CYME power engineering and analysis software

Brightlayer Utilities suite

CYME Users Group Meeting 2023

Agenda

Monday, June 5, 2023 – Le Westin Montreal

Engineering Course (optional)

Overcoming Common Ampacity Challenges in Modern Distribution Systems

by Dr. George Anders

Fortifications room (9th floor)

7:30 am – 8:30 am		Registration *Full breakfast buffet - Ville-Marie room*

8:30 am – 10:00 am		Overcoming common ampacity challenges in modern distribution systems – Part 1
10:00 am – 10:30 am		*Refreshment break*
10:30 am – 12:00 pm		Overcoming common ampacity challenges in modern distribution systems – Part 2
12:00 pm – 1:00 pm		*Lunch - Ville-Marie room*
1:00 pm – 2:30 pm		Overcoming common ampacity challenges in modern distribution systems – Part 3
2:30 pm – 3:00 pm		*Refreshment break*
3:00 pm – 4:30 pm		Overcoming common ampacity challenges in modern distribution systems – Part 4

Context		As the energy landscape continues to evolve, effective management of ampacity in modern distribution networks has become increasingly important to enhance system performance and facilitate renewable energy integration. In this workshop, we will explore the most common challenges associated with ampacity calculations and planning in modern distribution systems, as well as analyze the various factors that impact cable ratings.
Schedule highlights		This course will provide a general overview on cable ampacity theory. • Main factors influencing cable ratings • Ampacity for typical utility cable installations Transient ampacity calculations • Solving emergency conditions • Time series ampacity calculations Ampacity calculations for DER projects • Examples of problems encountered in rating cables from PV stations • Inshore and offshore wind farms • DC cables • Reactive compensation for long AC cable lines • How to deal with harmonics in ampacity calculations? Ampacity calculations for complex cable installations • Complex crossings: heat pipes, multiple cables, duct-banks crossing, etc. • Ventilated manholes • Short problematic sections • Cable inclinations • Cable transitions Environmental effects of cable lines • Electromagnetic field limitation on cable rating • Soil dry-out
Presenter		*Dr. George Anders is a world expert in cable rating calculations and professor in the Department of Electrical and Electronic Engineering at the Lodz University of Technology, Lodz, Poland and Retired Adjunct Professor at the Department of Electrical and Electronic Engineering of the University of Toronto, Canada.* *Dr. Anders is recipient of many distinctions including 2016 IEEE Halperin Award in Transmission and Distribution, 2016 Engineering Excellence Medal from the Ontario Professional Engineers Association. 2018 IEEE Roy Billinton Award in Power System Reliability, 2012 International Electrotechnical Commission Award for the contributions to the development of international standards in power cable current rating field and in 2019 IEEE Prize Paper Award.* *Dr. Anders is author of 3 monographs on power cable rating calculations published by IEEE Press in their Electrical Engineering Series and a monograph on application of probabilistic methods in electric power systems published by John Wiley & Sons. Author and coauthor of over 100 papers published in IEEE Transactions.*