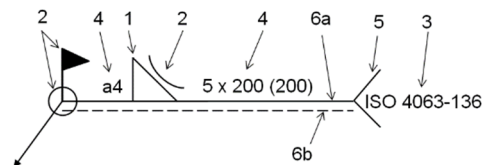
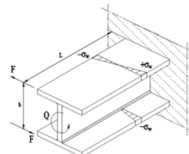
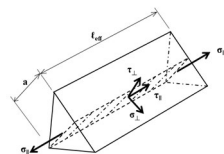


Design of welded steel products, SK2 with Welding for designers, WfD



Target audience: Mechanical Designers and Calculation Engineers.

Date and time: Monday-Tuesday March 7-8 and 14-15, 2022 from 9:00 to 16:00

Location: Tjörnborgs Kök, Norralundsvägen 11, Finspång, and also via TEAMS.

Teachers: M.Sc. Claes Olsson, Techstrat of Sweden and M.Sc./IWE Ali Bahrami, WoS

Demands on the modern designers are increasing and the field they must cover are many.

The designers have to decide what conditions a product must be able to meet, what material to use and how the welding process affects structures in the form of deformations caused by weld shrinkage. They also need to consider the possibilities and limitation of production unit as well as the manufacturing costs. Most important, the designer must understand and be able to assess a structure under different loads.

The course gives participants basic knowledge of modern methods to estimate the strength of welded joints subjected for both static and fatigue loads.

The first day of the course is devoted to welding technology for designers and deals with e.g. welding methods, materials, welding classes and welding designations on drawings.

The course then continues with the design of welded structures and their behaviour under different conditions. Several design tips are suggested. Favourable and less favourable designs are discussed.

Participants are welcome to bring their own design issues to the course.

Prerequisites: Corresponding to at least a 3-year upper secondary school level and basic knowledge in strength of materials.

The teacher: For many years Claes has worked with the design of welded products and written several books on the subject.

Program

Day 1 (7/3): Welding for designers, WfD. (Ali)

- Common welding methods (MMA, MIG / MAG, TIG, Submerged Arc Welding). Choice of welding method. Materials and filler material for welding. Welding designations on drawing with exercise. Welding classes and inspection methods for welding. Design for automated welding.

Day 2 (8/3): Basic design strategies for welded products. (Claes)

- Basic aspects on welded structures regarding material strength. Tips and suggestions for functional welded products. Design against corrosion. Examples.

Day 3 (14/3): Design of welded structures subjected to static loads. (Claes)

- Residual stresses and weld deformations. Brittle fracture. Lamellar tearing. Design against static loads. Short about the instability of slender structures. Examples.

Day 4 (15/3): Design of welded structures subjected to fatigue. (Claes)

- Background. The phenomenon Material Fatigue in welded structures. Tips and suggestions. Design against fatigue. Examples.

Course literature: Design Handbook for welded steel products, Claes Olsson 2017 (ISBN-978-91-981529-1-3) and digital OH material (PDF).

Course fee: SEK 29,500 for entire course. If you want to participate in individual days, the fee is SEK 8,900 per day. Course fee includes course book, digital OH-materials, coffee, lunch, course evaluation, and course certificate. VAT will be added by 25%. Payment terms 30 days.

Registration via weldonsweden.se or to Ali Bahrami ali@weldonsweden.se, 0703-336354

Hybrid