



SNS COLLEGE OF TECHNOLOGY



(An Autonomous Institution)



AGRICULTURAL PUMP INSTALLATION



Agricultural Pump Installation



- A number of accidents have occurred in agricultural installations due to leakage in the well water.

Extreme care should be taken in such installations to see that:

- Proper earthing is provided and at least one of the earth is continuous right up to the suppliers neutral.
- Proper type of protection should be provided.
- It is advisable to provide earth-leakage protection as well as required by rule 61 A.
- The work shall be carried out by only the trained persons.
- No one shall enter into the well without first switching off the supply to the Installation.



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- Sometimes to prevent the animals coming into the farm, the farmers charge the fencing artificially.
- In many of such cases the charged fencing has resulted in fatal accidents to human beings, sometimes involving the family members of farmer himself.
- Where electric fencing is to be used, this should be designed properly by using the services of experts.
- Such types of fencings are designed to scare away the animals by shocks which are not fatal



Agricultural Pump Installation



Purpose and Importance:

- Agricultural pumps are critical for irrigation, helping farmers provide a steady supply of water to crops.
- These pumps are commonly used to draw water from wells, ponds, rivers, or storage tanks and deliver it to fields through irrigation systems.



Agricultural Pump Installation

•Types of Pumps:

•**Centrifugal Pumps:** These are the most common for irrigation and operate by converting rotational energy into hydrodynamic energy.



•**Submersible Pumps:** Installed underwater, these pumps push water to the surface.

•**Turbine Pumps:** These pumps are useful for deep well installations where water levels are low.

•**Positive Displacement Pumps:** These are used when high pressure is needed for irrigation or when drawing water from long distances.



Agricultural Pump Installation

Installation Steps:

- **Site Selection:** The pump should be installed near a water source (e.g., a borewell or a river) to reduce the distance the water must travel.
- **Foundation Preparation:** A stable foundation is essential to minimize vibrations and prevent damage. Concrete slabs are often used for heavy-duty pumps.
- **Pump Setup:**
 - For submersible pumps, the pump is lowered into the well and connected to a power source.
 - For surface pumps, the pump is placed on the foundation, and suction





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Pump Testing and Commissioning:

Once installed, the pump is tested for operational efficiency, water flow rate, and pressure to ensure it meets the requirements of the irrigation system.

Monitoring: Post-installation, regular monitoring and maintenance are required to ensure the pump operates without issues, such as clogging or electrical faults.



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Safety Precautions:

- Ensure proper grounding of the pump to prevent electrical shocks.
- All connections should be checked for leaks to avoid water wastage and prevent damage to the pump and surrounding equipment.

Maintenance Considerations:

- Regular maintenance includes checking for wear and tear on pipes, valves, and pump parts.
- Electrical components need to be inspected for corrosion or insulation damage due to exposure to moisture.





THANK YOU