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Comparative Structural Analysis of Pre-Engineered Building: A Review

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Abstract: The concept of pre-engineering construction provides systems of steel buildings that are predesigned and prefabricated. As the name suggests, this concept involves preliminary engineering of structural elements, using a predetermined register of building materials and manufacturing technologies that can skillfully meet a wide range of structural and aesthetic design requirements. The basis of the PEB concept is to provide a site only in accordance with the requirement at that location. The sections can vary along the entire length according to the bending moment diagram.

Keywords: Pre-engineered building, steel, building, pitch and analysis.

REFERENCES

- [1]. Aijaz Ahmad Zende, Prof. A. V. Kulkarni, Aslam Hutagi "Comparative Study of Analysis and Design of Pre-Engineered-Buildings and Conventional Frames" Journal of Mechanical and Civil Engineering, Volume 5, Issue 1 Jan. - Feb. 2013
- [2]. Balamuralikrishnan R., Ibrahim Shabbir Mohammedali "Comparative Study on Two Storey Car Showroom Using Pre-engineered Building (PEB) Concept Based on British Standards and Euro Code" Civil Engineering Journal Vol. 5, No. 4, April, 2019
- [3]. C. M. Meera "Pre-Engineered Building Design Of An Industrial Warehouse" International Journal of Engineering Sciences & Emerging Technologies, Volume 5, Issue 2, June 2013
- [4]. Danush. J1, J. Ajith2, N. Kalaivanan "Design Optimisation Of An Aircraft Hanger With various Parameters" International Journal of innovative Research In Technology, Volume 4 Issue 12 May 2018
- [5]. G. Durga Rama Naidu, K. Srinivasa Vengala Rao, V. Divya Sri, M. Navakanth, G.V. Rama Rao "Comparative Study of Analysis and Design of Pre-Engineered-Buildings and Conventional Frames" International Journal of Engineering Research and Development Volume 10, Issue 9 September 2014
- [6]. IS: 800-2007 Indian Standard General Construction in Steel-Code of Practice
- [7]. IS: 875 (Part 1) 1987 Code of Practice for design loads (other than earthquake) for building and structures (Dead Load)
- [8]. IS: 875 (Part 2) 1987 Code of Practice for design loads (other than earthquake) for building and structures (Imposed Load)
- [9]. IS: 875 (Part 3) 2015 Code of Practice for design loads (other than earthquake) for building and structures (Wind Load)
- [10]. Jatin D. Thakar, 2 Prof. P.G. Patel "Comparative Study Of Pre-Engineered Steel Structure By Varying Width Of Structure" International Journal of Advanced Engineering Technology Volume 4, Issue 3, July-Sept 2013
- [11]. K. Prabin Kumar1, D.Sunny Praksh Planning Analysis and Design of Industrial Building Using STAAD PRO" International Journal of Pure and Applied Mathematics Volume 119 Issue 17 2018
- [12]. Limit state Design of Steel Structure by S. K. Duggal
- [13]. Ms. Darshana P. Zoad "Evaluation Of Pre-Engineering Structure Design By IS-800 As Against Pre-Engineering Structure Design By AISC" International Journal of Engineering Research & Technology, Volume 1 Issue 5, July 2012
- [14]. Pradeep V, Papa Rao G "Comparative Study of Pre Engineered and Conventional Industrial Building" International Journal of Engineering Trends and Technology Volume 9 Issue 1 March 2014

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Volume 2, Issue 1, July 2022

- [15]. Pratik R. Atwall, Vinaysingh Chandrakar2, Pravinsingh Tomar "Analysis and Design of Pre-Engineered Building Using IS800:2007 and International Standards" International Advanced Research Journal in Science, Engineering and Technology, Volume 4, Issue 11, November 2017
- [16]. Sagar D. Wankhade, Prof. P. S. Pajgade "Design & Comparison of Various Types of Industrial Buildings" International Refereed Journal of Engineering and Science, Volume 3, Issue 6 (June 2014)
- [17]. Sai Kiran Gone, Kailash Rao, Pradeep Kumar Ramancharla "Comparison of Design Procedures for Pre Engineering Buildings (PEB): A Case Study" International Journal of Civil, Architectural, Structural and Construction Engineering Volume 8 Issue 4, 2014
- [18]. Seena Somasekharan "Wind Load Analysis For Industrial Building With Different Bracing Patterns And Its Comparison With Pre-Enginnered Building" International Journal of Civil Engineering and Technology, Volume 8, Issue 4, April 2017.
- [19]. Shashank Pattanshetti, Prof. Sachin M. Kulkarni "Comparative Study on the Economy between Pre-Engineered and Conventional Steel Buildings" International Research Journal of Engineering and Technology Volume 4, Issue 7, July 2017
- [20]. Shrunkhal V Bhagatkar, Farman Iqbal Shaikh, Bhanu Prakash Gupta and Deepak Kharta "A Study On Pre-Engineered Building-A Construction Technique" International Journal of Engineering Research and Applications Volume 5, Issue 3, March 2015
- [21]. Subodh.S.Patil, Raviraj.V.Jadhav, Pritam.A.Mali, Mahesh.M.Bhanuse, Murgesh.R,Katti "Analysis and design of Pre-Engineered building of an industrial warehouse" International Journal Of Current Engineering And Scientific Research, Volumn-4, Issue-12, 2017
- [22]. Suraj Tale, K.Vasugi "Effect of Bracing under Different Loading for Conventional and Pre Engineering Industrial Structure" International Journal of Recent Technology and Engineering (IJRTE), Volume 8, Issue 1, May 2019
- [23]. Syed Firoz, Sarath Chandra Kumar B, S.Kanakambara Rao "Design concept of Pr-Engineered building" International Journal of Engineering Research and Applications, Vol. 2, Issue 2, Mar-Apr 2012
- [24]. T.D. Mythili "Analysis and Comparative Study of Conventional Steel Structure with PEB Structure" International Journal of Science and Research, Volume 6 Issue 4, April 2017
- [25]. Vishwanath Pujar, Prof. Ravi Tilaganji "Comparative Study Of Codal Provision For Pre-Engineered Building" International Research Journal of Engineering and Technology, Volume: 04 Issue: 07 July -2017.
- [26]. Gao, Zhenyang, Hongze Wang, Hua Sun, Tengteng Sun, Yi Wu, Chu Lun Alex Leung, and Hao Wei Wang. "Additive Manufactured High-Energy-Absorption Metamaterials with Artificially Engineered Distribution of Bio-Inspired Hierarchical Microstructures." Available at SSRN 4050259.
- [27]. Ramakrishnan, Roshni. "Comparitive Study of Pre-Engineered Building and Truss Arrangement Building for Varying Spans." PhD diss., University of Mumbai, 2022.
- [28]. Patil, Mr Rushikesh, Mr KS Patil, and N. V. Khadake. "comparative study of structural design of preengineered building with design of conventional steel struture."
- [29]. Jadhav, Miss Mrunal, and P. K. Deshpande. "MAINTENANCE OF PRE-ENGINEERED BUILDING."
- [30]. Kato, Kazuki, Wenyuan Zhou, Sae Okazaki, Yukari Isayama, Tomohiro Nishizawa, Jonathan S. Gootenberg, Omar O. Abudayyeh, and Hiroshi Nishimasu. "Structure and engineering of the type III-E CRISPR-Cas7-11 effector complex." Cell (2022)