

## **Connected @EMO2019 from Design to Finished Gear**

August 2019, Rochester, New York (USA)

*At this year's EMO show, Gleason Corporation will showcase a wide array of new design, manufacturing and inspection technologies for cylindrical and bevel gears. Highlights include: world's first Power Skiving Machine with Integrated Sharpening, new Chamfer Hobbing Technology, Hard Finishing of Gears in the Closed Loop, the new Gear Honing product line and the latest release of KISSsoft Transmission Design Software.*

### **Gear Design and Transmission Simulation with KISSsoft**

The market leader will demonstrate the current KISSsoft® Release 2019 with numerous new highlights: Among other things, "KISSdesign™", an instrument that allows intuitive concept design at system level, is now available. SKF and KISSsoft have also created a new interface to simplify the gear development process. This interface enables engineers to perform calculations using the latest bearing data from SKF via a direct connection to the SKF cloud. The manufacturability for Power Skiving can now also be evaluated in KISSsoft. After generating a special report with workpiece and tool data, this report can be transferred to Gleason if required, which makes data exchange between the designer and the tool supplier much easier and less error-prone.

The interface between GEMS® and KISSsoft provides an exchange of gear and system information between the two software packages. This allows the user to realistically evaluate and optimize every type of spiral bevel and hypoid gear - with a Closed Loop between the design and manufacturing software.

## **Integrated Chamfer Hobbing on the New Genesis 160HCD Hobbing Machine**

The latest edition to the Genesis<sup>®</sup> Gear Hobbing Machine family combines the state-of-the-art technology in gear hobbing with newly developed Chamfer Hobbing, which produces precise chamfers according to customer specifications, while minimizing tool cost-per-piece. Gleason will also demonstrate live the seamless integration of tool and machine workflows, reducing manual data input and minimizing input errors, tracking every aspect of tool information from supplier to machine, to crib, to sharpening, to end of tool life.

## **World's First: Power Skiving with Integrated Tool Sharpening**

The 300PS Power Skiving Machine is well-suited for soft cutting and hard finishing of cylindrical internal and external gears. The 300PS is now available with a brand-new feature, which premieres at EMO: the integrated Tool Sharpening functionality for spur and helical cutting tools, enabling continuous gear production without frequent tool change at consistently high quality, while greatly reducing both, tool cost-per-piece and tool inventory. The 300PS is "Closed Loop ready": it can directly interface with Gleason GMS<sup>®</sup> Metrology Systems for seamless data transfer and automatic corrections.

## **Closed Loop, High Accuracy and Excellent Surface Finish with the Genesis 260GX Threaded Wheel Grinding Machine**

The GX Series Threaded Wheel Grinding Machines are the ideal solution for customers in high-productivity, high-quality environments, combining maximum efficiency with minimal idle and setup times. The GX series takes gear finishing to a new level, with features like twist-control and polish grinding as well as integrated automation and software-guided single tool setup. The machine comes "Closed Loop ready": interfacing directly with the

Gleason GRSL Gear Roll Testing System with Laser Technology for fast, reliable, automatic data transfer and corrections.

## **Combi Honing and Super Finishing of Gears on the 260HMS**

The former Faessler line of gear honing solutions is now part of Gleason, including the 260HMS Gear Honing Machine which is a universal solution for a wide array of gear hard finishing applications. The Combi Honing™ feature enables the honing of two synchronized gears in one setup – like stepped pinions in typical eDrive power transmissions or two gears on one shaft – with or without a defined modification in lead and profile. Combi Honing can also be employed for the Super Finishing of gears combining the strength of different abrasives in one setup to achieve near-perfect surface qualities. With the 260HMS Gleason provides a highly economic, quality hard finishing system including tooling and fully integrated automation.

## **Gear Noise Detection and Analysis with 300GMSL Multi-Sensor Technology**

The latest 300GMSL Gear Metrology System combines standard tactile probing methods for cylindrical and bevel gears with the power of non-contact laser scanning of tooth flank form. The integration of laser scanning and associated 3D graphics with CAD interface considerably expands both the functionality and the range of applications for this machine platform and is ideally suited for thorough gear analysis and development. Achieving a more complete analysis of process variable changes becomes much more intuitive with the high-resolution topographical surface mapping capability. A new host of tools for the detection and analysis of gear noise makes the 300GMSL an ideal solution for addressing this critical factor in today's eDrive transmissions. The 300GMSL is "Closed Loop ready" to network to many of Gleason's Hard Finishing Machines.

## **100% In-Process Gear Inspection with GRSL Double Flank Gear Roll Testing System with Laser Technology**

The new GRSL Gear Roll Testing System with Laser Technology revolutionizes gear measuring and sets a new standard for throughput where high speed, high volume testing is required. This compact gear inspection unit provides both double flank roll testing as well as analytical index and involute measurement on all teeth as an in-process inspection in a matter of seconds. The GRSL can be employed either as stand-alone or fully integrated, automated solution. Real time analytics and process trend analysis are clearly visible over the production run, allowing for automatic Closed Loop corrections on Gleason process equipment. Users can also sort by defect so gears for rework or scrap are tracked by characteristic.

## **New Workholding Solutions**

Gleason presents two new workholding products: The new generation of expanding and contracting **Hydraulic Production Arbors** offers a host of benefits for many bore and shank clamping applications for cylindrical gears of all types and many bevel gears. New **Modular Standard Workholding** puts the performance benefits of Gleason's latest quick-change workholding solutions into a system of standard, interchangeable modules. Available for cylindrical gear bores ranging from 18 to 100 mm in diameter, and easily applied to all types of Gleason and other gear equipment producers' machines.

## **Gleason Diamond Dressing Tools for Improved Performance**

Gleason diamond dressing tools improve performance on machines of various manufacturers. These diamond-plated tools can be re-plated multiple times to extend tool life and maintain the highest precision. With 30+ years of experience in diamond plating technology Gleason can address every gear related dressing solution in the market including solutions for polished surfaces or asymmetrical gears. Tools can be equipped with RFID, barcode or QR technology to integrate in 4.0 tool management environments.

## Innovative Service Offerings

Gleason will present a host of new service offerings including: The **Gleason SPN Program (Safety-Productivity-Networking)** is a simple and economic field service alternative to a complete re-control of old Siemens 840D pl and many models of Gleason Metrology Inspection machines. With the SPN Upgrade, machine owners regain system safety with updated virus and hacker protection, secure spare parts availability, and extend the control's functionalities beyond its former capabilities. **Gleason Fingerprint** diagnoses machine problems and potentially prevents downtime of installations. Gleason will showcase their capabilities via applications in the cloud and edge computer to serve varied customer requirements. **Tool-to-Machine communication** adds intelligence to tool management, reduces manual data input and minimizes input errors. It provides data and methods to track every aspect of tool information from supplier to machine, to crib, to sharpening, to end of tool life. The new **Gleason Academy** platform is continuously growing in content including theoretical training classes and operator training in tutorial style. Our trainers will show you how easy it is to get educated without travel, related expenses and the loss of time.

*Gleason offers its customers "Total Gear Solutions". Gleason is a leader in the development, manufacture and sale of gear production machinery, related equipment, automation solutions, plastic gears and design software for gears and power transmission systems. The Company's products are used by customers in automotive, truck, aircraft, agriculture, mining, energy, construction, power tool and marine industries and by a diverse set of customers serving various industrial equipment markets. Gleason has manufacturing operations in the United States, Brazil, Germany, Switzerland, India, China and Japan, and has sales and service offices throughout North and South America, Europe and in the Asia-Pacific region. More information about Gleason Corporation is available at [www.gleason.com](http://www.gleason.com).*

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