



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Activity Supports Employability/Entrepreneurship/Skill Development

Course Code : 15UEE504
Course Name : Electrical Machine Design
Academic Year : 2020 – 2021 (ODD) Class : III Year

Category	Employability
Activity	Videos for Electrical Machine Design
Topic	Design of turbo alternator and design of tank

TURBO ALTERNATOR

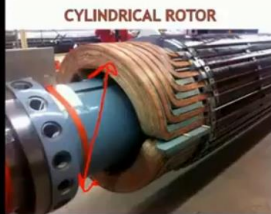
High Speed → No. of poles & Coils ↓

$\downarrow P = \frac{120f}{N \cdot \phi}$


Diameter of rotor ↓

Cylindrical Rotor → Salient pole → Coils may get damage at high force due to high speed

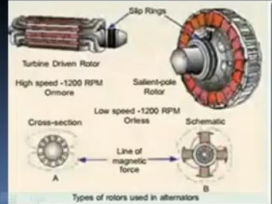
Flux /pole : $\Phi_m = (2 * B_m * D * l) / P$



CYLINDRICAL ROTOR



Axial Length



Types of rotors used in alternators

Design of Turbo Alternator

Outcome In the last century, electrical machines have been the subject of a huge development. New concepts in design and control allow expanding their applications in different fields. These are considered as important components in many industrial applications as: power systems, manufactories, power plants, electrical vehicles, and home appliances. These new concepts help to increase the employability of the students.

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HoD/EEE