KISSsoft Training
Cylindrical Gear Contact Analysis and Gear Optimization

Gleason hosts a 3-day comprehensive KISSsoft Training Class to be held February 17-19, 2020 at The Gleason Works Facility in Rochester, NY.
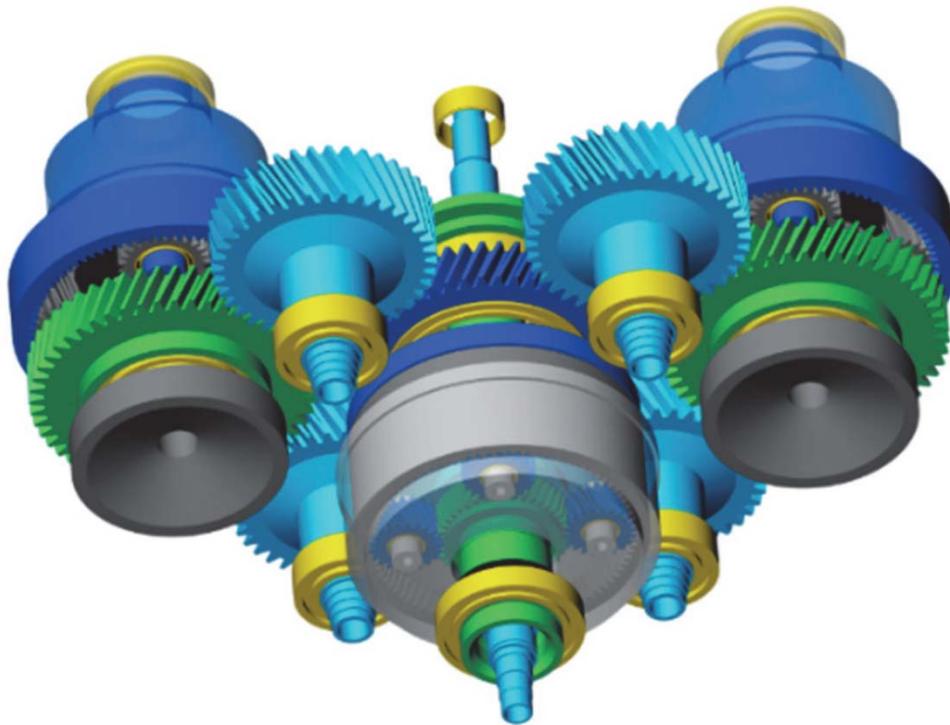
General scope of the program:

The objective of the 3-day training is to understand the fundamental theories for cylindrical gear design and analysis and to learn the application usages of KISSsoft. Participants will gain knowledge on how to interpret the gear rating, analyze reports and apply the software to improve gear design from the conceptual to the final design phase.

The training is designed for engineers who are already familiar with cylindrical gear calculations and basic functionalities of KISSsoft. If a participant has a lack of knowledge on gears or KISSsoft usages and user interface, we highly recommend going through the KISSsoft tutorials posted on our website before the training.

Day 1: Geometry and Strength of Cylindrical Gears with Involute Profile

- Gearing law, Involute tooth form
- Reference profile and tool geometry
- Tooth form for spur and helical gears, external and internal gears
- Profile shift, Grinding stock allowance, Manufacturing profile shift
- Sizing profile shift coefficient and deep tooth form
- Path of contact, Specific sliding
- Definition of various circles
- Backlash (Theoretical and Operating), Tip clearance
- Operating backlash calculation
- Tolerances and allowances, Quality and deviation
- Various methods for inspection
- Tooth flank modifications (Profile and tooth trace)
- Profile and tooth trace diagram (K chart)
- Most frequent errors found in the geometric design of gear pairs
- Calculation of safety factors, Identifying required safety factors
- Definition of material data and Woehler Line (S-N curve)
- Calculation of the flank safety (pitting resistance)
- Calculation of the root safety (bending strength)

KISSsoft Software Training
Tel (585) 256-6688
gwrtraining@gleason.com
jlabarge@gleason.com

The Gleason Works
1000 University Ave,
Rochester NY 14607, USA

Day 2: Loaded Tooth Contact Analysis

- Basic principle of loaded tooth contact analysis (LTCA)
- Tooth stiffness according to Weber/Banaschek
- Assumptions in the analysis of helical gear teeth
- Actual path of contact and identification of entry and exit impact
- Effective transverse contact ratio and overlap ratio
- Actual normal force and stress distribution
- Transmission error and its relation with vibration and noise
- Effect of the deviation and inclination error of axis
- Combining the shaft calculation
- Combining the gear body deformation by FEM
- Calculation of face load factor according to ISO 6336-1 Annex E

Day 3: Strategies for Gear Design Optimization

- Rough sizing to define the raw dimension of gears
- Fine sizing to define macro geometry of gears
- Modification sizing to define microgeometry of gears
- Finding an optimal solution well balanced for various criteria
- Incorporating contact analysis results in sizing functions
- Strategies for optimizing tooth flank form for strength and noise
- Sizing modifications considering load spectrum
- Sizing modifications considering manufacturing errors

Schedule:

Class Times: 8:30 AM – 4:30 PM
Lunch 11:30 AM - 12:30 PM

Pricing:

$2,100 per person.

Lunch is included as part of the course fee in the Gleason cafeteria. Customers will need to bring their laptops with them. Gleason will provide software and training material electronically prior to the training.

Registration:

Complete the request for registration on the next page to reserve your training spot. Please include the name of the person/persons attending and any special dietary considerations. The class size will be limited to 14 and fills up fast. The deadline to register is 2/7/2020.

Please send the completed form to the Gleason Training Department:
Attn: **KISSsoft Software Training**
Phone   **(585) 256-6688**
e-mail   jlabarge@gleason.com or gwrtraining@gleason.com

Receive course confirmation.

All classes at The Gleason Works Customer & Dealer Training Center are taught in English. If trainees require an interpreter, one must be provided by them or arranged through their Gleason Sales Office or representative.

Cancellations must be made at least 10 days in advance of a class. If a cancellation is received after that day but before the start of a class, the student will be charged 50 percent of all course fees. Students who do not attend a session for which they registered will be charged the full course fee.

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Request for Registration

KISSsoft Training
February 17-19, 2020 The Gleason Works, Rochester, NY

Date of this request: _____

Name(s): _____

Employee of Company: _____

Company address: _____

Telephone: _____

E-mail: _____

Training Details:

        Number of attendees: _____

        Attendee Name(s): _____

                      _____

                      _____

☐   Type of payment: Purchase Order   Purchase Order Number: _____

☐   Check Enclosed

☐   Credit Card – (Bring your credit card to the class for payment)

Gleason Hotel Providers

Would you like Gleason Works to make a hotel reservation for you? Yes _____ No _____
If yes, please specify hotel and dates for check-in and check out. Please note that some hotels provide transportation. The Gleason Works does not provide daily transportation.

Hotel _____ Check in _____ Check-out _____

Signature: _____ Date: _____

WOODCLIFF HOTEL & SPA 199 Woodcliff Drive, Fairport, New York 14450
www.woodcliffhotelspa.com
Current Rate (one breakfast included): $92 per night, plus tax
Reservations call: 1-800-365-3065 or (585) 248-4810 (Ask for the Gleason rate.) Complimentary shuttle service to/from Gleason is provided. (Must be arranged in advance by customer prior to arrival. 8:15 AM hotel departure to Gleason and 5:30 PM Gate 1 departure to hotel.) Shuttle service to/from airport and within a 3-mile radius of hotel is also provided by customer request.
The Woodcliff is approximately 12 miles from Gleason; estimated drive time is 20 minutes.
The approximate cost of a taxi to Gleason is $30 (one way).
Cancellation Policy: 24 hours in advance (must cancel by 6 PM day before check-in).

HILTON GARDEN INN DOWNTOWN 155 East Main Street, Rochester, NY 14604
www.rochesterdowntown.hgi.com
Current Rate (breakfast included): $94 per night, plus tax.
Reservations call: Toll Free: 1-877-782-9444 or 585-232-5000, then press "0" (ask for the Gleason rate).
Complimentary shuttle service to/from the airport and to/from Gleason is available. Call 585-232-5000, then press "0" when flight arrives. Shuttle service to/from Gleason MUST be arranged in advance.
Parking: Self-parking is available in the Stone Street Garage at a cost of $10 per night. Valet parking is available at a cost of $15 per night.
Cancellation Policy: 4 PM day of arrival.

Please send/submit the completed form using one of the email address below.
Attention: KISSsoft Software Training
Phone: (585) 256-6688
e-mail: jlabarge@gleason.com or gwrtraining@gleason.com
Once everything is finalized. We will follow up with a Sales Order Acknowledgment as your confirmation to attend.

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