

Study And Assessment For Dameges And Maintenance Management of Residential Apartment

Sainath B. Dhage

Dept of civil Engineering

GHRU, AMRAVATI

Abstract- Apartment buildings constructed prior to the First World War are important examples of Polish buildings with regard to their historical significance – the technical maintenance of such buildings remains challenging. The purpose of the review was to study & identify an influence of widely considered maintenance of apartment houses on a degree and intensity of their elements'. The goal of this review has been achieved through the discussion of symptoms reflecting the decline of the inspected elements exploitation values that is identification of mechanics of arising their defects. The aim of the study is to provide information which would assist in the research about planning of maintenance work for the group of the apartment houses in question. Various methods of scientific research for calculating the technical wear of an apartment house and the detailed results of the technical wear of apartment buildings elements are presented in this study which was mentioned by different authors.

Keywords- Inventory Control, Buildings, Damage & Maintenance, Repair , Addition , Alteration , preventive and measures etc.

I. INTRODUCTION

Background

Repairs and Maintenance of Buildings Repairs and Maintenance of buildings, principles of construction and detection of defects, and advice on the course of action to be taken: planning. General knowledge of the life serviceability and strength of building materials in common use for the purpose of maintenance. The preparation of schedules of dilapidation and bill of quantity with specifications for repairs. Methods of measurement, recording and pricing of work. Building survey for assessment of damage due to fire, explosion, earthquake or any other peril for insurance purpose and preparation of estimate for insurance claim. Maintenance of plants providing services and refurbishment cost in use and prediction of performance in building.

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Damage Assessment of Structures

To identify the suitable repair procedure, it is necessary to have a planned approach to investigate the condition of concrete and reinforcement. This will require a thorough technical inspection and an understanding of the behavior of the structural component, which is being repaired. By the visual inspection, a detailed mapping of affected areas, documentation of type and location of symptoms, their history and photographic evidences are prepared. A comprehensive inspection data helps in making an effective strategy for repair and rehabilitation. Early detection of structural damage is an important issue to minimize the cost of repairs. Non-Destructive Tests (NDT) can be effectively employed to evaluate the damages in structures and to choose a suitable method of repair technique to extend their service life. The strength and life depends on deterioration of structures and in turn change the structural parameters like stiffness of a member. The extent of damage can be effectively assessed using the stiffness degradation in the member. The level of damage in RC structures should be effectively assessed in order to ensure safety and serviceability conditions.

Repair and Rehabilitation

Repair and Rehabilitation mean restoring the damaged structures to make them fit for serviceability condition. Rehabilitation of structurally deteriorated RC structures is one of the major tasks for the construction industries worldwide. Use of properly selected repair materials can solve this tough task. Durable repair can be obtained only by matching the properties of the base concrete with those of the repair material intended for use (Neelamegam, 2001)

Repair Management

A repair job involves three distinct stages at different levels. In the first stage, documentation of damage, type of damage and its extent, forecasting the repaired structure and recommendations on repair methodology. The second requires preparation of detailed drawings, sketches, execution guidelines and notes, material and works specifications and tender document. The third stage is actual execution of repairs.

For specialized jobs, experts in this repair field and resources in terms of tools and plants should be engaged. The engineer incharge should have a good understanding of the procedures and give an attentive supervision. To find out the effectiveness of repairs, various tests before and after the repairs have been employed.

II. IDENTIFY, RESEARCH AND COLLECT DATA

Maintenance of Structures

Building maintenance is work undertaken to keep, restore or improve every facility at every part of the building, its services including horticulture operations to a currently acceptable standard and to sustain the utility and value of the facility. The objectives of maintenance include the following:

1. To preserve machinery, building and services, in good operating condition.
2. To restore it back to its original standards
3. To improve the facilities depending upon the development that is taking place in the building engineering.

Maintenance aims at effective and means of keeping the building and services fully utilizable. It involves a lot of skills as influenced by occupancy and the performance level expected of a building. Programming of works to be carried out to keep the building in a good condition calls for high skills. Feedback from the maintenance should be a continuous process to improve upon the design and construction stages. Preventive maintenance is also carried out to avoid breakdown of machinery and occurrence problems in buildings and services. It should be carried out on the basis of regular inspection of buildings.

III. CONCLUSION

The main purpose of repairs is to bring back the architectural shape of the building so that all services start working and the functioning of building is resumed quickly. Repair does not pretend to improve the structural strength of the building and can be very deceptive for meeting the strength requirements of the next earthquake. The actions will include the following:

- Patching up of defects such as cracks and fall of plaster
- Repairing doors, windows, replacement of glass panes
- Checking and repairing electric wiring

- Checking and repairing gas pipes, water pipes and plumbing services v. Re-building non-structural walls, smoke chimneys, boundary walls, etc.
- Re-plastering of walls as required
- Rearranging disturbed roofing tiles
- Relaying cracked flooring at ground level

Redecoration, whitewashing, painting, etc. The architectural repairs as stated above do not restore the original structural strength of cracked walls or columns and may sometimes be very illusive, since the redecorates building will hide all the weaknesses and the building will suffer even more severe damage if shaken again by an equal shock since the original energy absorbing capacity will not be available.

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