



School of Engineering

Design and Construction of
Prestressed Concrete Tanks

Speaker: Jeff Ward, Chief Structural Engineer, Crom Corp.
Ryan Harvey, Vice President of Engineering, Crom Corp.

Location: UNF Student Union

Date/Time: Tuesday, October 27, 2009/1:40-2:55pm

- Present the design of our various tanks which are shell structures in which we use both classical shell analysis, as well as finite element analysis where applicable as well as wire winding and post-tensioning pre-stressing analysis.
- Compare the efficiencies of shell design as opposed to the inefficiencies of shear and bending design
- Give the students a taste of classical shell analysis.
- Discuss pre-stressing as a counteracting load rather than passive structural resistance.
- Cover items such as special tanks, seismic analysis.
- Show construction photos and completed structures of interest which have been designed and built by the Crom Corporation over the last 55 years.

Jeff Ward Biography

Jeff Ward is the Chief Structural Engineer for the Crom Corporation, a Gainesville-based, design-build firm specializing in Pre-stressed Concrete Storage Tanks for the storage and treatment of water, wastewater and industrial waste. He has been with Crom for about 27 years and has been involved in the design of various types of pre-stressed tanks throughout that time. He is a member of ACI, ASCE and FES. Within these organizations, he serves on many committees which are associated with the design and construction of liquid-containing structures including ACI 350 Code Requirements for Environmental Engineering Concrete Structures, ACI 372 Design and Construction of Circular Wire- and Strand-Wrapped Concrete Tanks and ACI 371 Elevated Tanks with Concrete Pedestals in which he serves as secretary.

Jeff is a graduate of the University of Florida with a Bachelor of Civil Engineering degree and a Master of Science degree in Civil Engineering. He is a licensed engineer in 12 states, a SE in California and certified in the practice of structural engineering by the Structural Engineers Certification Board.

Ryan Harvey Biography

Ryan Harvey is Vice President of Engineering at The Crom Corporation, a Gainesville-based, design-build firm specializing in Pre-stressed Concrete Storage Tanks for the storage and treatment of water, wastewater and industrial waste. He has worked at The Crom Corporation for the past 12 years beginning as a Staff Engineer and progressing to Project Manager of the Tennessee/Kentucky territory where he was responsible for sales, design and management of over 40 projects. In his current position, he is responsible for the management of the Engineering Department including the functions of Design, Project Management, Purchasing, Estimating, and Drafting. He is a member of ACI, ASCE, FES, and AWWA. In addition, within these organizations, he serves on many committees which are associated with the design and construction of liquid-containing structures including ACI 350 Code Requirements for Environmental Engineering Concrete Structures, ACI 372 Design and Construction of Circular Wire- and Strand-Wrapped Concrete Tanks, ACI 371 Elevated Tanks with Concrete Pedestals, and AWWA D110 Design and Construction of Circular Wire- and Strand-Wrapped Concrete Tanks. Mr. Harvey is a graduate of the University of Tennessee with a Bachelor of Science degree in Civil Engineering and a Master of Science degree in Structural Engineering. He is a licensed engineer and certified in the practice of structural engineering by the Structural Engineers Certification Board.

***If you have any questions, please contact Dr. Adel ElSafty
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