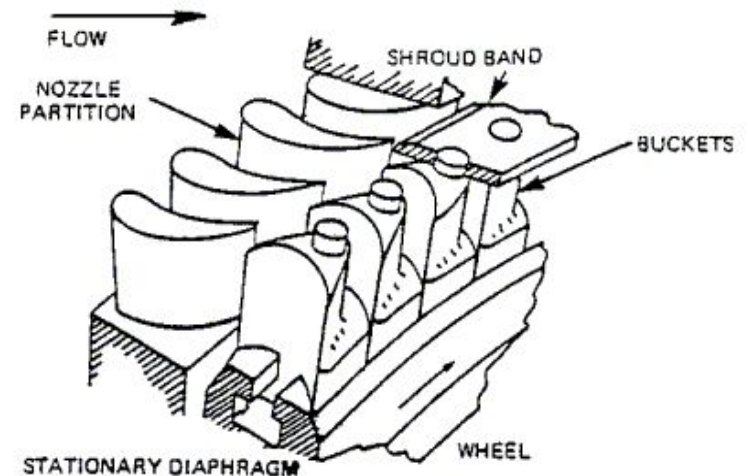
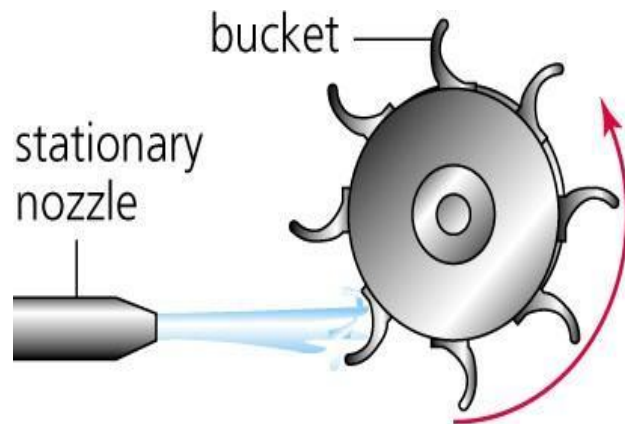
The steam turbine is steam driven rotary engine.



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# Types of steam turbine:

- There are two main types
  1. Impulse steam turbine
  2. Reaction steam turbine



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# Impulse steam turbine:

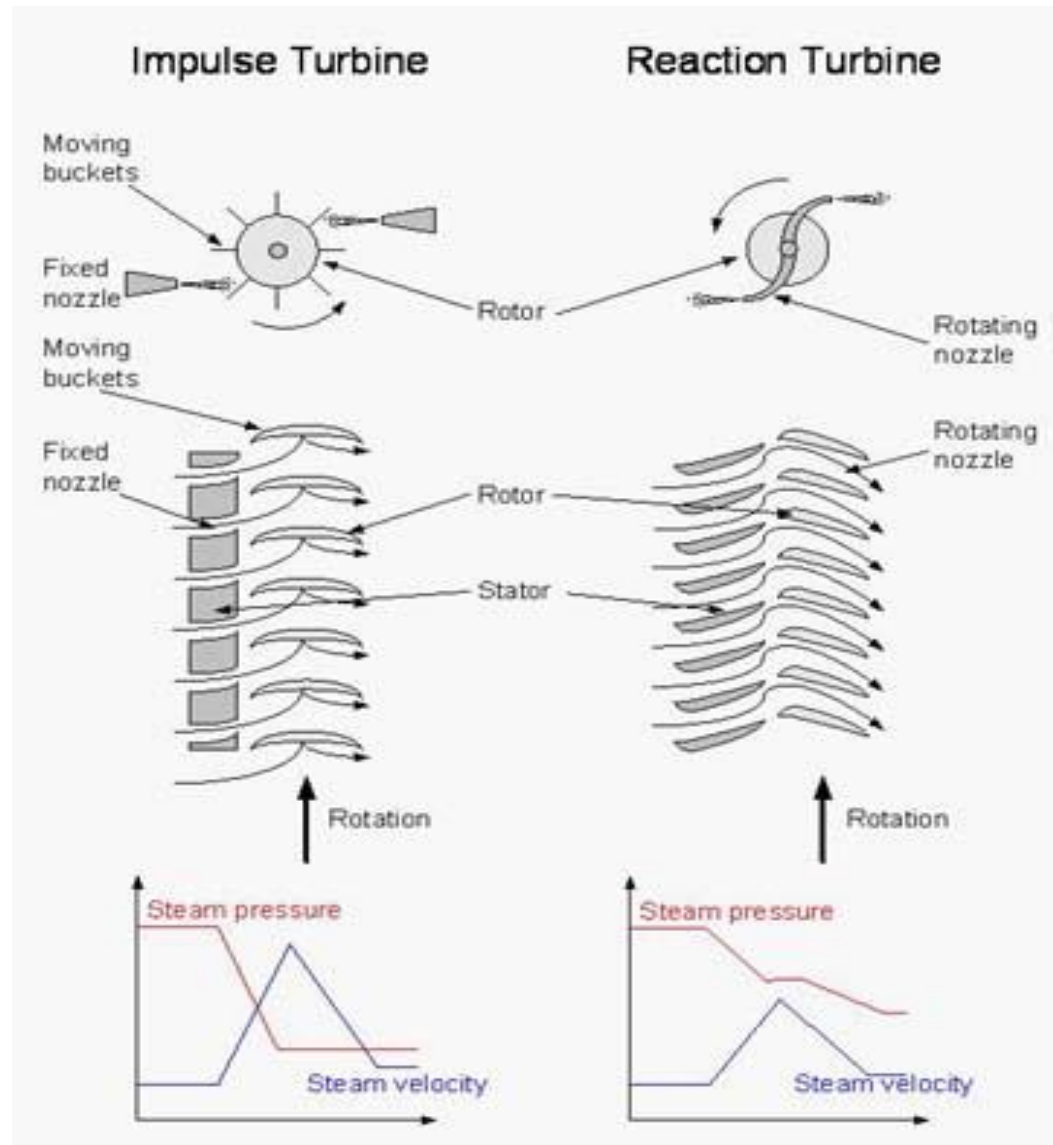
- The basic idea of an impulse turbine is that a jet of steam from a fixed nozzle pushes against the rotor blades and impels them forward.
- The velocity of steam is twice as fast as the velocity of blade.
- Pressure drops take place in the fixed blade (nozzle).

# Reaction steam turbine:

- A reaction turbine utilizes a jet of steam that flows from a nozzle on the rotor.
- Actually, the steam is directed into the moving blades by fixed blades designed to expand the steam.
- The result is a small increase in velocity over that of the moving blades.



# Comparative diagram:



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# Tandem-compound



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# Cross-compound



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*Thank you*

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