OBJECTIVES:

a) CURING AND THERMAL BEHAVIOUR OF DGEBA IN THE PRESENCE OF DIORGANOTIN DICHLORIDES.

b) CURING AND THERMAL BEHAVIOUR OF DGEBA USING MIXTURE OF BIURET AND DDS.

c) CURING AND THERMAL BEHAVIOUR OF DGBT IN THE PRESENCE OF AROMATIC IMIDE-AMINES.

METHODOLOGY: Following are the methodologies that were used during the research work:

1. Literature survey was done to know the advancement, technology, significance, applications and progress in the field till today. From the extensive survey of literature it was found that no work was done on the curing of DGEBA with diorganotin chlorides and biuret and also DGBT with imide-amines.

2. The reaction were carried out to prepare the following imide-amines and diorganotin dichlorides by known methods:

![Chemical Structure](image)
Letters within the parenthesis represent the designation of aromatic imide-amines.

Where P = pyromellitic dianhydride, B = benzophenone 3,3', 4,4'-tetracarboxylic dianhydride S = diaminodiphenylsulphone, E = diaminodiphenylether, M = diaminodiphenylmethane

3. Curing of DGEBA was carried out with diorganotin dichlorides, biuret and that of DGBT with imide-amines with the help of Differential Scanning Calorimetry (DSC).
4. Thermal stability of DGEBA was carried out with diorganotin dichlorides, biuret and that of DGBT with imide-amine with the help of Thermo-gravimetric Analysis (TGA).

**WORK PLAN:**

1. Literature survey was done.
2. Preparation of diorganotin compounds was done according to literature methods.
3. Curing of DGEBA with diorganotin compounds was carried out using DSC technique.
4. Thermal study of cured DGEBA with diorganotin compounds was carried out using TGA technique.
5. Curing of DGEBA was carried out with Biuret and DDS using DSC technique.
6. Thermal study of cured DGEBA with biuret and DDS was carried out using TGA technique.
7. Preparation of various imide-amine was carried out according to literature methods.
8. Curing of DGBT with imide-amine was carried out using DSC technique.
9. Thermal study of cured polymer was carried out using TGA technique.