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ROOF WATERPROOFING BY STARPROOF CHEMICAL

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ABSTRACT

In the recent time the increasing cost of construction as well as the repair and restoration of constructed buildings, led essentially escalating raw material and labour cost, is making project developers and owner opt for effective and advance waterproofing product and solutions. There is also an increasing perception amongst the project developers and owner that the long lasting concrete structures alone should not suffice. The requirement of water proofing should be coupled with "aesthetics" and also with the "environmental demand". The paper is basically on the seepage problems on the terrace due to any case. Most of the times the engineers or the site incharge doesn't look after the seepage and then after some time when rain occurs or building getting old the terrace keeps on absorbing the water which leads to the seepage problem on the terrace. There are many chemicals are available in the market like most the Dr. Fixit but the cost of Dr. Fixit is high and normally no one can easily afford it. In this paper we are introducing "STARPROOF Chemical" as a waterproofing agent to reduce cost of treatment and on the other hand it will reduce the chances of seepage.

Keywords: ***Waterproof; Chemical Agent; Roof Proofing; Seepage; Leakage Treatment; Starproof.***

I. INTRODUCTION

STARPROOF is a high quality waterproof material used in waterproofing and seepage resistance treatments for roofing and in basements, but generally used in roofs. It has many types like STARPROOF WF SP600; WF AC500; WF AC603; WF AC601 and WF MB602.

In the present study we used STARPROOF WF MB602 for protecting the seepage on roof at "Le MERIDIEN Hotel" Gurgaon. It is rubberized elastomeric waterproofing material. It is basically cold applied, specially designed for a blend and special resin and rubber, reinforced with special water repelling fillers, mineral stabilized and gelling agents.

II. NEED FOR WATERPROOFING

Water proofing on roof is required due to some causes such as Rainwater, faulty joints in roof slabs, low quality of the material and improper slope provided. So to reduce these issues we have to use some waterproof resisting agents and for achieving these goal here in the present study STARPROOF WF MB602 is used as shown in figure 1.1

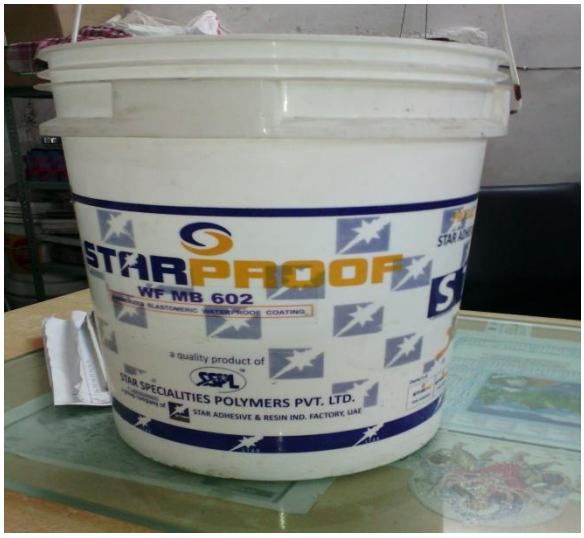

Fig 1: STARPROOF WF MB602

III.METHODOLOGY

The following steps discuss the methodology for applying the chemicals on the roof:

3.1 Dust Free Surface

Firstly we prepared the terrace as a dust free surface and all the plaster from terrace have removed with the help of wire brush.

3.2 Wrapping the Wall

After preparing the dust free roof, the procedure of removing the POP and plaster from the wall have been completed.

The height of scratching of wall is taken as 450mm approx. and before starting the work we have wrapped the wall up to a height of 10-12 inch as shown in figure 2:

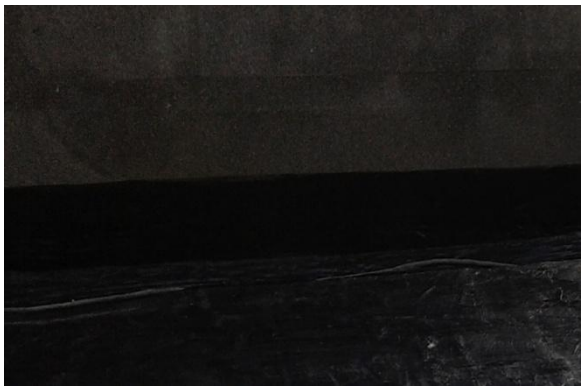

Fig 2: Wrapping the Wall

3.3 Surface Smoothening

Then all the plaster from the terrace has been removed to access the roof slab and the terrace is made smooth as shown in figure:

Fig 3: Smooth Surface

3.4 Curing

Before starting the water treatment work on terrace the slab surface must be of good strength and to achieve this we have done the curing of slab for 48 hours and at last the remaining water were taken out from the terrace.

3.5 Terrace Slab

The terrace slab was made dry before starting the work.

3.6 Dust Free Surface

After curing water was removed from the slab and made dust free. This was achieved with the help of wire brush.

3.7 Filling the Joints

The joints between the terrace and the wall were filled and full care was taken to fill the joints with the help of filling material. The material used to fill the joint is poly-sulphide.

3.8 Primer Coat

With the help of brush we applied the first layer of star proof chemical as a prime coat as shown in fig4 given below:

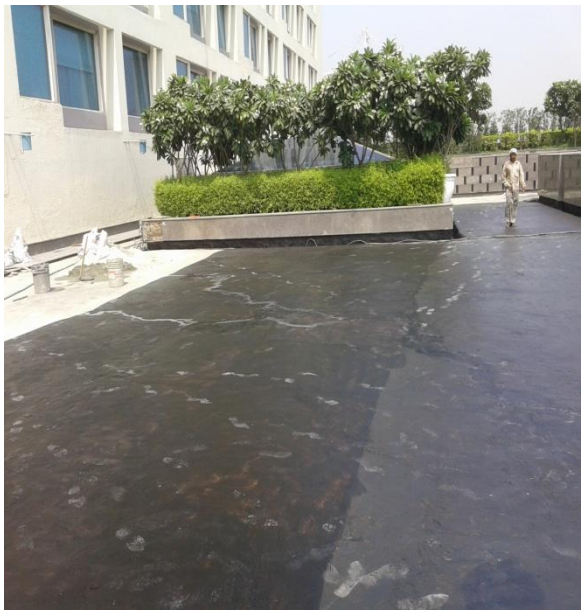

Fig 4: Primer Coat

3.9 Fiber Mesh

After applying prime coat, on the next day wire mesh is laid on the coat. The fiber mesh has an opening of 2mm and the fiber mesh was overlapped by 3 inch minimum.

3.10 Overlapping

To provide proper bond between the two layers of fiber mesh minimum 3mm overlapping is taken in concentration. The overlapping is shown in fig 1.5 below:

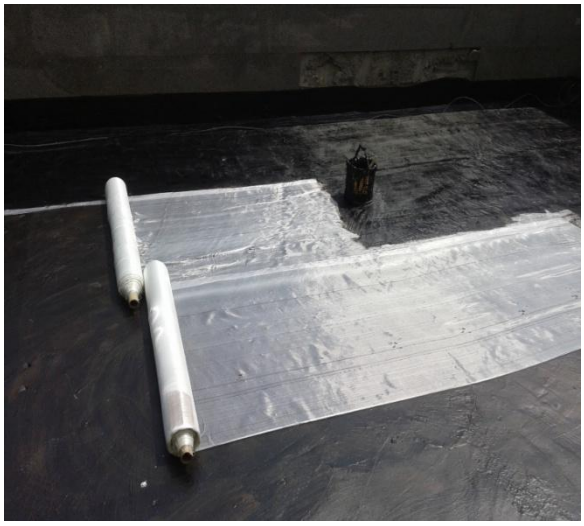

Fig 5: Fiber Mesh with Overlapping

3.11 Third Coat

The third coat of star proof chemical is applied and left it for 4-6 hours.

3.12 Final Coat

Lastly, the final coat of the chemical is applied to complete the water proofing treatment.

3.13 Testing

After completion of the work testing must be done to ensure that the waterproofing has done right or not. To ensure this, the terrace area is divided into 7-8 equal parts. Then the water is filled in those divided parts and left for 72 hours as shown in figure below. Make sure that the drains pipes are blocked at the time of testing. The testing of seepage after treatment is shown in figure 6 below:

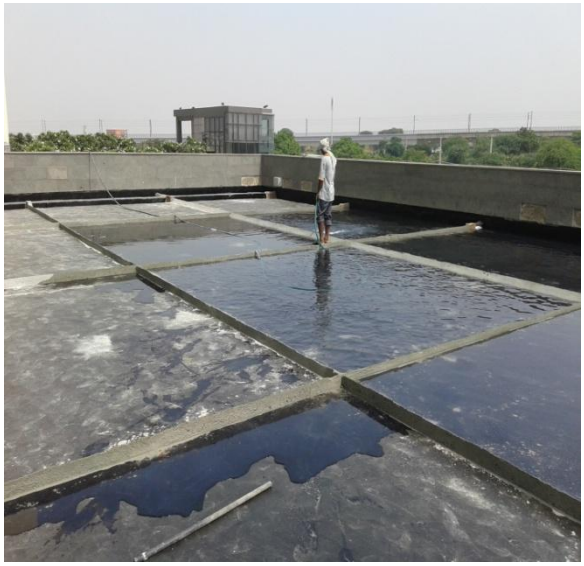

Fig 6: Testing of Seepage after Treatment

IV. PROVIDE THE NECESSARY SLOPE

It was necessary to provide a drain to terrace with a proper slope.
Slope was given to the terrace as it drains out the water without logging.

V. PREPARING FOR PLASTER

Prepare the terrace surface for plaster.
Plaster is required to provide the base for the tile or marble or to increase the strength of water proofing treatment.

VI. FINISHING WORK

The required type of marble or tile or whatever you want is ready to fix on the floor. The marble is fixed and appear like as shown in figure.

VII. RESULT AND DISCUSSION

The following result has been drawn from this study:
Water proofing treatment cost = Rs72 feet^2.
This is much lesser than the other waterproofing materials which are generally used for waterproofing.

VIII. CONCLUSION

Here, we have found that STARPROOF chemical is economic as compared to other waterproof chemicals. It keeps the desired surface durable and resistant to the infiltration of liquid under drastic condition which would otherwise deteriorate the surface. It is very effective in incurring penetration resistant to the structures. No skilled supervision is required and it is cost effective. The time required to perform the functional execution of

the star-proof prepared surface is not too much. It can be exposed to atmospheric conditions 6-8 hours after the operation. Therefore, such innovative technique is very efficient & effective for the civil works.

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