

Seamless Steel Connections in Tekla : From Simple To Complex

Course Overview

Tekla Structures E-Learning Course: Mastering Steel Connection Design

Welcome to our comprehensive Tekla Structures E-Learning course, curated and conducted by expert trainers, specifically designed to empower you with the skills to excel in steel connection design. This transformative program covers 20 different types of connections in extensive detail, ensuring that Tekla users can become proficient in creating connections with ease and confidence.

Course Outline:

1. **End Plate Connection:** Master the principles of end plate connections and learn to model and analyse them effectively.
2. **Two-Sided End Plate:** Understand the intricacies of two-sided end plate connections to handle higher loads.
3. **Shear Plate:** Learn the techniques to create shear plate connections for efficient shear force transfer.
4. **Two-Sided Shear Plate:** Delve into the design and implementation of two-sided shear plate connections for complex loads.
5. **Clip Angle:** Explore the versatility of clip angle connections and their applications in diverse projects.
6. **Two-Sided Clip Angle:** Master the art of creating two-sided clip angle connections for intricate joint configurations.
7. **Gusset:** Gain proficiency in designing gusset connections to provide bracing and support.
8. **Tube Gusset:** Understand the specialized application of tube gussets for connecting tubular structural members.
9. **Haunch:** Learn to design haunch connections to efficiently transfer bending moments.
10. **Joining Plate:** Discover the role of joining plates in connecting different steel elements seamlessly.
11. **Seating Plate:** Gain insights into creating seating plate connections for accurate support.
12. **Base Plate:** Explore the principles and guidelines for designing base plate connections.
13. **Stiffener:** Dive into the world of stiffeners and their role in enhancing load-bearing capacity.

14. **Cap Plate:** Learn how to design and model cap plate connections for optimal load distribution.
15. **Staircase:** Understand the complexities of designing steel connections in staircase structures.
16. **Handrails:** Gain proficiency in designing handrail connections for safety and aesthetics.
17. **Purlins:** Learn to design purlin connections for efficient load transfer in roofing systems.
18. **Generation of Purlins:** Discover the power of automated purlin generation using Tekla Structures tools.
19. **Cold Rolled Overlap:** Explore the nuances of cold rolled overlap connections in steel structures.
20. **Bridging:** Master the art of designing bridging connections to enhance structural stability.

Benefits of the Course:

- **In-Depth Understanding:** Gain comprehensive knowledge of 20 different connection types, enabling you to tackle diverse project requirements effectively.
- **Practical Experience:** Engage in hands-on practice sessions with each connection, reinforcing your learning and boosting your confidence.
- **Improved Efficiency:** Learn time-saving techniques and automated tools to streamline connection design processes.
- **Enhanced Productivity:** Acquire skills to create accurate and reliable connections, resulting in increased productivity and reduced errors.
- **Real-World Applications:** Explore real-world examples and case studies to apply your knowledge to practical scenarios.
- **Career Advancement:** Upgrade your skillset and enhance your resume with proficiency in Tekla Structures connections, opening up new career opportunities.
- **Industry Recognition:** Being well-versed in steel connection design using Tekla Structures will earn you recognition as a skilled professional.

Enrol in our Tekla Structures E-Learning course and unlock your potential to create robust connections effortlessly. Our expert guidance and comprehensive materials will empower you to become a pro in steel connection design, advancing your career and making you a valuable asset in the world of structural engineering.

Course Content

This eLearning course aims to equip Tekla users with advanced skills in creating various connections efficiently. Participants will explore 20 different types of connections commonly used in structural detailing and gain hands-on experience through practice sessions. By the end of the course, attendees will be proficient in handling connections with ease, enhancing their productivity and becoming proficient Tekla users.

Benefits of the Course:

- **Enhanced Productivity:** Learn time-saving techniques and default settings that streamline the connection modelling process.
- **Comprehensive Connection Knowledge:** Gain insights into various connection types, making you well-versed in different project scenarios.
- **Hands-on Practice:** Engage in practice sessions for each connection type to reinforce your understanding and confidence.
- **Improved Model Accuracy:** Master the intricacies of connection detailing to ensure precision in your Tekla models.
- **Faster Project Completion:** Acquire skills to create connections swiftly, contributing to project efficiency.
- **Professional Skill Upgrade:** Elevate your expertise in structural detailing, making you a valuable asset to your team.
- **Industry-Recognized Training:** Obtain a certificate of completion, showcasing your proficiency to potential employers.

Connection covered in Detail.

1. General Settings for Connections

- Learn default settings for components to optimize the connection modelling process.
- Master keyboard shortcuts for frequently used commands, speeding up your workflow.

2. Cap Plate

- Explore detailed cap plate connections for SHS, CHS, and PFC sections.
- Practice session to apply cap plate connections effectively.

3. Stiffener (1003)

- Understand stiffener connections to I-section and C-section profiles.
- Implement stiffeners confidently in your Tekla models.

4. Base Plate Detail (1004)

- Create various base plate connections, including SHS, anchor rod, L shape, and more.
- Learn additional features and practice base plate connections.

5. End Plate 144

- Master different end plate connections for columns and beams, including additional features.
- Practice end plate connections to gain proficiency.

6. End Plate 29

- Explore column-to-beam and beam-to-beam connections using End Plate 29.
- Reinforce your skills through practical exercises.

7. Shear Plate (146)

- Learn shear plate connections for column-to-beam and beam-to-beam scenarios.
- Implement additional features and practice shear plate connections.

8. Shear Plate (185)

- Create shear plate connections between beams with the same or different profiles.
- Practice shear plate connections for a better grasp.

9. Splice (77)

- Master beam-to-beam and column-to-column splicing connections.
- Implement additional features and practice splice connections.

10. Tube Gusset (20)

- Discover connections for beams to SHS and columns to CHS.
- Learn multiple connections involving CHS, column, and beam.
- Practice tube gusset connections effectively.

11. Haunch (40)

- Understand haunch connections for column-to-straight beam and column-to-slope beam.
- Implement additional features and practice haunch connections.

12. Apex Haunch (106)

- Explore beam-to-beam apex haunch connections.
- Practice apex haunch connections for better proficiency.

13. Joining Plate

- Learn I-section and C-section beam-to-beam connections using joining plates.
- Engage in practical exercises to reinforce your skills.

14. Seating Plate

- Discover seating plate connections for columns to single and double beams.
- Receive valuable tips for improved connection design.

15. Clip Angle (141)

- Implement single and double-sided beam-to-beam connections using clip angles.
- Practice clip angle connections for better understanding.

16. Two Sided Clip Angle (143)

- Explore beam-to-beam connections with two-sided clip angles.
- Reinforce your knowledge through practical exercises.

17. Staircase (71)

- Learn to create staircases with welded and bolted steps.
- Gain proficiency in staircase connections.

18. Handrail

- Implement handrails for staircases using various connection types (76, 77, and 75).
- Create professional handrail connections with ease.

19. Generation of Purlins

- Master purlin connections for C and Z profiles with different orientations.
- Learn to change the direction of purlin connections effectively.
- Practice purlin connections for improved skills.

20. Bridging

- Understand bridging connections for purlins and girts.
- Implement bridging connections confidently.

Conclusion:

This comprehensive eLearning course offers Tekla users the opportunity to upgrade their skillset and become proficient in creating various connections used in structural detailing. With detailed explanations and practical sessions for each connection type, participants will gain the confidence to handle complex projects with ease, ensuring accurate and efficient connection design in their Tekla models. Become a connection design expert and boost your career in structural detailing with this training!