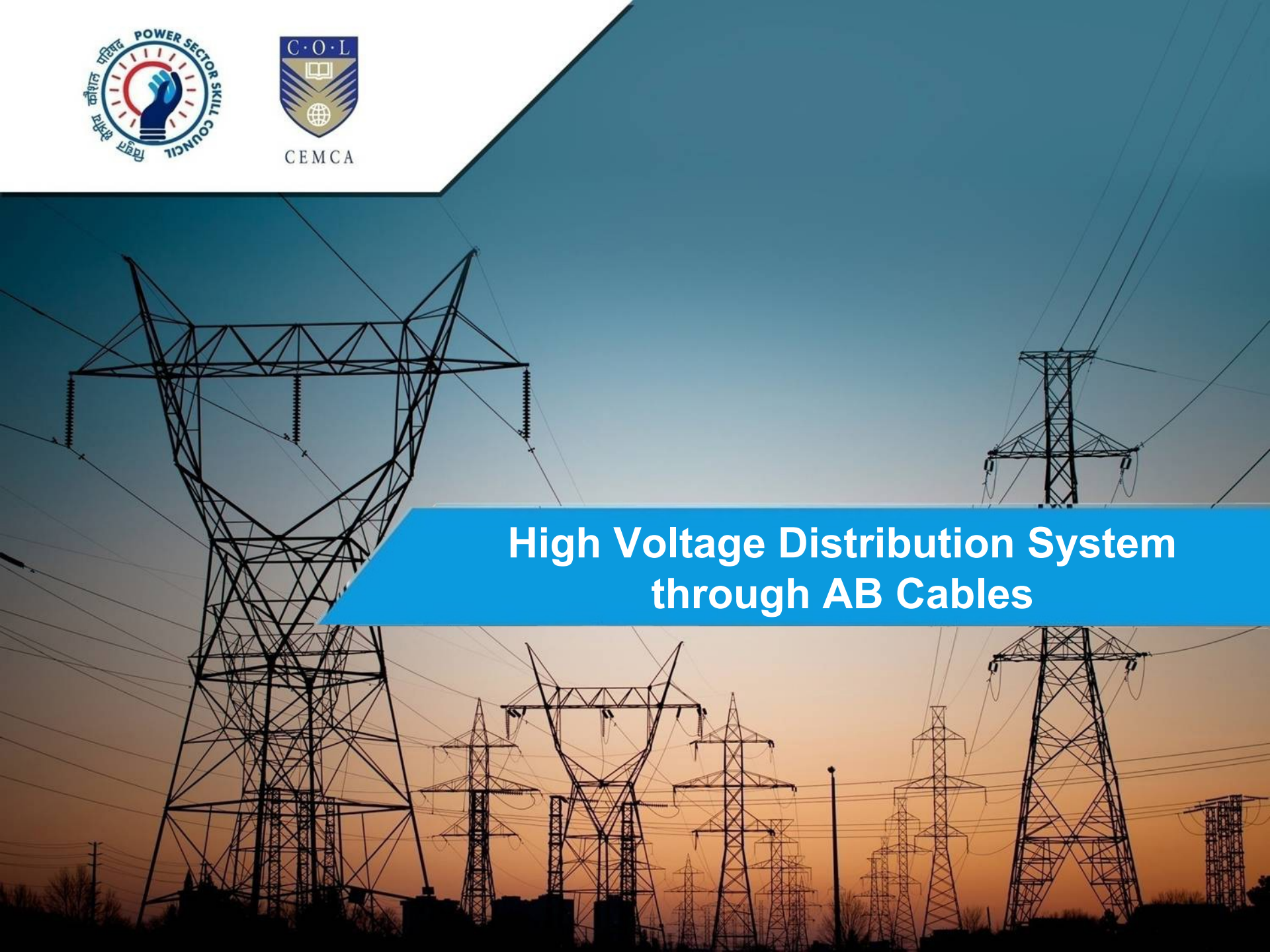


High Voltage Distribution System through AB Cables

Learning Objective

By the end of this session, you will be able to:

- Explain the installation and important components of a High Voltage Distribution System

Open House Discussion

- What do you mean by HVDS?
- Where can we use HVDS?

Benefits of High Voltage Distribution System

The benefits of a HVDS system are:

- It has high reliability as there are no bare conductors
- Number of faults is small compared to bare conductor lines
- Technical losses are low
- No theft is possible at 11000-voltage lines

Provision of Electricity Supply From HVDS

High Voltage Distribution System

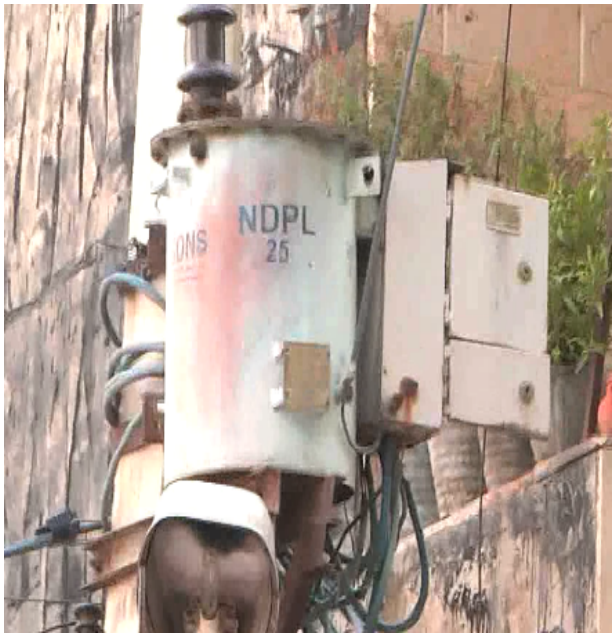
HVDS in Front of Houses

From each HVDS transformer, service connections can be given to at least 5 houses.

Provision of Electricity Supply From HVDS

Single Phase HT Line

Lightning Arrestor



DD Fuse

HVDS system provides consumers proper voltage.

High Voltage Distribution System

11,000 volts electricity distribution voltage is supplied through the Aerial Bunch Cable

High Voltage Distribution System

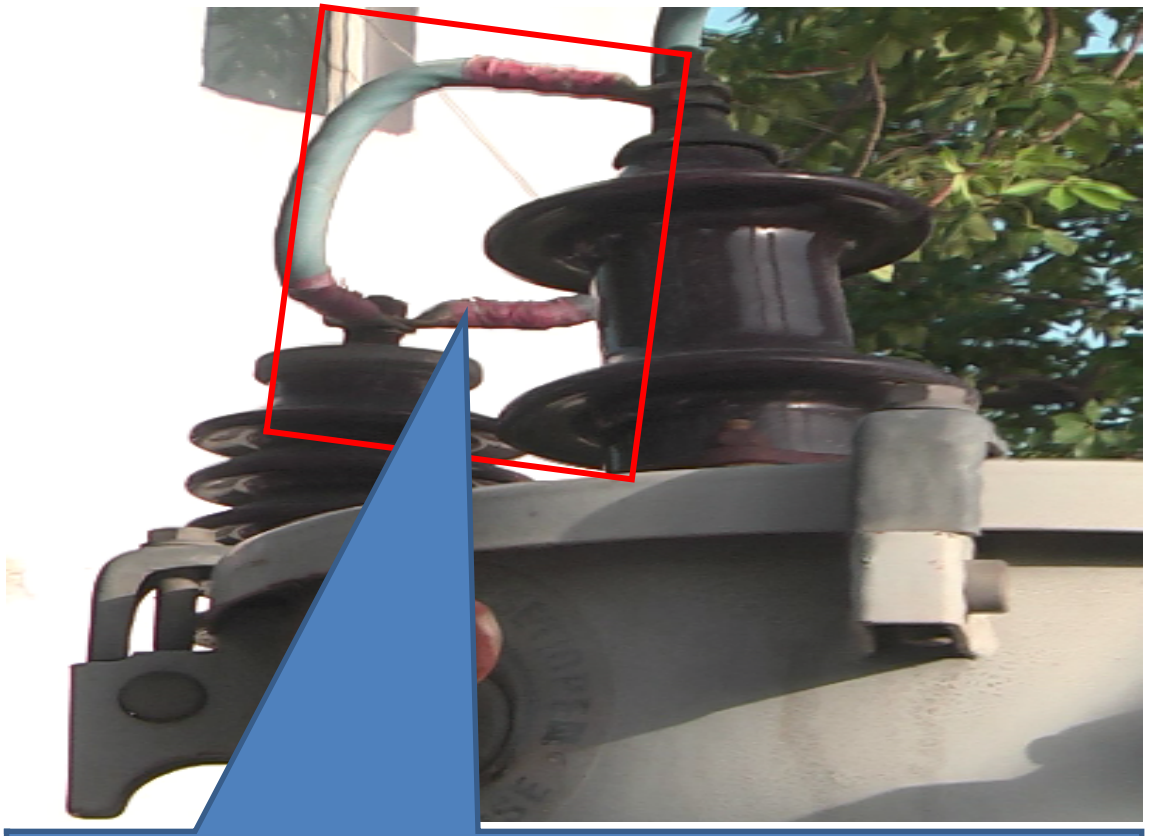
The distribution transformer is installed at the doorstep of the consumer for stepping down voltage to the usable level.

High Voltage Distribution System

Single Phase HT AB Cable

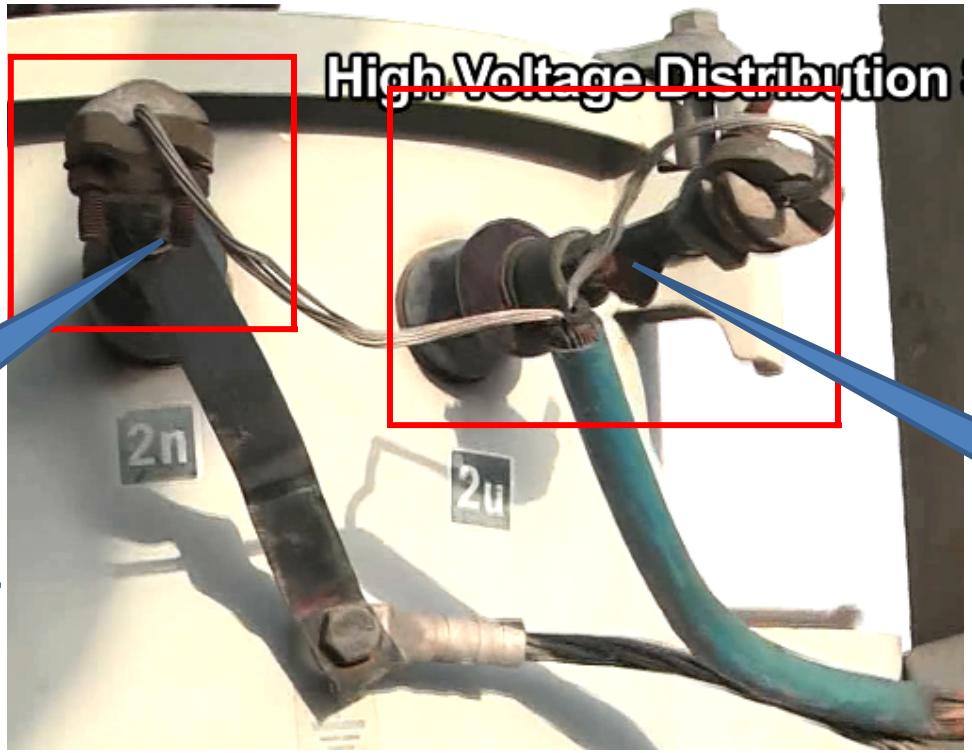
Lightning Arrestor

High Voltage Distribution System



Terminal point is connected through a DD fuse and distribution transformer's bushing and Lightening Arrester (LA)

High Voltage Distribution System



Neutral Terminal

Phase Terminal

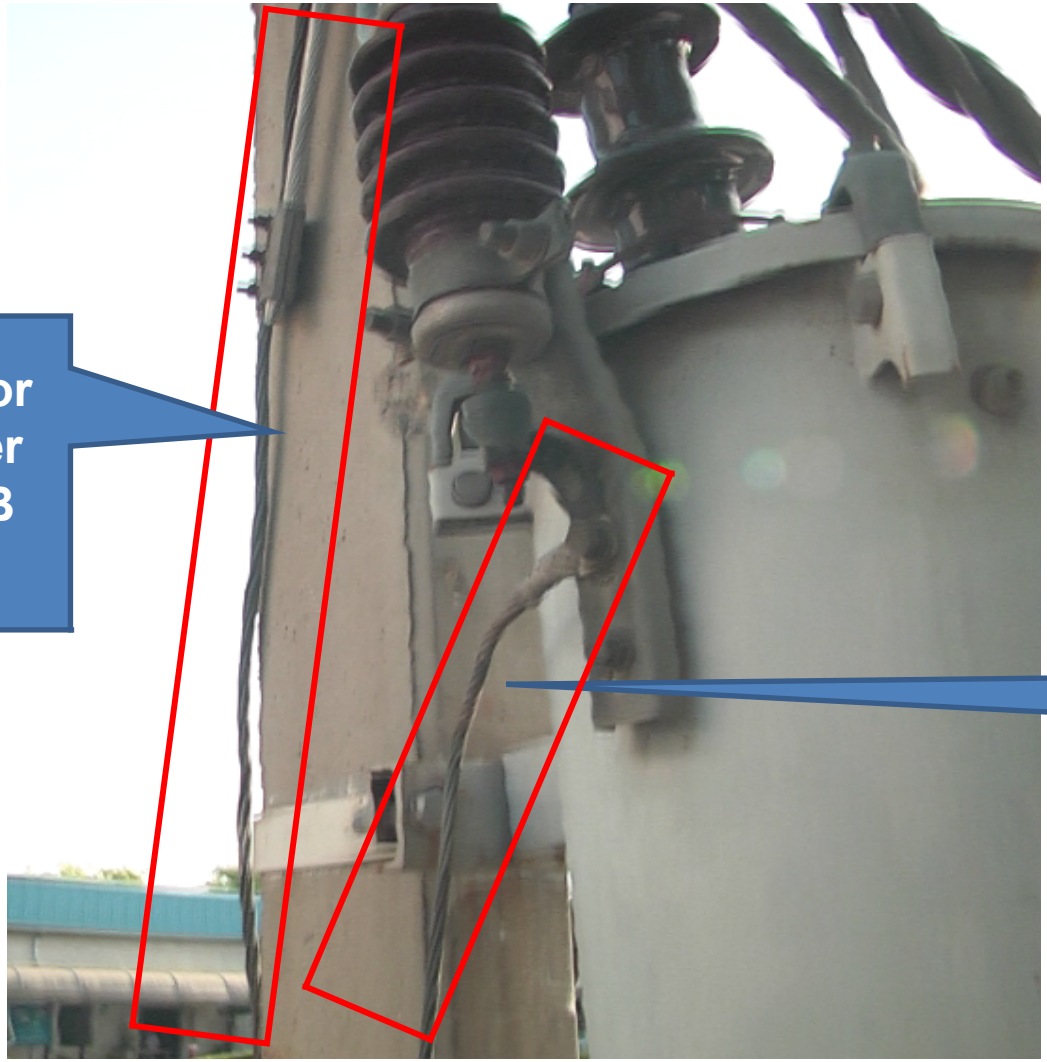
Two Terminals of Transformer

Neutral has an earthing connection.

High Voltage Distribution System

The connection, which goes from the phase terminal to the consumer's meter through the distribution box, is connected to the Distribution Board.

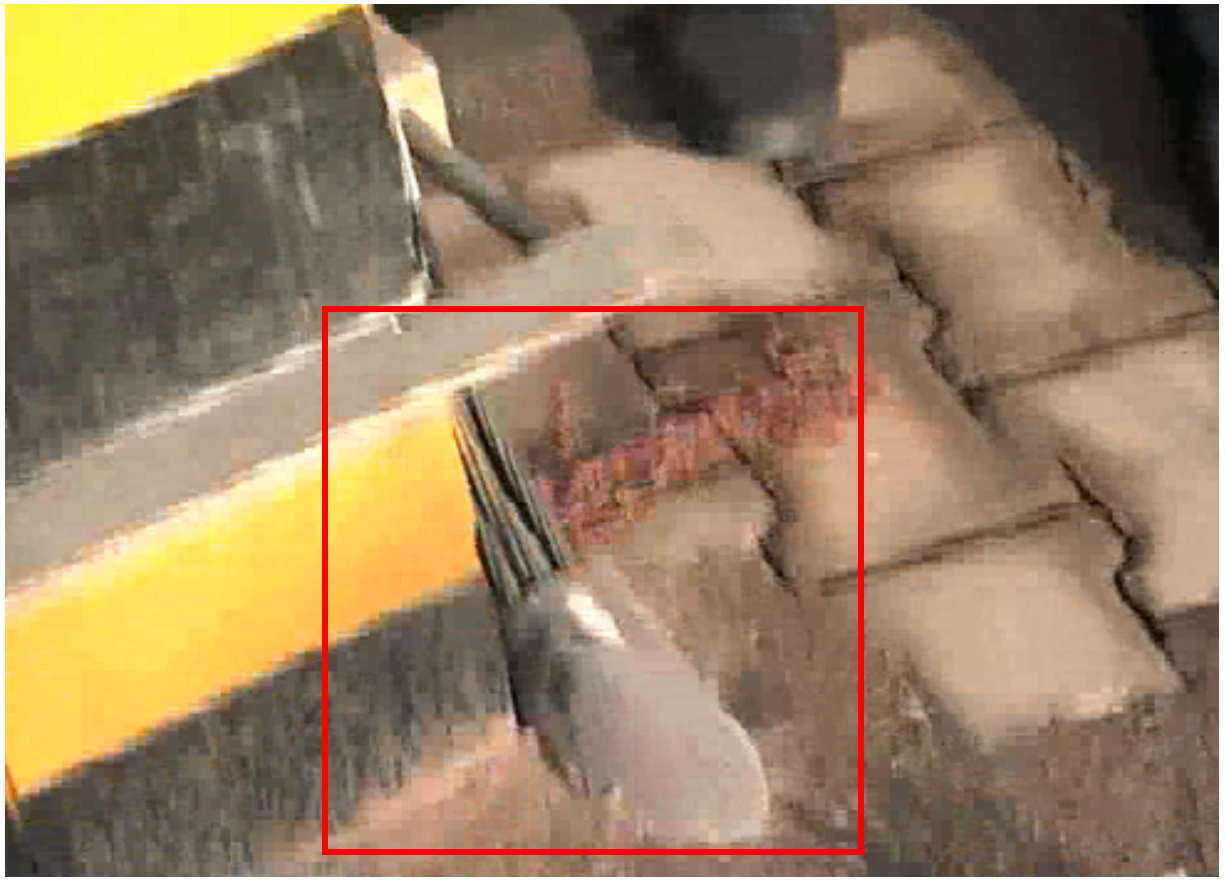
High Voltage Distribution System



Earthing for messenger wire of AB cable

LA earthing

High Voltage Distribution System



All earthing cables go into the earthing pit

Components of High Voltage Distribution System

Suspension Clamp

Installed on the messenger of Low Voltage ABC. It is used when there are small angle deviations between poles.

Components of High Voltage Distribution System

Anchoring Clamp

Installed on the messenger wire of HV ABC and for the dead end application.

Components of High Voltage Distribution System

Earthing in HVDS

Key Learning Outcomes

- HVDS is the short form of High Voltage Distribution System
- Each HVDS transformer can provide service connections to at least five houses
- Distribution transformer is installed at the doorstep of the consumer for stepping down the voltage to a usable level
- The components of HVDS include:
  - Suspension clamp
  - Anchoring clamp