

# UEDA HEAVY GEAR WORKS LTD PROJECT



## MAAG SH600/735 CONTROLS UPGRADE

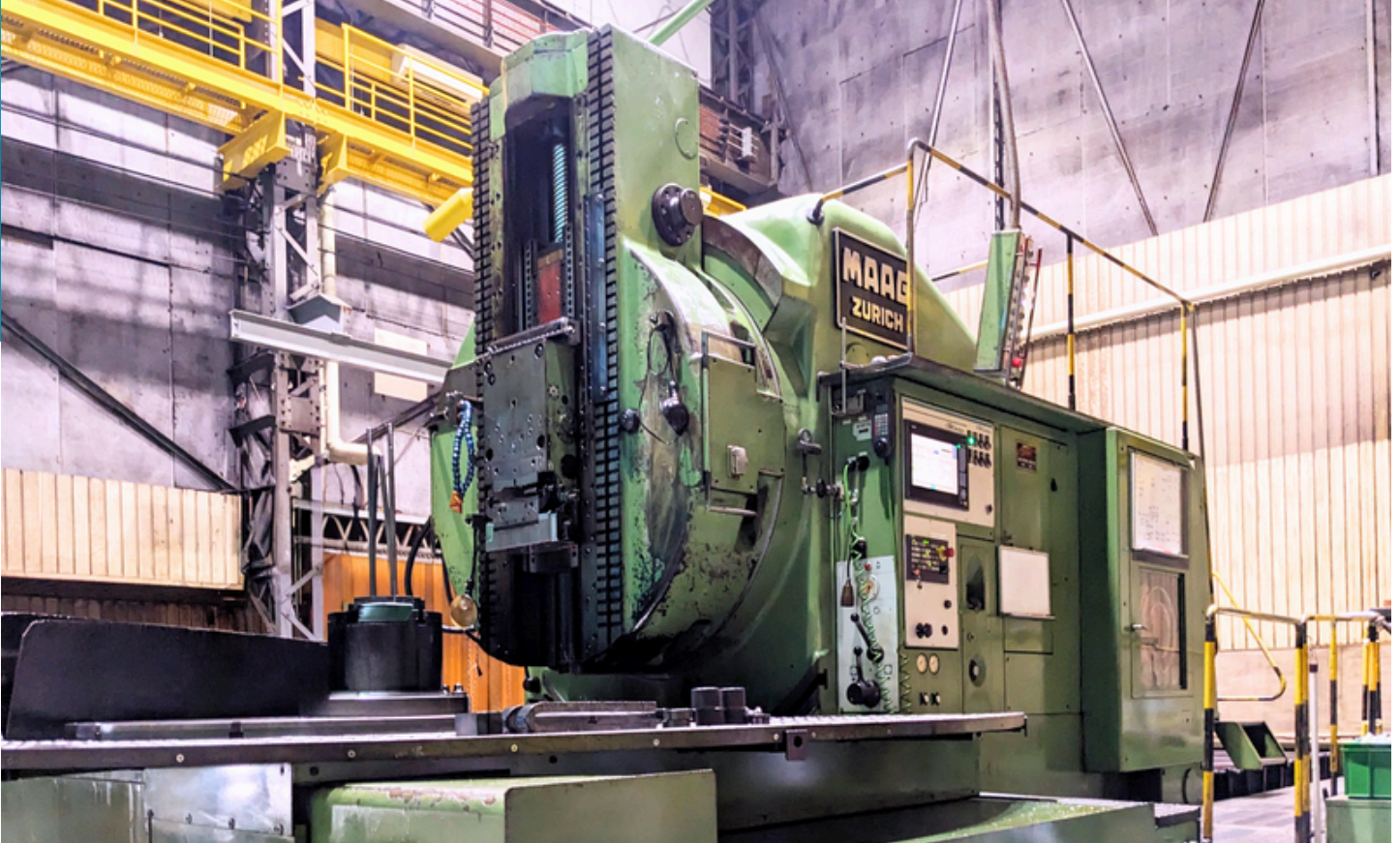
# The Customer



Ueda Heavy Gear Works Ltd is one of Japan's flagships of heavy industry companies. Established in 1893, Ueda Heavy Gear Works has become the leading gear manufacturer in Japan, supplying large gears, pinions and other power transmission components to all major steel and machinery manufacturers in Japan. Located in Osaka, specialising in manufacturing large cylindrical girth gears, pinions and bevel gears, Ueda Heavy Gear Works has a large number of MAAG gear shaping machines.



# The Challenge



As of April 2024, Siemens officially ended the product lifecycle for some of the SINUMERIK 840D Powerline CNC systems and the SIMODRIVE 611D drive components that included power modules and control cards. With the discontinuation of manufacturing and the end of guaranteed factory tested spare parts availability, users of these systems are advised to upgrade to current platforms to ensure long-term maintainability and operational reliability.

The MAAG SH600/735 gear shaping machine currently utilizes the SINUMERIK 840Dsl CNC system. It was originally retrofitted by CNC Design in 2014. However, certain components within its operator panel are derived from the older SINUMERIK 840D Powerline family, which has now reached end-of-life. This partial legacy configuration poses a risk to service continuity and spare parts availability.

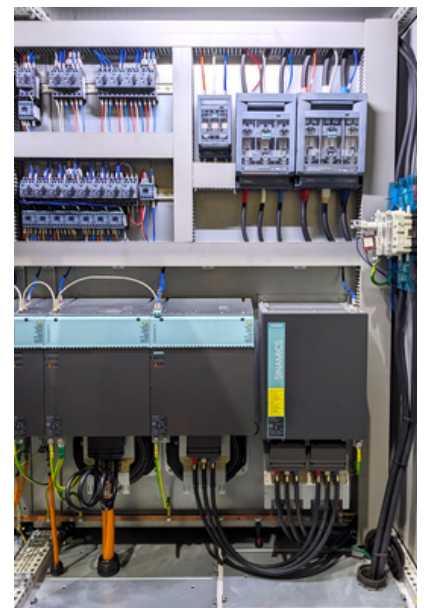


# The Solution



To align the MAAG SH600/735 with current technological standards while minimizing disruption, a strategic retrofit was proposed. The upgrade involved replacing the CNC NCU and operator panel components with the latest generation:

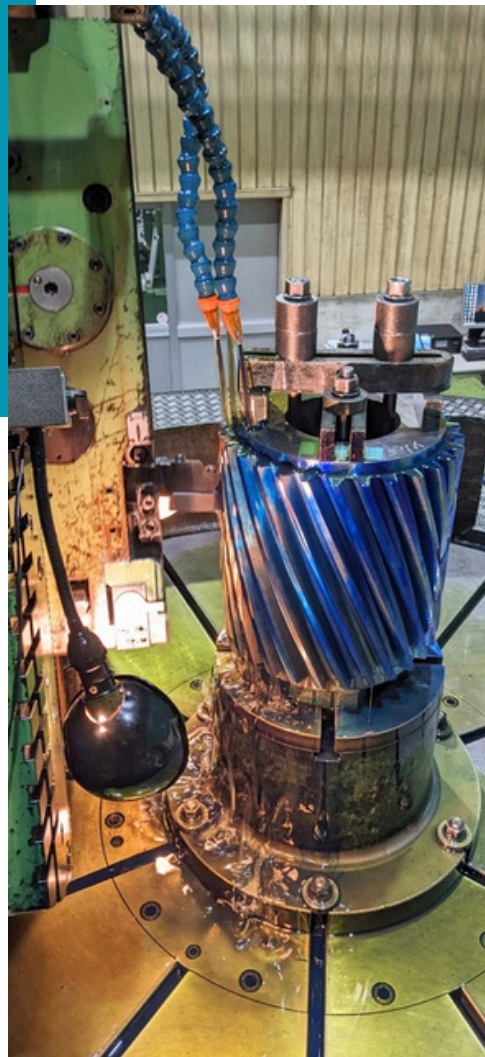
- SINUMERIK ONE CNC
- New Operator Panel, Machine Control Panel & Hand-Held Unit
- On-site installation, commissioning & training plus updated documentation





# Outcome & Benefits

By focusing the upgrade on control and interface components only, the retrofit reduces downtime, lowers investment cost, and will ensure compatibility with the MAAG 250/300E scheduled for its upgrade in the near future, thereby streamlining future maintenance, spare parts management, and machine operation.



## Outcome & Benefits

- **Future-Proofing:** The SH600/735 hardware & software will be harmonised with the SH250/300E, once upgraded, simplifying lifecycle service and support.
- **Operational Continuity:** No need to replace motors, S120 drives, or measuring systems.
- **Cost-Efficiency:** Maximizes use of existing assets while leveraging modern CNC capabilities.
- **Ease of Maintenance:** Ensures long-term availability of spare parts and Siemens support.

This case exemplifies a targeted modernization approach, preserving core mechanical assets while enabling a digital-ready control architecture through SINUMERIK ONE.

# Client Feedback



The CNC retrofit of the MAAG gear cutting machines can be realized by knowing the mechanism and features of the MAAG gear cutting machines and putting the latest Siemens technology on it.

CNC Design Pty Ltd is the only company in the world that can do this. MAAG gear cutting machines are still widely used in the production of large gears.

With the help of CNC Design Pty Ltd, I hope we will continue to use MAAG gear cutting machines with great care.

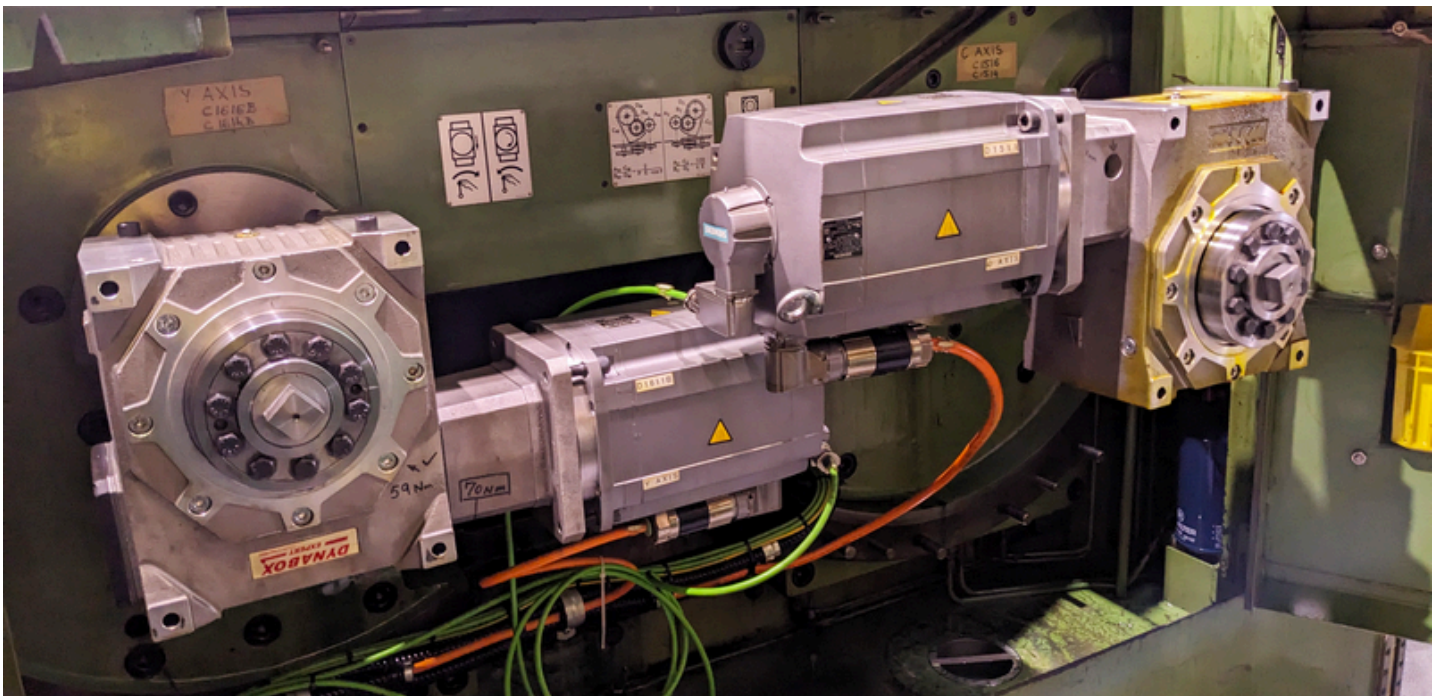
**Masakatsu Ueda**  
**President**  
**Ueda Heavy Gear Works Ltd.**



# Why CNC Design?



CNC Design is an Australian company established in 1984 with core competencies in Machine Tools, Production Machinery and associated Motion Control products. With more than 160 people located in our offices in Australia, New Zealand and SE Asia, we have been the exclusive Siemens distributor in this region for their Machine Tool Systems products and services for more than 40 years. CNC Design has experience working with our customers to develop solutions tailored to their applications with more than 3,000 projects completed in over thirty countries.



# THANK YOU

**CNCdesign**  
Motion Control Solutions

**Our technicians are by your side all over the world**



Upgrades &  
Retrofitting



On-site  
Support



Installation



Spare  
Parts



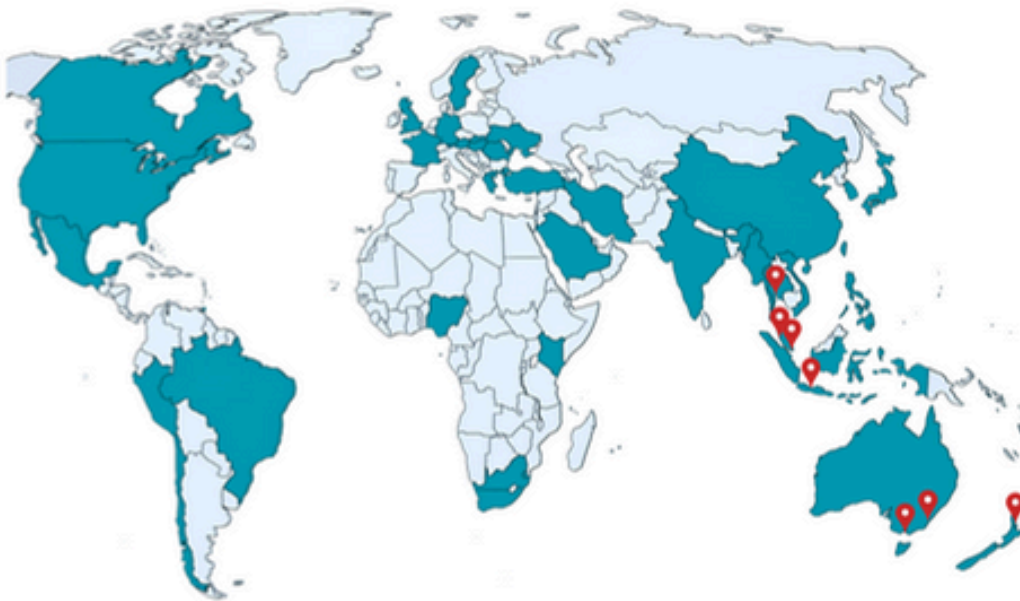
Maintenance



Training



Remote  
Customer  
Care (RCC)



CNC Design Pty. Ltd.  
Melbourne, Sydney, Australia  
Established 1984



CNC Design Ltd.  
Auckland, New Zealand,  
Established 1989



PT CNC Disain Nusantara  
Jakarta, Surabaya, Indonesia,  
Established 1996



CNC Design Co. Ltd.  
Bangkok, Thailand,  
Established 2000



CNC Design Sdn. Bhd.  
Kuala Lumpur, Johor Bahru, Malaysia,  
Established 2003



CNC Design Pte. Ltd.  
Singapore,  
Established 2009



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