



SNS COLLEGE OF TECHNOLOGY



(An Autonomous Institution)

COIMBATORE-35

Accredited by NBA-AICTE and Accredited by NAAC – UGC with A++ Grade

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UNIT III: SPEED GOVERNING AND AUTOMATIC GENERATION

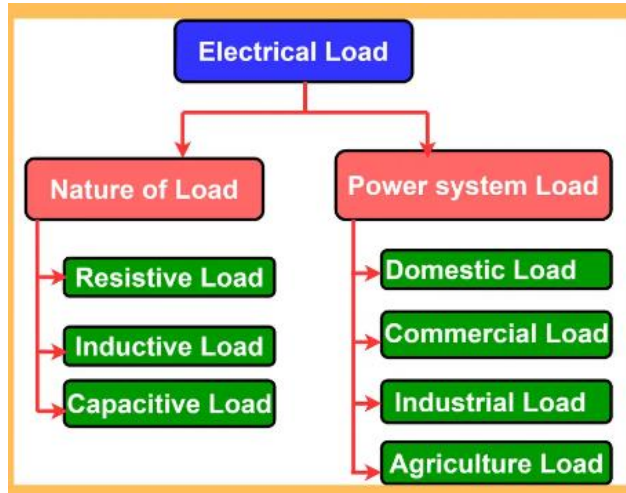
TOPIC: **SPEED-LOAD CHARACTERISTICS**





TOPIC OUTLINE

- INTRODUCTION
- TYPES OF LOAD
- LOAD CURVE
- LOAD DURATION CURVE
- COMPARISON





Nature of Load

- System load varies continuously with time
- Significant changes from hour to hour, day to day, month to month and year to year

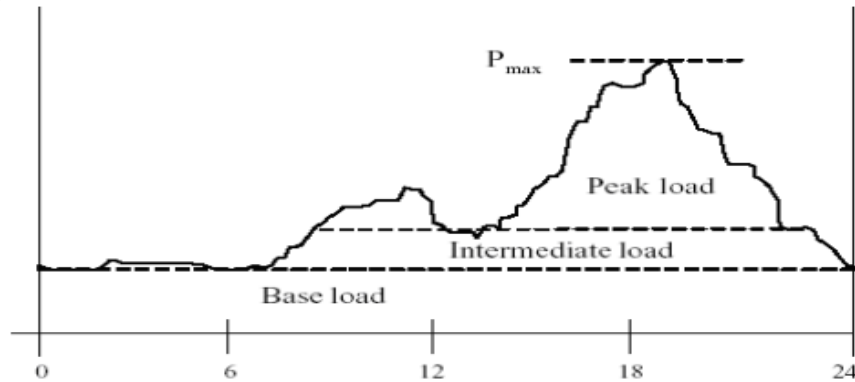
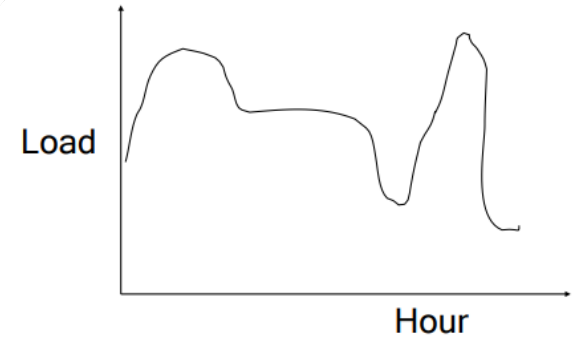


Fig 1. Daily load curve





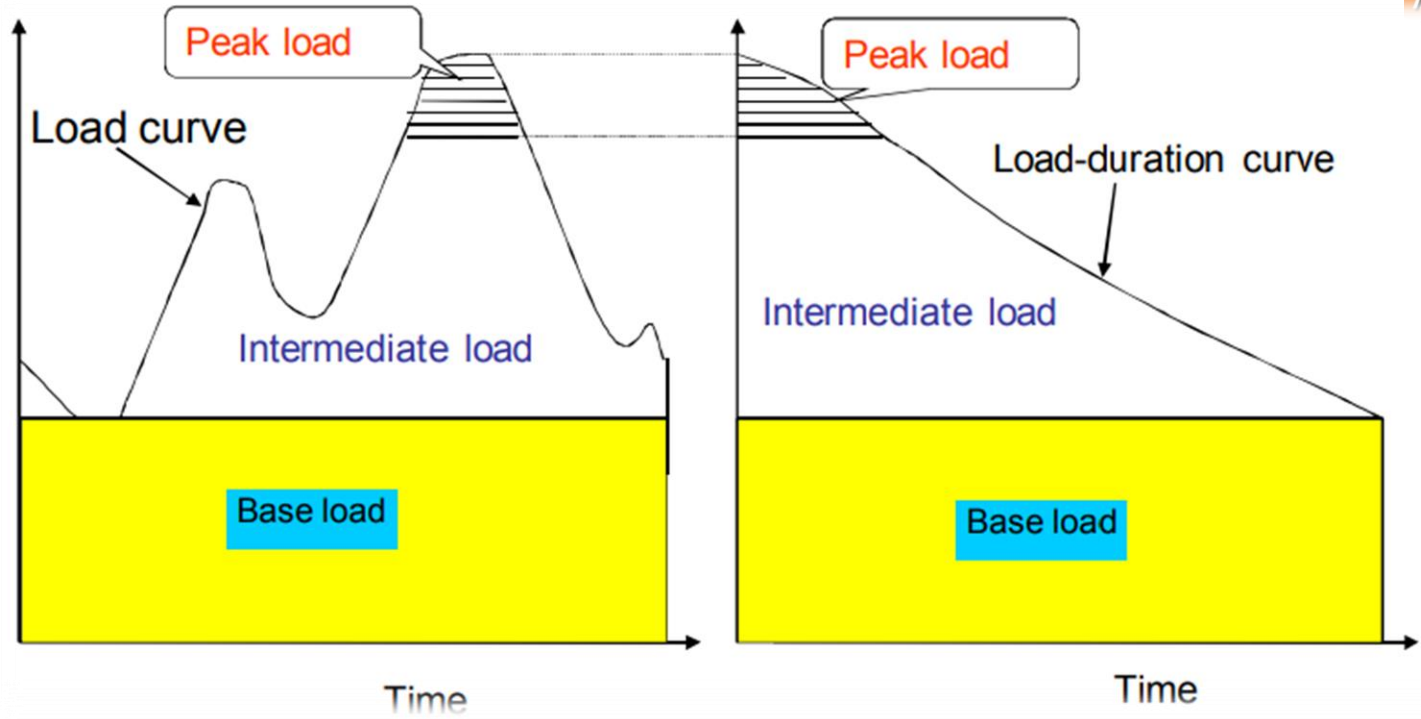
Load Types

The areas under the load curve and load duration curve are equal and each represents the total units consumed during a day of 24 hours. The load – duration curves can be daily, weekly, monthly and annual. Sometimes the plots are done in per unit values.

The total load supplied by a generating station is normally divided into three parts:

- **Base load**
- **Intermediate load**
- **Peak load**

The base load is the load below which the demand never falls and is supplied 100% of the time. The peak load occurs for about 15% of the time. The intermediate load represents the remaining load region in the load curve. These types of loads are shown in the next figure.

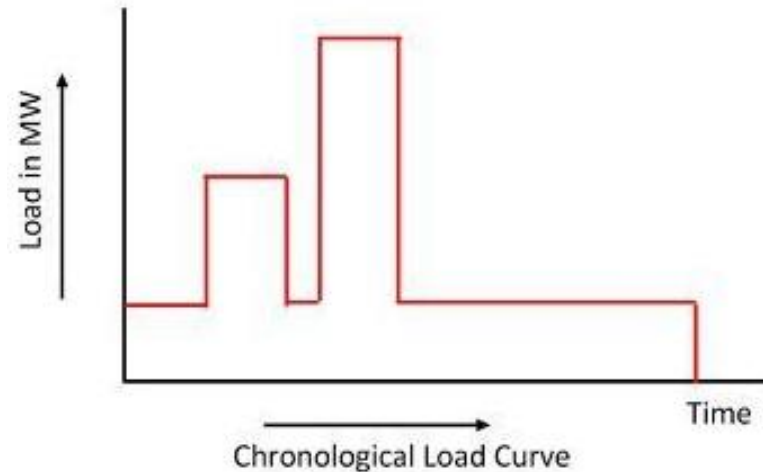




Load-Duration Curve

The daily load curve shows the variations of load on the power station during different hours of the day. The area under the daily load curve gives the number of units generated in the day.

Generation companies use this information to plan how much power they will need to generate at any given time.



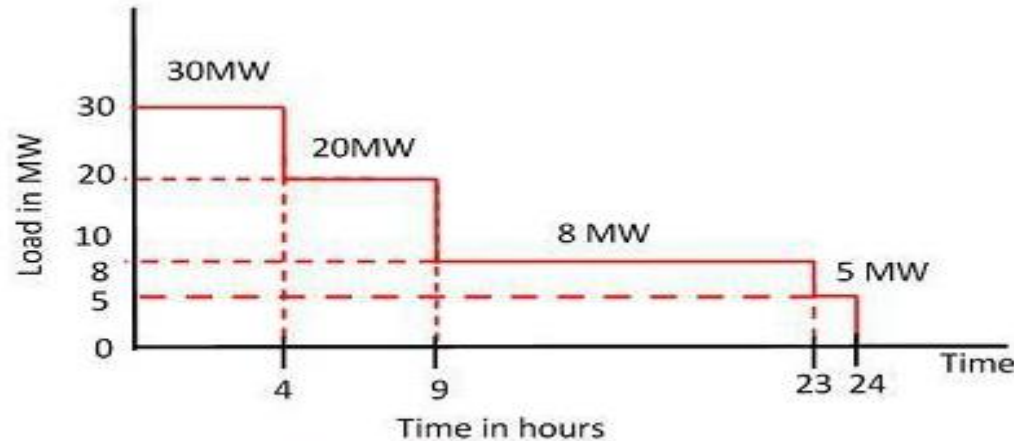
Ideal Load Curve

Circuit Globe



Load Duration Curve

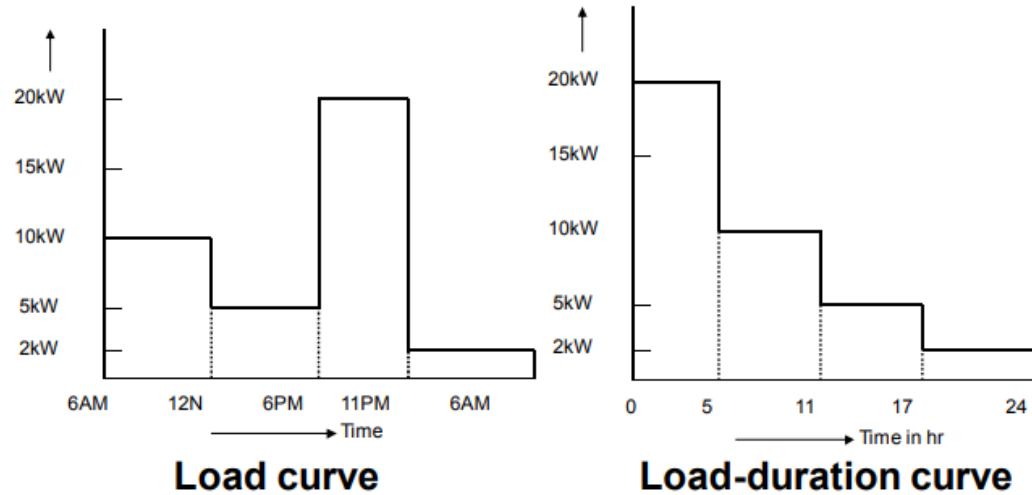
The load duration curve is constructed using the daily load curve. The area under the load duration curve represents the total energy generated by the utility's generating system in the considered period. It indicates the number of hours for which the particular load lasts during a day.



Load Duration Curve

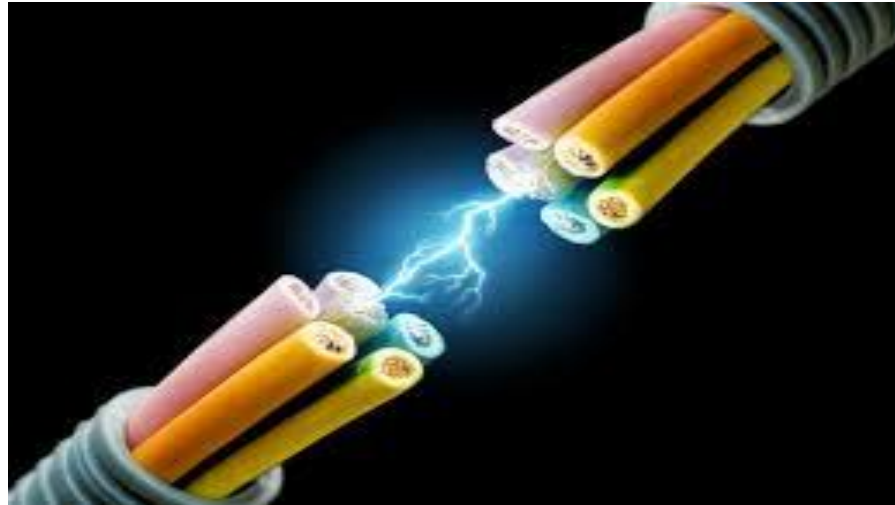


LOAD CURVE AND LOAD DURATION CURVE





RECAP...



...THANK YOU

