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Analysis of Incidences of Collapsed Buildings in the City of Douala, Cameroon from 2011-2020

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Abstract : This study focuses on the problem of collapsed buildings within the city of Douala over the past ten years, and more precisely, within the period from 2011 to 2020. It was carried out in a bid to ascertain the real causes of this phenomenon, which has become recurrent in the leading economic city of Cameroon. To achieve this, it was first necessary to review some works dealing with construction materials and technology as well as some case histories of structural collapse within the city. Thereafter, a statistical study was carried out on the results obtained. It was found that the causes of building collapses in the city of Douala are: Neglect of administrative procedures, use of poor quality materials, poor composition and confectioning of concrete, lack of Geotechnical study, lack of structural analysis and design, corrosion of the reinforcement bars, poor maintenance in buildings, and other causes. Out of the 46 cases of structural failure of buildings within the city of Douala, 7 of these were identified to have had no geotechnical study carried out, giving a percentage of 15.22%. It was also observed that out of the 46 cases of structural failure, 6 were as a result of lack of proper structural analysis and design, giving a percentage of 13.04%. Subsequently, recommendations and suggestions are made in a bid to placing particular emphasis on the choice of materials, the manufacture and casting of concrete, as well as the placement of the required reinforcements. All this guarantees the stability of a building.

Keywords : collapse buildings, Douala, structural collapse, Cameroon
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