

1. Record Nr.	UNINA9910337613203321
Autore	Silva Fernando A.N
Titolo	Design of Reinforced Concrete Silo Groups / / by Fernando A.N. Silva, Bernardo Horowitz, João M.P.Q. Delgado, António C. Azevedo
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-13621-3
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (93 pages)
Collana	Building Pathology and Rehabilitation, , 2194-9840 ; ; 10
Disciplina	624.1834
Soggetti	Buildings - Design and construction Building materials Mechanics, Applied Solids Building Construction and Design Structural Materials Solid Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Characterization and Brief Literature Review -- Geometry and Loading -- Two-Dimensional Linear Elastic Analyses -- Slice Method -- Three-Dimensional Analysis -- Structural Behaviour and Simplified Model Proposition -- Conclusions and Recommendations.
Sommario/riassunto	This book offers a new calculation procedure of the structural behavior of grouped layout of silos, easy to use and with satisfactory responses. Groups of reinforced concrete silos are structures commonly used in the food industry, where it is usually necessary to separate the storage of different types and sources of grain. The grouped layout of silos has numerous benefits when compared with single-cell silos in which the emphasis is on creating further space for silage, normally referred to as interstice – a space formed between the edges of the group's cells. This economic benefit, on the other hand, raises a structural problem for the designer of this type of building, which is to assess the magnitude of bending moments and hoop forces due to the structural continuity of the walls in the interstice region of the cells. Bending moments

assume extreme values exactly when the interstice is loaded and the other cells in the group are empty. To develop the formulation of the proposed analysis models, a parametric study was carried out that allowed the adequate consideration of the variables involved. The idea is to help professionals, engineers, industrials and academics involved in this advanced interdisciplinary field as a comprehensive guide for courses offered at different levels of learning (undergraduate and postgraduate).
