

## *A view to remember*

*Class Work starts on 20.07.2015 onwards for Second and for Third students from 29.06.2015.  
Class Work for final year students has started on 13.07.2015.*

### Editorial & Design Team:

Faculty:

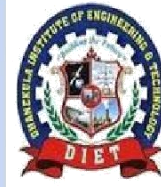
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## *Civil Info*

*Civil Engineering  
News Letter Volume-II Issue-I  
June-Sep (2015-2016)*



*“One man’s  
“magic” is  
another  
man’s  
engineering.  
“Supernatura  
l” is a null  
word.”*

The quasi-static explicit finite element method (FEM) and element free Galerkin (EFG) method are applied to trace the post-buckling equilibrium path of thin-walled members in this paper. The factors that primarily control the explicit buckling solutions, such as the computation time, loading function and dynamic relaxation, are investigated and suggested for the buckling analysis of thin-walled members. Three examples of different buckling modes, namely snap-through, overall and local buckling, are studied based on the implicit FEM, quasi-static explicit FEM and EFG method via the commercial software LS-DYNA. The convergence rate and accuracy of the explicit methods are compared with the conventional implicit arc-length method. It is drawn that EFG quasi-static explicit buckling analysis presents the same accurate results as implicit finite element solution, but is without convergence problem and of less-consumption of computing time than FEM.

**List of Toppers:**

Batch	Year/Sem	Name of topper	%
2011-2015	IV-II	1. B.POOJITHA (118T1A0129)	87.84
		2. B.TARUN KUMAR (108T1A0146)	87.00
2012-2016	III-II	1. S.SNEHA SRI (138T5A0110)	89.2
		2. CH.MOUNIKA SANNIHITHA (128T1A0121)	88.94
2013-2017	II-II	1. K. SAI TEJASWINI (148T5A01107)	85.82
		2. k. PRIYATH KUMAR (138T1A0164)	85.1



S.SNEHA SRI



CH.MOUNIKA SANNIHITHA



K.SAI TEJASWINI



K. PRIYATH KUMAR

**Dhanekula's Samskruthi 2017-2018:**

SNo	Date	Events	Name of Students	Prize
1.	23-06-15	Debate	Nabeel Ahmed	II
			Balaji Naik	I
2.	23-06-15	JAM	P.Likhita	III
3.	28-07-15	AD Making	P.Chandra Mouli	I
			M.Raffie Hyder	
			I.Naveen	
4.	07-07-15	Role Play	T.Sai Pranav Keerthan	I
5.	21-07-15	Mind Quiz	T.Sai Pranav Keerthan	III
			K.V.G.S. Pradeep	
			L.Yoganadh	

**Concrete walls weakened by openings as**

**compression members: A review**

The purpose of this paper is to review the advances that have been made in the design of monolithic and precast reinforced concrete walls, both with and without openings, subject to eccentrically applied axial loads. Using the results of previous experimental studies, a database was assembled to enable statistical assessment of the reliability of existing design models. Several design aspects are highlighted, including the size and position of openings, and the roles of boundary conditions and geometric characteristics. In addition, the performance of fiber-reinforced polymers in strengthening wall openings is discussed.

Overall it is found that design codes provide more conservative results than alternative design models that have been proposed in recent studies. Research into the strengthening of walls with openings is still in its early stages, and further studies in this area are needed. The paper therefore concludes by highlighting some areas where new investigations could provide important insights into the structural behaviour of strengthened elements.

**Highlights**

- A review of current design models on axially loaded concrete walls.
- An up-to-date database with experimental tests on concrete walls with and without openings.
- Statistical assessment of existing design models on axially loaded concrete walls.
- Techniques for strengthening concrete walls with openings using fiber-reinforced polymers.
- Research gaps have been highlighted.



