

# Tekla Structural Designer Advanced

Public Program *Remote Online Training:* 14-15 June 2022 2-5.30pm

In-House Program Available

Trainer: Dr Steven Wong Tung Yew

**Trimble Solutions Malaysia Sdn Bhd Company Registration No: 0628323X** Contact person: Wee Eng Yau +60 12-987 8190 / Chiang Xin Yi +60 10-270 8733 Email: Tekla.sales.my@trimble.com



HRD claimable course program no. 10001153268



This advance module is aimed for those who have previously completed the TSD fundamental training course and want to learn about more advanced features and topics in the software.

You'll learn how to generate the commonly requested model information by wind tunnel specialist and also applying the wind loads via copy & paste to the structural model. For seismic module, you'll understand various input parameters, RSA analysis & design, and review mode shapes. Lastly, you'll also learn how to apply equipment loading and open structure wind load for your industrial projects.

### **Course information**

In this advanced course, the learner will learn how to generate the commonly requested model information by the wind tunnel specialist and also apply the wind loads via copy & paste to the structural model. For the seismic module, we will go through various input parameters in more detail, understanding RSA analysis & design, and reviewing mode shapes. In addition, the learner will also learn how to apply equipment loading and open structure wind load for an industrial project.

- Skill level: Advanced
- Pre-requisites: Knowledge of engineering

Basic skills with Tekla Structural Designer

- Duration: 2 half-days
- ► Training method: Online



### Agenda

### Day 1

Wind Tunnel Testing

- Introduction
- Overview
- Exporting wind tunnel data workflow
- Using imported wind tunnel information

Data Generation for Wind Tunnel Specialist

- Wind Tunnel Data tab
- Generate model mass combination
- Review settings
- Modal analysis
- Result tables
- Export to Excel
- Mode shapes

Applying Wind Loads (from Wind Tunnel Specialist) at floor diaphragm

- Generate wind load cases
- Preparing loading in Excel template file
- Paste the loading to Diaphragm table
- Review the applied loading graphically
- Generate load combination, run analysis and design
- Seismic Analysis and Design
- Pre-requisites of running Seismic Wizard
- Create Seismic Loads in Seismic Wizard
- Seismic Wizard Base Information
- Seismic Wizard Structure Regularity
- Seismic Wizard Fundamental Period
- Seismic Wizard Behaviour Factor

Seismic Wizard - Seismic Interia Combination

Seismic Wizard - Localization

Seismic Wizard - EC8 Seismic Combination Generator

Seismic Wizard - Seismic Loadcases and Combinations



### Day 2

- Response (Horizontal) Spectrum Curve
- RSA Analysis and Member Design
- Seismic Analysis Results
- Seismic RSA Member Design
- Vibration Mode Shapes
- Vibration Mode Shapes Periods & Mass Participations
- **Total Mass Participation**
- **Vibration Frequencies Report**
- **Total Mass Participation Report**
- Seismic Design Reports
- Second Order Effect Interstorey drift
- sensitivity coefficient
- Seismic Drift Checks
- Summary
- **Equipment Loading Overview**
- Model Equipment Loading
- **Equipment Loadcases**
- **Creating Equipment Loading Exercises**
- Equipment Load Report
- **Open Structure Wind Load Introduction**
- Wind Load Calculation for Members and Ancillaries
- Wind Load Calculation for Equipment
- Shape Factors and Effective Area Factors
- Apply Open Structure Wind Load
- Open Structure Wind Load Report



### **Dr Steven Wong Tung Yew**



The trainer is a Senior Technical Consultant and he helps Engineers to adopt Tekla's software. He was involved in providing technical support and project consultation to the end users of Tekla's software and also assisted in the development of the programs. He has considerable experience conducting event seminars and technical webinars.



## Tekla Structural Designer Advanced

Date: 14-15 June 2022 2-5.30pm	Fee: <i>RM600/pax</i> <i>excluding 6% S</i> .	ST
Company name:		
Company address:		
Person-in-charge:		
Phone no.:	Email:	
Name of participant(s)	Designation	Email address

### Payment

Payable to: Trimble Solutions Malaysia Sdn Bhd

### Contact

Trimble Solutions Malaysia Sdn Bhd Suite B-12-5, North Point Offices, No. 1 Medan Syed Putra Utara, Mid Valley City, 59200 Kuala Lumpur, Malaysia

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### **Terms and conditions**

- Seat is confirmed only upon receipt of full payment prior to the program.

- Training fees will be invoiced from the customer in full in case HRD Corp's grant approval documents are not provided to Trimble before the training, customer fails to declare or sign claims forms in a timely manner and/or HRD Corp withdraws the grant for any reason.

- Trimble Solutions Malaysia Sdn Bhd reserves the right to cancel or postpone the program owing to unforeseen circumstances