

Plagiarism Demo Report

Name¹, Name²

Dept. name of organization (*Line 1 of Affiliation - optional*)

¹Name of organization - acronyms acceptable (*line 2*)(*author 1*)

²Name of organization - acronyms acceptable (*line 2*) (*author 2*)

City, Country (*line 4*)

¹name@xyz.com – optional (*line 5*)

Abstract: Institutional are the store house of knowledge development. They are a big source of developing knowledge. It provides a clear path for students to achieve in life. Number of students gets gravitation every year and starts their career. In addition, the learn more about the society, culture and responsibility. The aim of the project is to analyze and design of an institutional building provisions.

A lay out plan of the proposed building is drawn by using AUTO CADD 2010. The structure consist of ground floor plus three floors. The planning is done as per Indian standard code provisions. The building frames are analyzed using the various text books. Using this so many standard books analysis of bending moment, shear force, deflection, end moments and foundation reactions are calculated. The structure was analyzed using STAAD.ProV8i.

In this rapid growing world, there is a very big need of infrastructures which have to be constructed at a very faster rate. The constructed buildings need to be furnished in all aspects immediately and should give good service. There is a need to build structures in a rapid stage and should be given for service immediately. Steel structure is one of the suitable methods to cater these needs. Structures can be constructed at a faster rate, this enables the structure to be used early thereby leading to overall economy. Steel is the ideal and most useful material for modern construction; due to its large strength to weight ratio steel structures tend to be more economical.

Keywords: Institutional building, AUTO CADD, STAAD.ProV8i

INTRODUCTION

Institution play a catalyst role in social transformation. These include any building used for school, college or day-care purposes involving assembly for instruction, education or recreation and which is not covered by assembly building. The quality of a country's institutions matter for its. Indeed, the repeated failed interventions in these and other developing societies suggest that ensuring comprehensive institutional change is difficult. They play an important role in social development. They are centers for innovation and development.

Structural steel is a material used for steel construction, which is formed with a specific shape following certain standards of chemical composition and strength. They can also be defined as hot rolled products, with a cross section of special form like angles, channels and beams/joints. There has been an increasing demand for structural steel for construction purposes in the United States and India.

OBJECTIVES

Measures are been taken by the structural steel authority for ready availability of structural steel on time for the various projects. Steel has always been more preferred to concrete because steel offers better tension and compression thus resulting in lighter construction. Usually structural steel uses three dimensional trusses hence making it larger than its concrete counterpart. There are different new techniques which enable the production of a wide range of structures and shapes, the procedures being the following:

- High-precision stress analysis
- Computerized stress analysis
- Innovative jointing

Flats are actually thin strips of mild steel having the

thickness of the strip commonly varying from 12mm to 10mm but thicker flats than this are also available. Steel flats are produced by the utilization of relatively smooth, cylindrical rolls on rolling mills. Generally the width to thickness ratio of flat rolled products is fairly large. Composite beams typically consists of steel „I“ sections acting structurally with a concrete slab by means of shear connectors attached to the top flange of the steel section, as shown in. The effective width of slab is taken as acting as part of the composite section on either side of the centreline. Fabric reinforcement is ideally placed below the head of the studs; its main role, possibly supplemented by individual bars, is to act as transverse reinforcement in order to transfer the forces between the shear connectors and the slab.

Alternatively, fibre reinforcement may be used to fulfil this role. Fabric or fibre Concrete composite floors consist of rolled or built-up structural steel beams and cast in-situ concrete floors connected together using shear connectors in such a manner that they would act monolithically. The principal merit of steel-concrete composite construction lies in the utilisation of the compressive strength of concrete slabs in conjunction with steel beams, in order to enhance the strength and stiffness of the steel girder.

More recently, composite floors using profiled sheet decking have become very popular. Composite deck slabs are particularly competitive where the concrete floor has to be completed quickly and where medium level of fire protection to steel work is sufficient.

However, composite slabs with profiled decking are unsuitable when there is heavy concentrated loading or dynamic loading in structures such as bridges. The alternative composite floor in such cases consists of reinforced or pre-stressed slab over steel beams connected together to act monolithically.

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METHODOLOG

The method we are design the entire structure is limit state Method

LIMITE STATE OF DESIGN:

Limit state method of design in a factor improvement of ultimate load design. In the limit state method, a structure is designed to withstand all loads likely to act on in the duration of its life span also to satisfy the serviceability requirements like deflection, limitation and crack width.

GEOMETRY OF THE STRUCTURE:

Institutional building is planned for the analysis and design, its plan was done by using AUTO CADD. There is an increasing awareness of the need for practical second-order analysis approaches for a direct determination of overall structural system response. This paper attempts to present a simple, concise and reasonably comprehensive introduction to some of the theoretical and practical approaches which have been The slab is created by composite interaction between the concrete and steel deck with embossments to improve their shear bond characteristics.

However, it fails under longitudinal shear bond due to the complicated phenomenon of shear behaviour. Therefore, an experimental full-size test has been carried out to investigate the shear bond strength under bending test in accordance to Eurocode 4 - Part 1.1. Eighteen specimens are split into six sets of three specimens each in which all sets are tested for different shear span lengths under static and cyclic loadings on simply supported slabs.

IMPLEMENTATION

STAAD.Pro, the most popular structural engineering software product for 3D model generation, analysis and design. It has an intuitive, user-friendly GUI, visualization tools, powerful analysis and design facilities. The Software Release Report for STAAD.Pro V8i contains detailed information on additions and changes that have been implemented since the release of STAAD. Pro 2007 build 03. This document should be read in conjunction with all other STAAD. Pro manuals, including the Revision History document. It works on “ Finite Element method” STAAD.Pro has been enhanced so that the model STD data file can be managed on a Project Wise server.

Steel column design is based on the interaction equation of the AISC Specification. These equations are presented in terms of actual and allowable stresses and much time is required by a designer to manually determine the stresses and solve the equations. To simplify their solution, the interaction equations were reformulated and a set of parameters (multipliers) was introduced to them. The parameters were investigated to determine their validity, limits, and ranges of

significant influence. They were then tabulated to provide quick and easy access for use.

Composite flooring systems incorporating cold formed profiled steel sheeting as both permanent formwork and tensile reinforcement are becoming widely adopted for high rise buildings. Research has shown that the performance of the sheeting alone in supporting the weight of wet concrete during construction frequently governs the design. This paper concentrates upon this aspect of the behaviour and describes the application of the elasticity method, derived from folded plate analysis. The method allows the important deformations due to ponding and transverse bending to be taken into account accurately; such deformations are treated empirically, or ignored, in current design codes. Comparisons with the summarised results of many tests established the accuracy of the folded plate method and indicate the limitations of the codes. Folded plate analysis is also used to illustrate several aspects of behaviour, particularly the possible movements at the lapped joints between adjacent sheets.

Description:

Four integration functionalities have been added. These are

- Open a STAAD model from a Project Wise repository.
- Save a local STAAD model into a Project Wise repository.
- Update an existing model from Project Wise.
- Review model properties (meta-data) which has been opened from a Project Wise repository.

OUTCOMES

1. In this project a Institutional Building designed by using of STAAD PRO 2007.
2. Using of this software analysis of bending moment, shear force, deflections, end moments and foundation reactions are calculated.
3. Using this calculated Bending moment, shear force, and reactions the beams, columns and footing are designed.
4. By using the AUTO CAD we can design the footing.
5. Detailed drawings of all R.C.C. members such as slabs, beams, columns, and footings are also shown.

Design of steel frames, concrete frames, concrete shear walls, composite beams, composite columns, and steel joists can be performed based on a variety of US and International design codes. Flexural, shear and deflection checks may all be performed depending upon the material and member type. Concrete sections are designed using reinforcing bar sizes chosen from US or International standards. Steel connection design automates the review of beam-beam and beam-column connections based on user specified bolt and shear plate preferences. Steel base plate design verifies the size, thickness, and anchorage of the connection.

CONCLUSION

1. In developing countries like India, cities are growing very fast and the institution plays a major role in the development of nation's economy. This made us to think about this and we decided to go with it.
2. The limit state method of design is adopted. We had done the design aspects of the structure manually and software.
3. In our project we also used the code provision of the SP 16 and SP 34 (the design aids for concrete and detailing)
4. Finally we learn detailing of various structural members by using SP 34 design aids.
5. The knowledge gained from this project will help us to take up similar projects with courage and confidence in future course of actions.

REFERENCES

1. Design Aids for reinforced concrete IS 456 – 1978 Bureau of Indian standards, New Delhi.
2. Indian standard code of practice Reinforced concrete (third revision) IS: 456 -2000, Bureau of Indian standards, New delhi,1989.
3. Deneufville, sb, sm, phd, m.asce, m.orsa, f.aas“Designing airport passenger buildings” for the 21st century r. accepted for transport journal proceeding of the institution of civil engineers (uk) paper 10284 (October 2008)
4. Punmia. B.C, Ashok kumarjain : “Design of Reinforced concrete”Seventh edition(2008)
5. Analysis and design of an office building with mono column byE K Mohanraj*, Kongu Engineering College, IndiaS Nisar Ahmad, Kongu Engineering College, India A Gowri Sankar, Kongu Engineering College, India27th Conference on OUR WORLD IN CONCRETE & STRUCTURES:29 - 30 August 2002,Singapore.
6. SP-7 “National Building Code of India”, *second edition 2005, Bureau Of Indian Standards, Sunshine Process Publishers, New-Delhi* 28.
7. Joseph De Chiara & John Callender, “Time Saver Standards for Building Types”, *2nd edition 1987, McGraw-Hill Publications.*
8. American Institute of Steel Construction, “Designing With Structural Steel”, *Second Edition 2002, AISC Publications.*
9. Dr. B.C.Punmia, Ashok Kumar Jain, Arun kumar Jain “Building Construction”, *10th Edition 2008, Laxmi Publications (P) LTD, New Delhi.*
- 10.ANSI/AISC 360-10 “Specification for Structural Steel Buildings”, *June 2010, American Institute of Steel Construction, United States of America.*
- 11.ASCE 7 “Minimum Design Loads for Buildings and Other Structures”, *2nd edition 2002, American Society of Civil Engineers”, American Society of Civil Engineers publication, Reston 4400.*
12. “Design Examples V-14”, *October 2011, American Institute of Steel Construction, United States of America.*
- 13.R.P.Johnson, “Composite Structures of Steel and Concrete”, *2nd edition1994, Blackwell Scientific Publications.*
- 14.Wai Fah CHEN (March 10 2008), “Advanced analysis for structural steel building design”, *Research Article.*
- 15.Namdeo Adkuji Hedao01*, Laxmikant Madanmanohar Gupta2 and Girish Narayanrao Ronghe2, (3rd Sep 2012), “Design of composite slabs with profiled steel decking: a comparison between experimental and analytical studies”.

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A

GRADE

S-Good
A-Satisfactory
B-Upgrade
C-Poor

Sl.No LOCATION**PRIMARY SOURCE****%**

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