Water Proofing For Residential Building

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Abstract- **The building leaks through it's various components like exterior walls,roofing,foundation, basement and bathroom this causes adverse effect in the building like moldypdors, peeling paint, damp spors on walls, cracked walls, rust on furniture, efflorescence, etc. So the study on material and mathods of waterproofing is carried cut in this project.**

Index Terms- **concrete, Water Proofing, Water Proofing Chemical.**

1. INTRODUCTION

There is a wide history and background related to water proofing in a civil engineering a waterproofing is important topic. In many structure and many object related to civil engineering is depend upon a waterproofing and its method. In the history of waterproofing is ever wonder how long waterproofing has been around? Amazingly, it has been part of human dwelling construction for over 13.000 years, viewed by a number of people as the third oldest trade, behind only carpentry and masonry. It came about from the desire to protect our shelters from the elements. and not surprisingly, has seen vast improvements over the ages. The agrarian revolution saw' a decrease in small hunter-gatherers groups as many formed larger social units and "stayed put" in more permanent locations. This resulted in a more productive form of agriculture and excess grain from the harvests needed to be stored. and protected from moisture. Waterproofing was necessary· to prevent the produce fmm being spoilt. The Neolithic revolution. a few thousand years later. saw the rise of water transportation to allow exploration. fishing and trading. The primitive boatt were sealed with bitumen emulsion from the surface of peat bogs, ensuring they were waterproofed. The water proofing coating of roofing systems has traditionally been made of bituminous material and despite the existence of other waterproofing systems for decades, built-up and single-ply bituminous systems gill represent most roof waterproofing systems installed worldwide.[1]

2. LITRATURE REVIEW

Water Proofing:

successful waterproofing of concrete foundations prevents the degradation of environmental and health conditions and of building materials used in belowground stories and extends the service life of concrete constructions. However, despite the important role of waterproofing systems for concrete foundations and the fact that repairing them is either impractical or prohibitively expensive, there is very little useful information or discussion on membrane properties and the detailing required for a durable, watertight design. This paper presents a discussion of the requirements of waterproofing membranes and the auxiliary components used in waterproofing systems for concrete footings, mat-slabs, and pile foundations, along with a schematic representation of suggested systems and their detailing. Flexibility and mechanical resistance are particularly important and reasonably well-documented properties of buried waterproofing membranes, but knowledge of their long-term durability presently relies mostly on empirical data. The cost analysis of some of the suggested waterproofing systems revealed significant differences that, along with the other data presented, should aid building designers and contractors with the design and installation of effective waterproofing solutions for concrete foundations. [2]

Objective:

The present study was undertaken with the following objectives

- To identify common method of water proofing.
- To explore the practical on site application of water proofing.
- To understand the operation of water proofing.

3. METHODOLOGY

In this site generally two types of waterproofing methods is done , we most focus in sunk and slab waterproofing during our time period of projects and site situation.

-In sunk waterproofing there are two types:-

1. Single coat waterproofing
2. Double coat waterproofing

First explain singal coat waterproofing and after double coat waterproofing.

1.Singal coat waterproofing method:-

In single coat waterproofing of sunk first make a clean and dry surface to the waterproofing area than after it's verify by water store in the sunk 6 to 7 days .After clean and verify the area waterproofing process is to be continues first make mortar mix and also mix chemical is used on the rcc sunk within 3 to 4 inches and on its make arrangement of brick pieces as shown in below . And also focus of no leakage of water from drainage line ane water line which is throuht out from sunk as shown in fig. Than the water is storage on it to 4 to 5 day after the portion is dry and check by an engineer the sunk is pack by mortar mix. This kind is waterproofing is done.

Fig. 1 arrangement of brick pieces

2.Double coat waterproofing method:-

In double coat waterproofing of sunk first make a clean and dry surface to the waterproofing area than after it's verify by water store in the sunk 6 to 7 days .After clean and verify the area waterproofing process is to be continues first make mortar mix and also mix chemical is used on the rcc sunk within 3 to 4 inches and on its make arrangement of brick pieces as shown in below . And also focus of no leakage of water from drainage line ane water line which is throuht out from sunk as shown in fig. Than the water is storage on it to 4 to 5 day after the portion is dry than after brick peices is covered with mortar and after it make again brick peices arranga and water storage 4 to 5 day ,after it's check the sunk is covered with mortar and flooring is done over it.[3]

4. CONCLUSION

The project on "waterproofing for residential building" has been successfully implemented. As there are many problems in the building due to water leakage like mouldy odors,peeling paint, damp spots on walls cracked walls , damp uncomfortable internal environment, deterioration of internal finishes (including mould growth). And increased concentration of harmfull pollutant affecting occupant's health. The exclusion of moisture from building is therefor not only desirable but also an utmost concern to the residents of the buildings and also most important process to maintain the beauty and increase the life of the structure.

Waterproofing of building is aminor part of building from economic point of view but a great importance as durability of building is concerned. Since this system is dependent on so many factors it requires sound knowledge of engineering, material scinece, skilled and experienced workforce.

We concluded that, as the problem of leakage in the building varies there is no perfect mathod of waterproofing. The detailed study should be carried out at various sites to adopt best material and method of waterproofing.

For all these reasons, waterproofing new residential building are one of the best decisions that today's environmentally responsible home buyer can take.[4]

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