**Static electricity**

**Static electricity:**

If two surfaces come in close contact with each other, then charge is created due to friction between them. The produced charge remains enclosed and static in those surfaced. They cannot move from one place to another place. Here only charges are exchanged between two surfaces. This type of electricity is called static electricity.

**Formation of Static Electricity:**

Static electricity can be formed by various theories. Till now the following 5 theories are available:

1. **Two fluid theory**
2. **One fluid theory**
3. **Faraday’s theory**
4. **Lorentz theory**
5. **Modern theory.**

**Modern theory:**

According to this theory every atom has a positively charged nucleus and negatively charged electrons moving around nucleus. If the number of electrons increases the atom becomes negatively charged and I the number of electrons decreases the atom becomes positively charged.

**Problem caused by static electricity in textile:**

**Similar charge repel each other:**

a)    The filament in a charged warp will blow out away from one another.

b)   This causes difficulties in handling materials.

c)    There will be ballooning of a bundle of sliver.

d)   Cloth will not fold down neatly upon itself when it comes off a finishing machine.

**Different charge attracts each other:**

a)  Difficulties in the opening of the parachute.

b) Different parts of garments may be stick together.

**Attraction between charged particles & charged textile materials:**

a)    Roller lapping may occur.

b)   Dust, Dirt’s etc may be attracted by the textile material as a result materials become dirt.

c)    Soiling of cloth may occur.

d)   Fibers may stick to the earthed parts of the machine.

**Methods of minimizing static electricity:**

a) By increasing relative humidity of the atmosphere, static electricity can be minimized.

b) By using anti-static agent on the materials static problem may reduce.

c) By ear thing the metallic part of the machinery static electricity can be minimized.

d) By blending conductive materials with non conductive materials, static electricity can be minimized.

e) By using conducting liquids like emulsion, oil, friction between the materials ca be reduced as a result, static electricity will be minimize.