Your partner for POWERTRAIN challenges

ADVANCED GRINDING SOLUTIONS

DANOBAT

WHO IS **DANOBAT**?

DANOBAT

Grinding SOLUTIONS for powertrain applications

LG

Integration of a gantry loader or a robot for automatic loading. **Additional stations**, such as SPC or NOK drawers, and cleaning systems can be integrated into the same cell

CG

Customizable **wheelhead**

Optidress: the new way of dressing

PG

Latest digital technology to **monitor the machine's condition**, and to assist the operator

LG – VERSATILE AND HIGH SPEED PRODUCTION MACHINE

- The machine’s natural granite base and the linear motor driven slides provide t**he high accuracy and thermal stability**
- The use of a water cooled electrospindle makes possible the combination of conventional and high speed grinding
- Reduction change over time: Wide range of tailstock with 80 – 260 mm strokes

CBN | 1000 mm | 290 mm | 80 kg | 500 mm | 140 m/s

CG – COMPACT PRODUCTION MACHINE

- The compact design with small footprint combined with its high rigidity make the CG the perfect grinding machine to work in the **most exigent industrial and production environments**
- The machine's natural granite base and the linear motor driven slides provide the high accuracy and thermal stability
- A winning combination: **speed and an in-depth understanding** of grinding
- The use of a water cooled electrospindle makes possible the eliminate belts and its vibration effect
- Wide range of **tailstock with 80 – 600 mm strokes**

Conventional	1800 mm	440 mm	500 kg	610 mm	80 m/s

PG – MASS PRODUCTION MACHINE

- Proper machine for **big batches and mass production for long time** without operator intervention
- It offers a production solution that can accommodate **parts of up to 1000 mm length and wheels of max. 910 mm in diameter**
- **In/post-process measuring** equipment

Convent.	1000 mm	440 mm	500 kg	910 mm	80 m/s

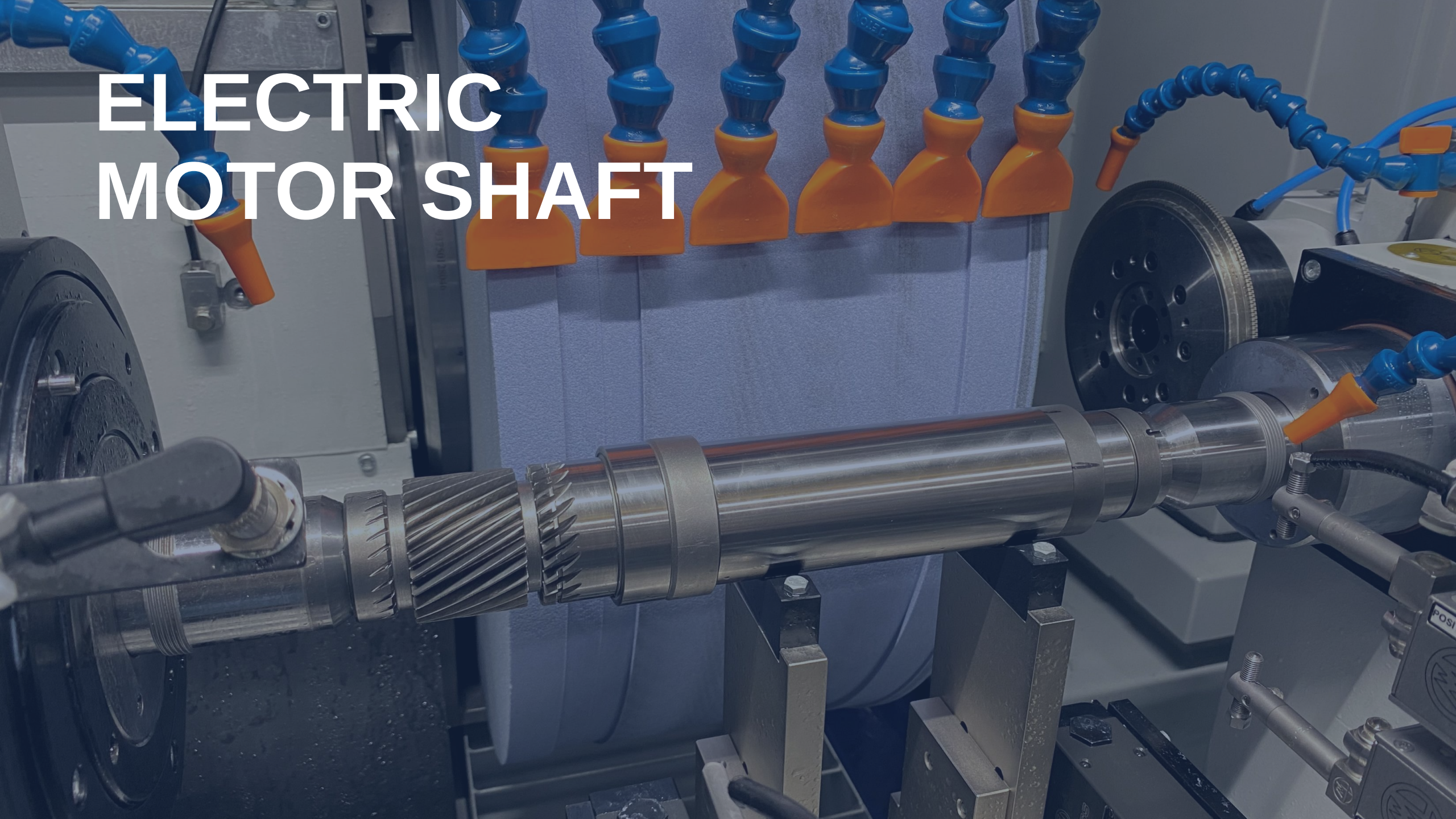
Powertrain APPLICATIONS

E-mobility

Electric vehicle gearbox shaft
Electric vehicle motor shaft

CVT

Truck transmission shaft



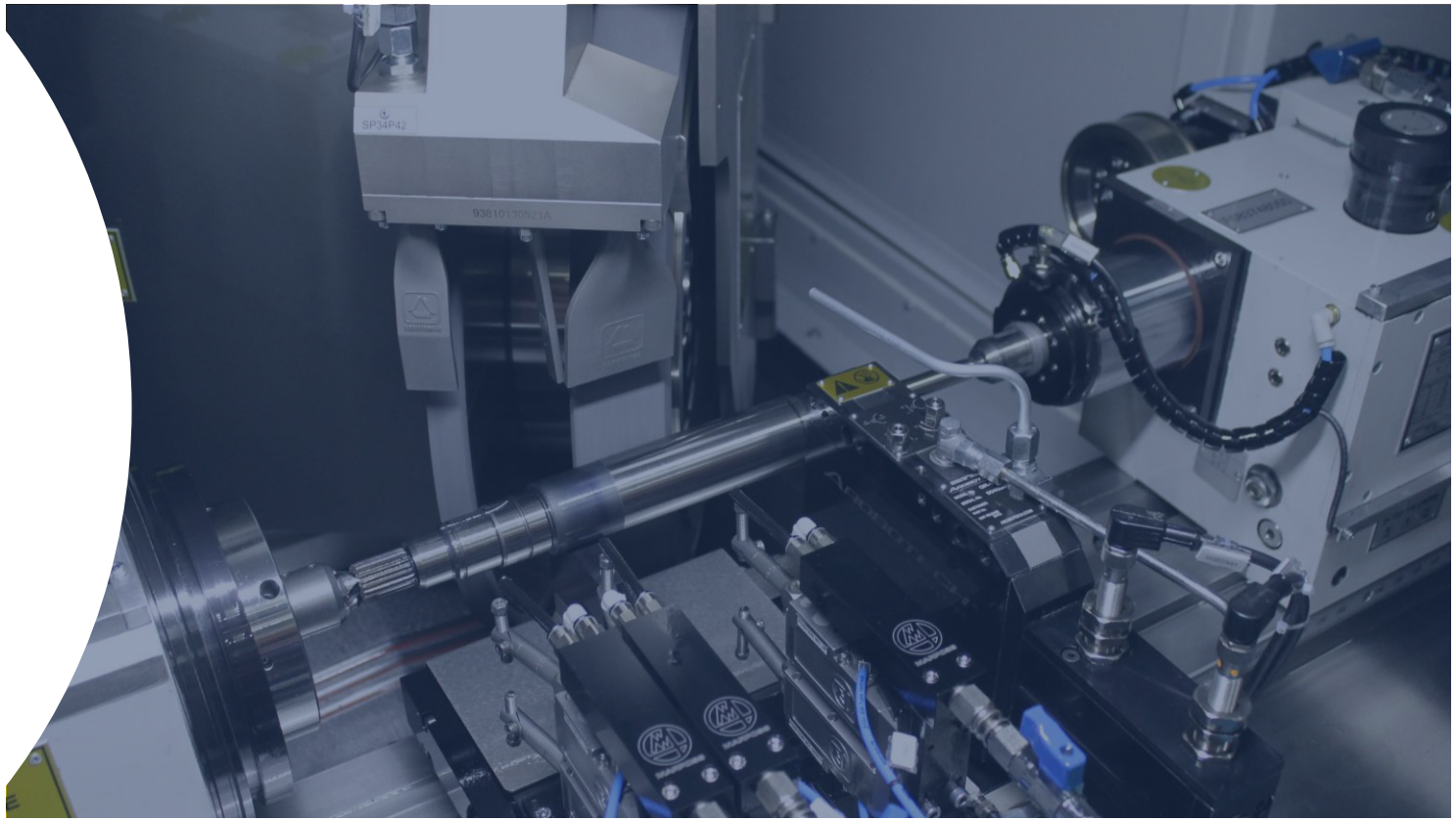
ELECTRIC MOTOR SHAFT

CASE STUDY I

Machine model
LG-600-S

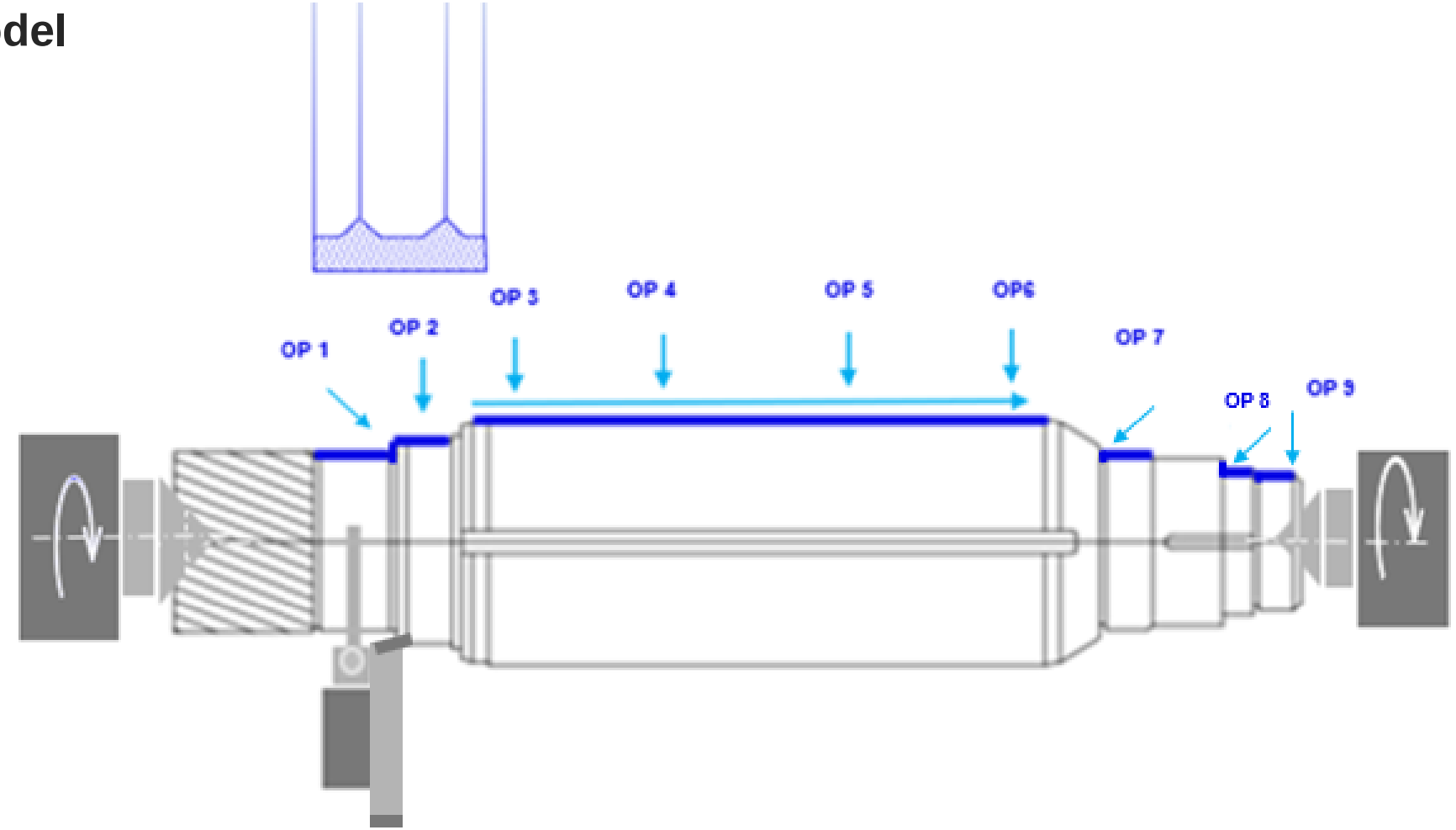
HIGHLIGHTS

- Enables **high speed grinding**, up to 140 m/s peripheral speed
- **Improve your performance** by grinding Ø + faces without tool change neither B axis rotation
- Maximum flexibility. **Reduce your reference change time up to 70%** no need to change grinding wheel for each part reference!



CASE STUDY I

Machine model
LG-600-S



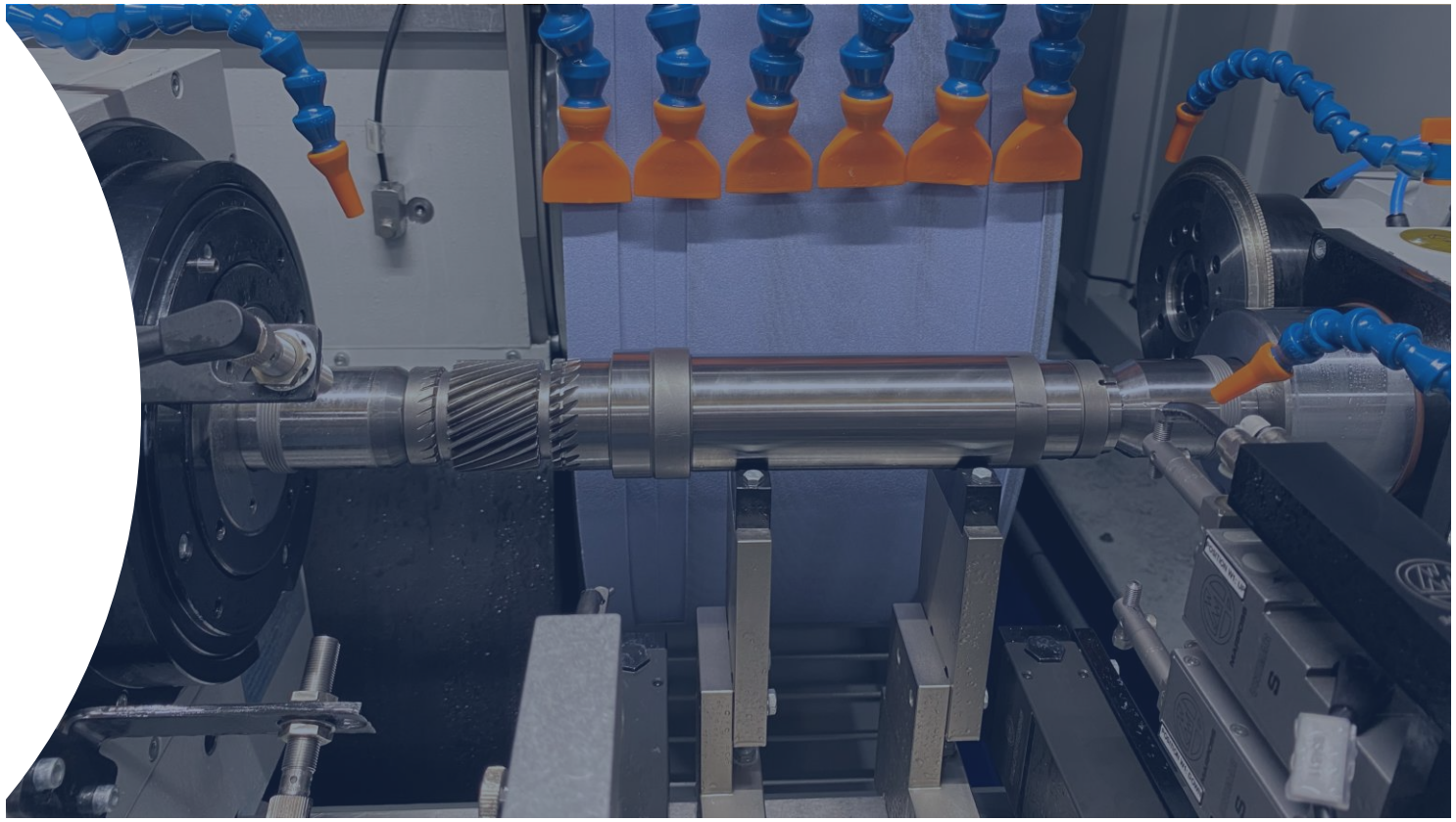
Grinding technology	Time study	Wheel life	Time of changeover	Annual production	Cost per part
Kiss Grinding	125.3 s	33,000 parts	7 mins	128,945 parts	0.3€

CASE STUDY II

Machine model
PG-600-S

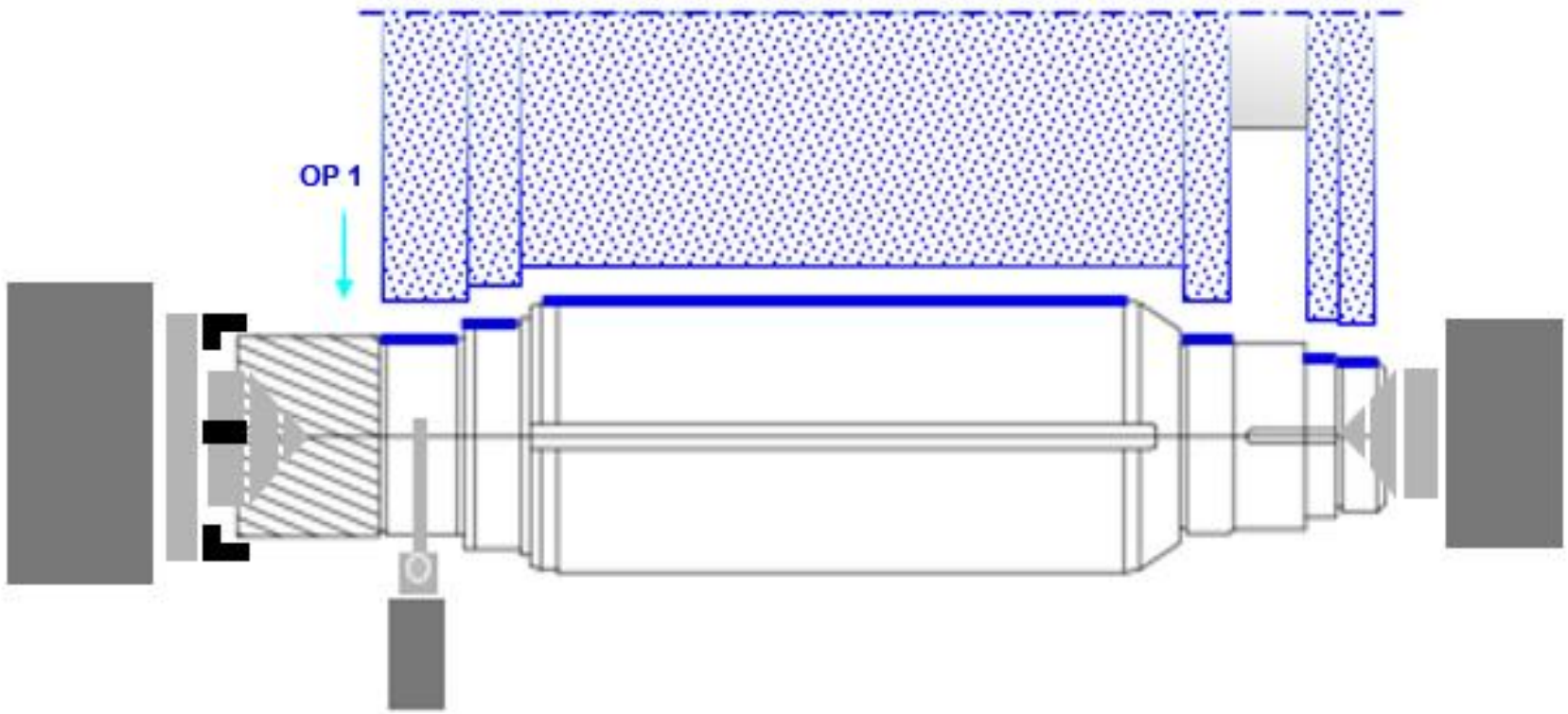
HIGHLIGHTS

- **Increased throughput** reducing cycle time up to 70%, by grinding 6 diameters simultaneously
- **Increased availability** by smart Optidress system. Enables a fast-grinding Wheel shape change without changing grinding wheel
- **Reduced tool change frequency and increased availability** by means of long tool life
- **Increase the availability** because the grinding process is the most simplest way possible due the stiffness of the machine avoiding unnecessary movements



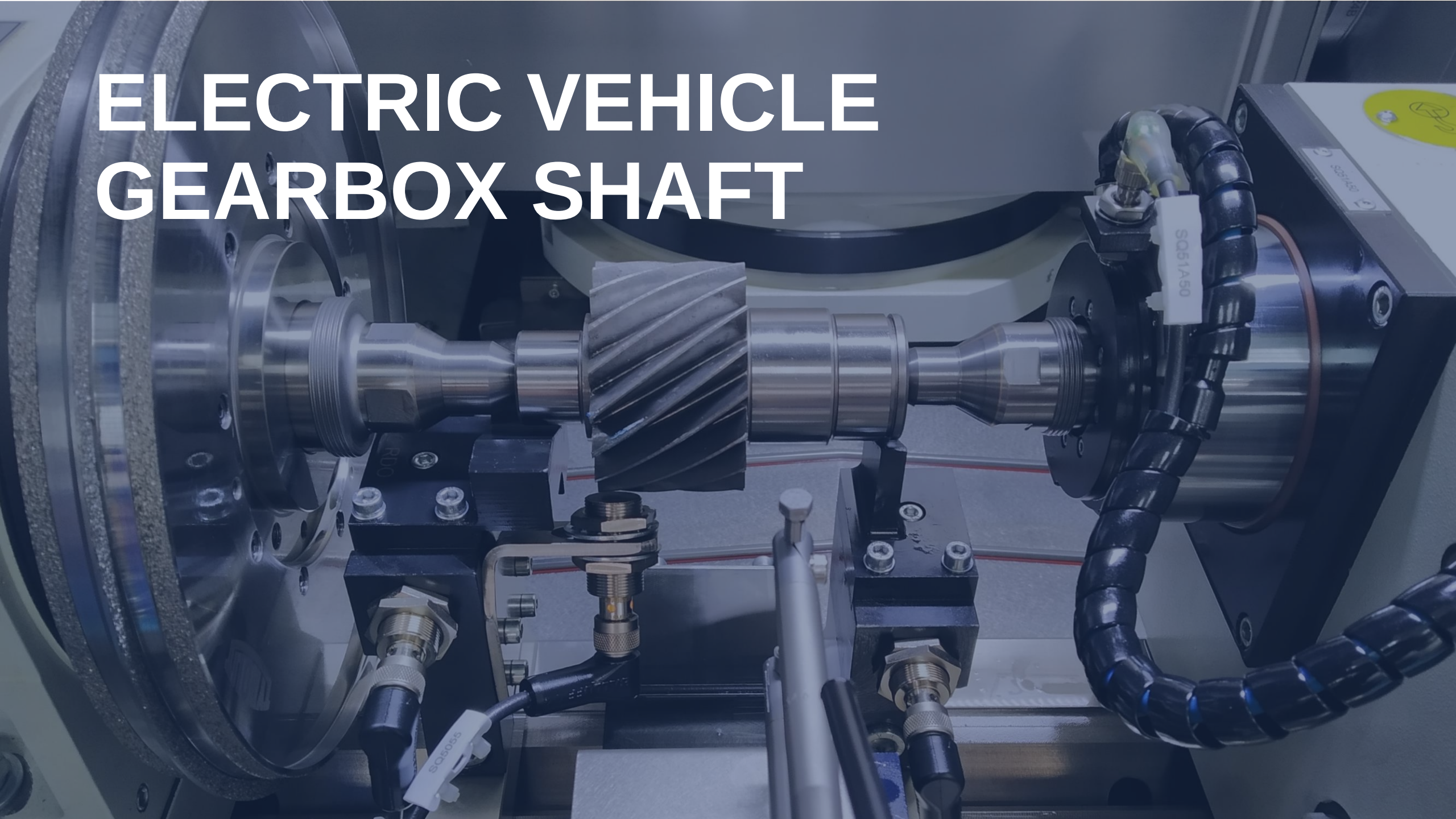
CASE STUDY II

Machine model
PG-600-S



Grinding technology	Time study	Wheel life	Time of changeover	Annual production	Cost per part
1 plunge with a tandem grinding wheel	34.6 s	266,800 parts	25 mins	466,959 parts	0.006 €

ELECTRIC VEHICLE GEARBOX SHAFT

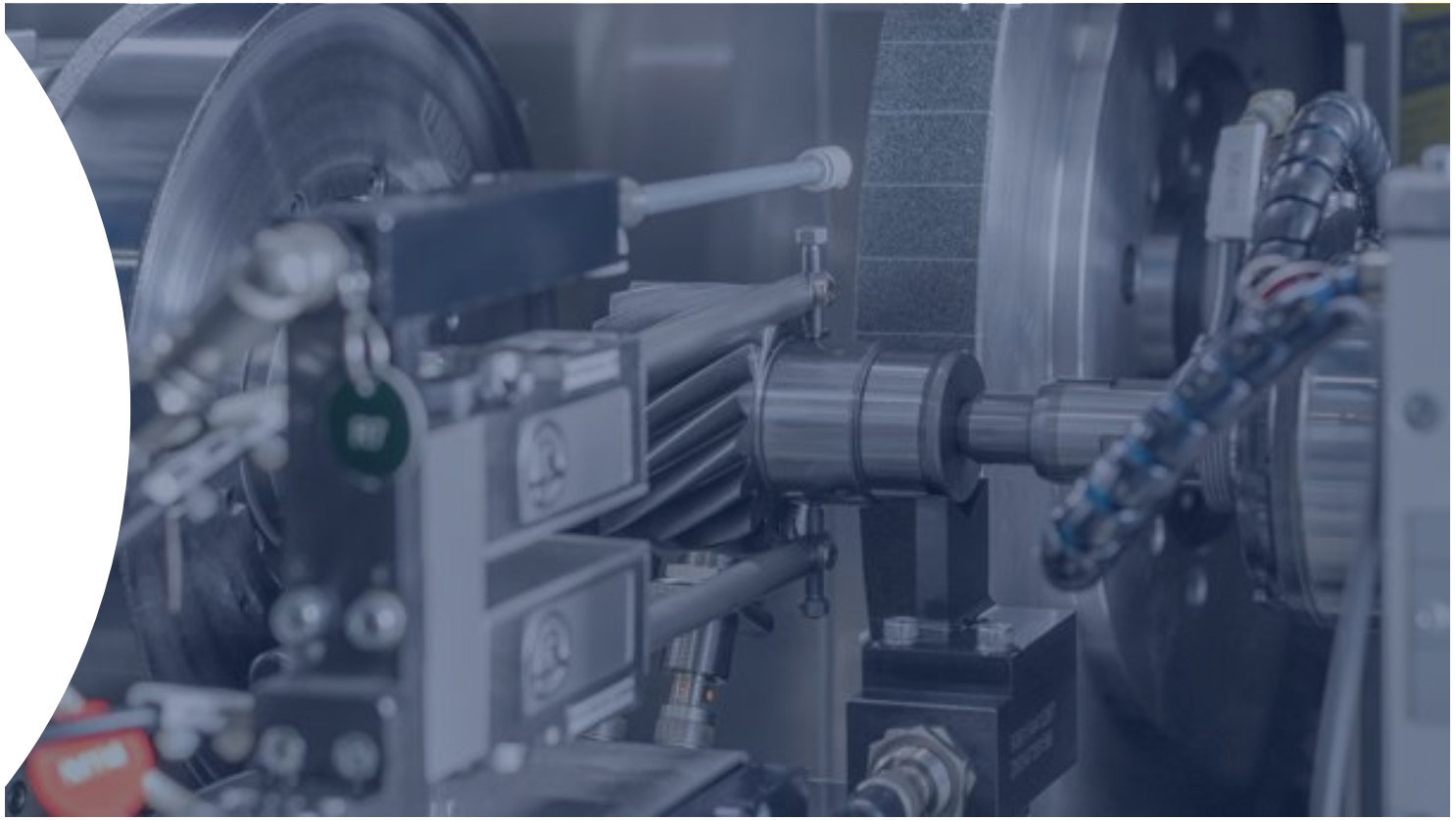


CASE STUDY III

Machine model
LG-600-S

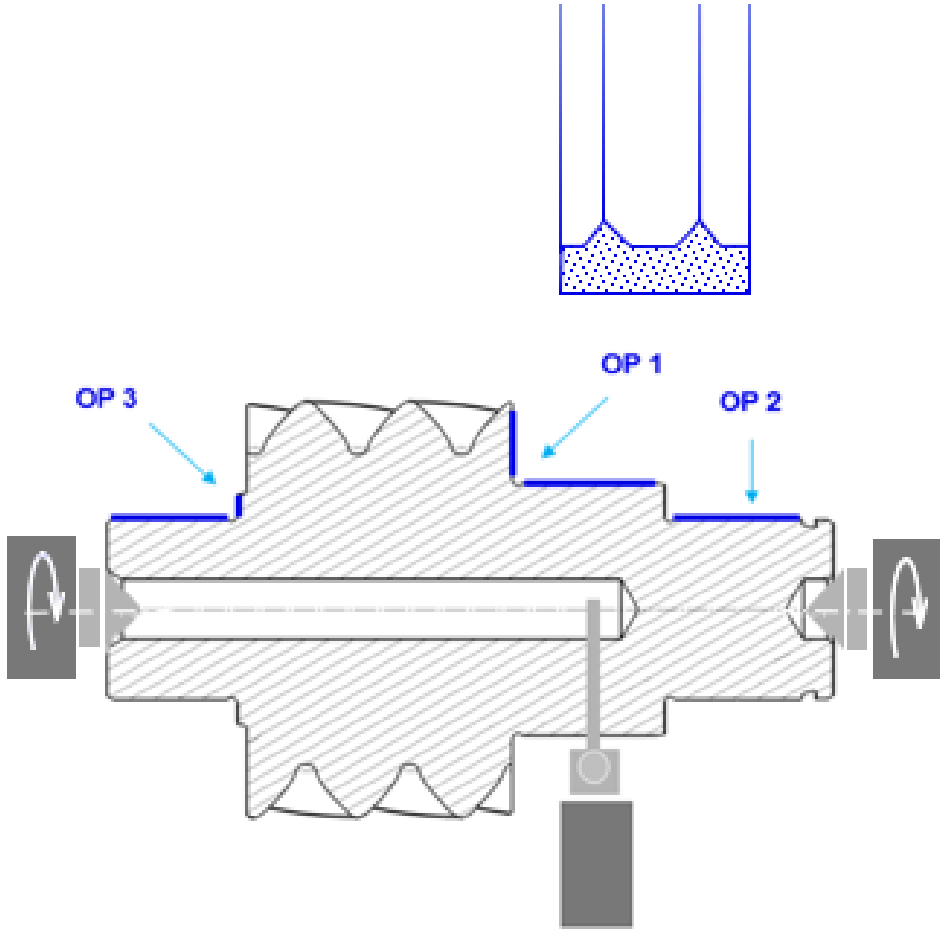
HIGHLIGHTS

- Enables high speed grinding, **up to 140 m/s peripheral speed**
- **Improve your performance** by grinding Ø + faces without tool change neither B axis rotation
- **Maximum flexibility**. Reduce your reference change time up to 70% no need to change grinding wheel for each part reference!



CASE STUDY III

Machine model
LG-600-S



Grinding technology	Time study	Wheel life	Time of changeover	Annual production	Cost per part
Kiss Grinding	54.4 s	74,000 parts	8 mins	279,000 parts	0.09 €

E-mobility

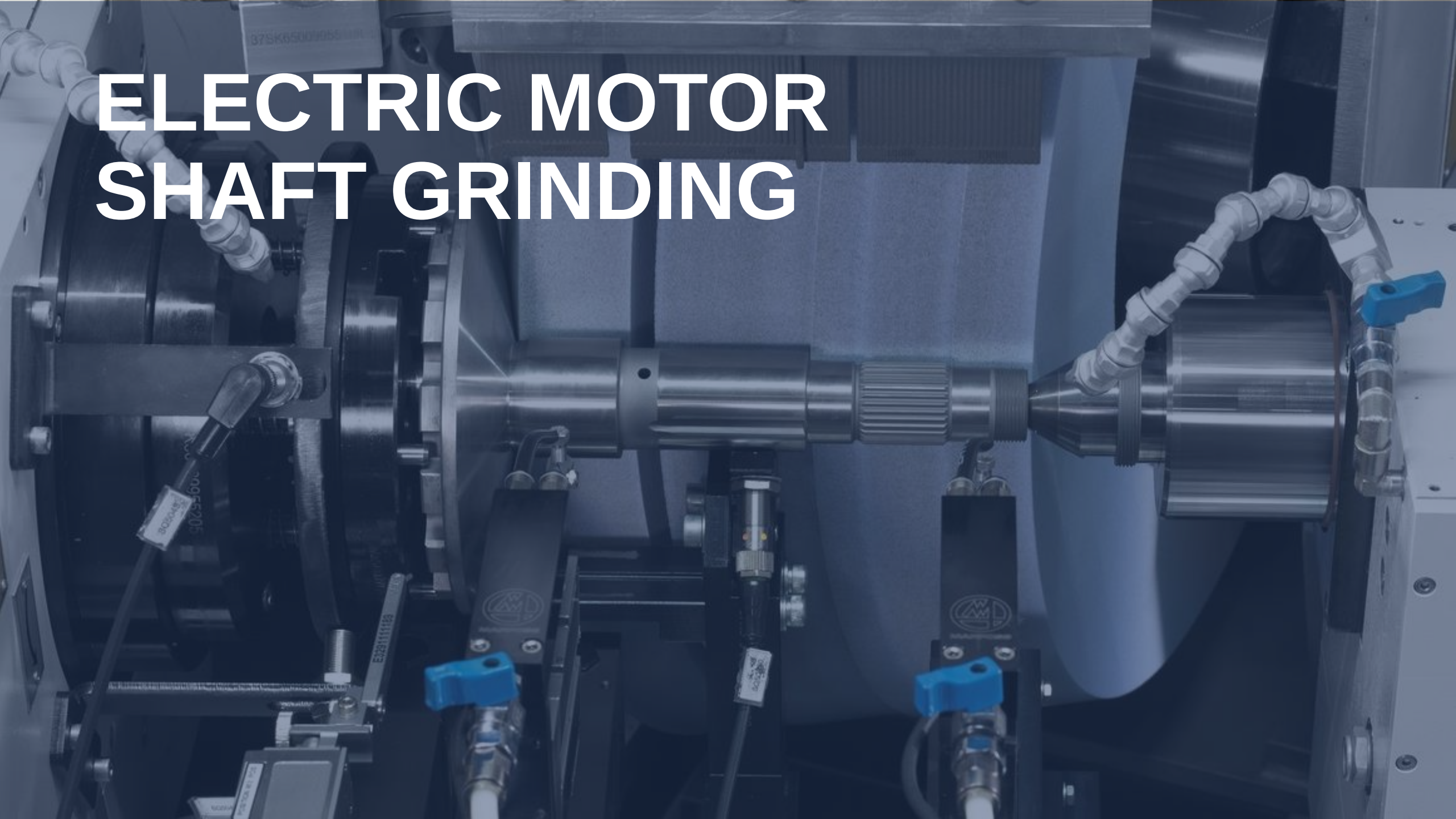
CVT

(Continuously Variable Transmission)

Truck transmission shaft

Transmission shaft

ELECTRIC MOTOR SHAFT GRINDING

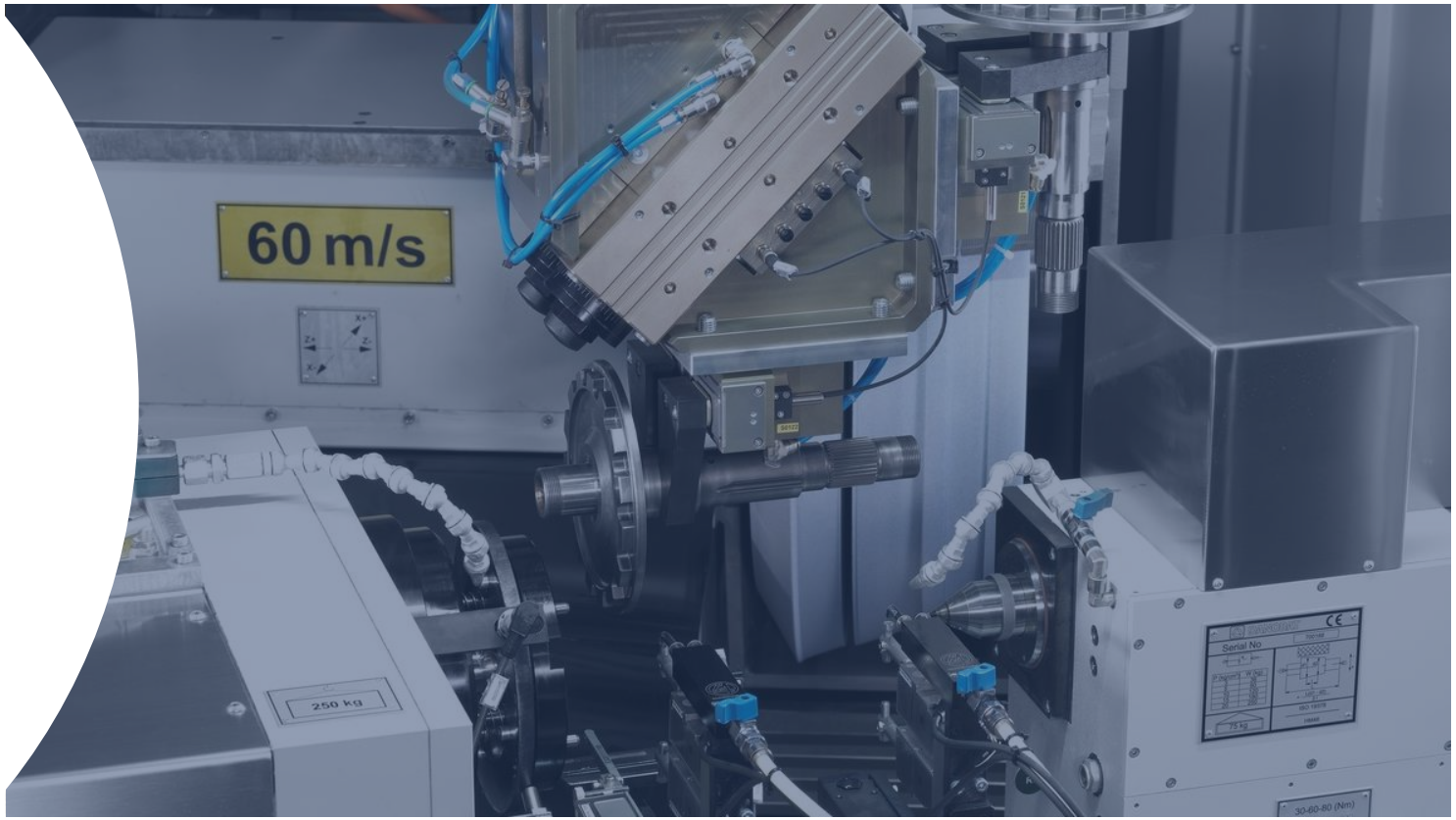


CASE STUDY I

Machine model
PG-600-A

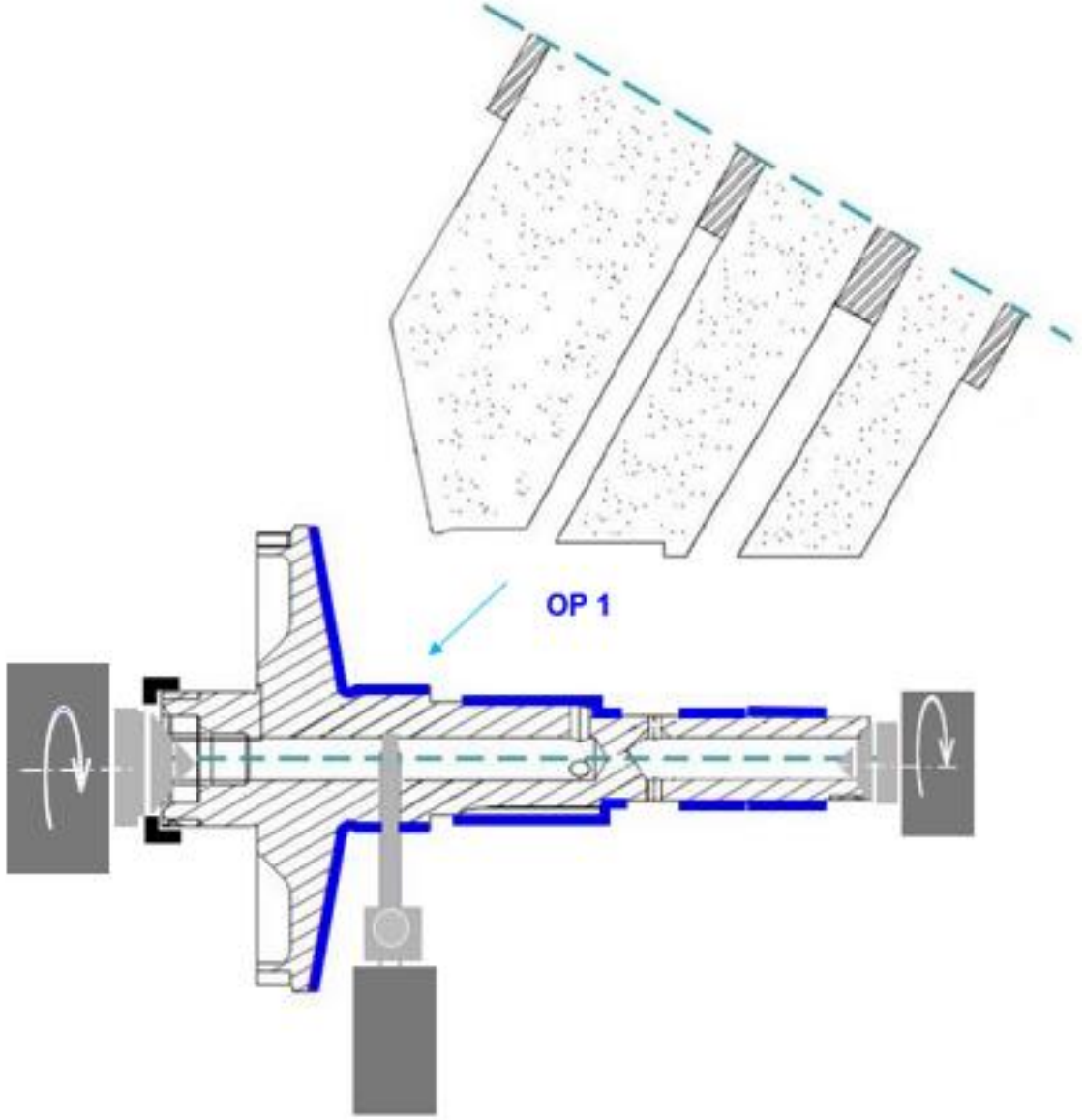
HIGHLIGHTS

- Enables high speed grinding, **up to 60 m/s peripheral speed**
- **Increased availability** by smart Optidress system. Enables a fast-grinding Wheel shape change without changing grinding wheel
- **Reduced tool change time** and **increased availability** by means of long tool life
- **Automatic taper correction**



CASE STUDY I

Machine model
PG-600-A



Grinding technology	Time study	Wheel life	Time of changeover	Annual production	Cost per part
1 plunge with a tandem grinding wheel	49.7 s	72,000 parts	58 mins	325,086 parts	0.05 €

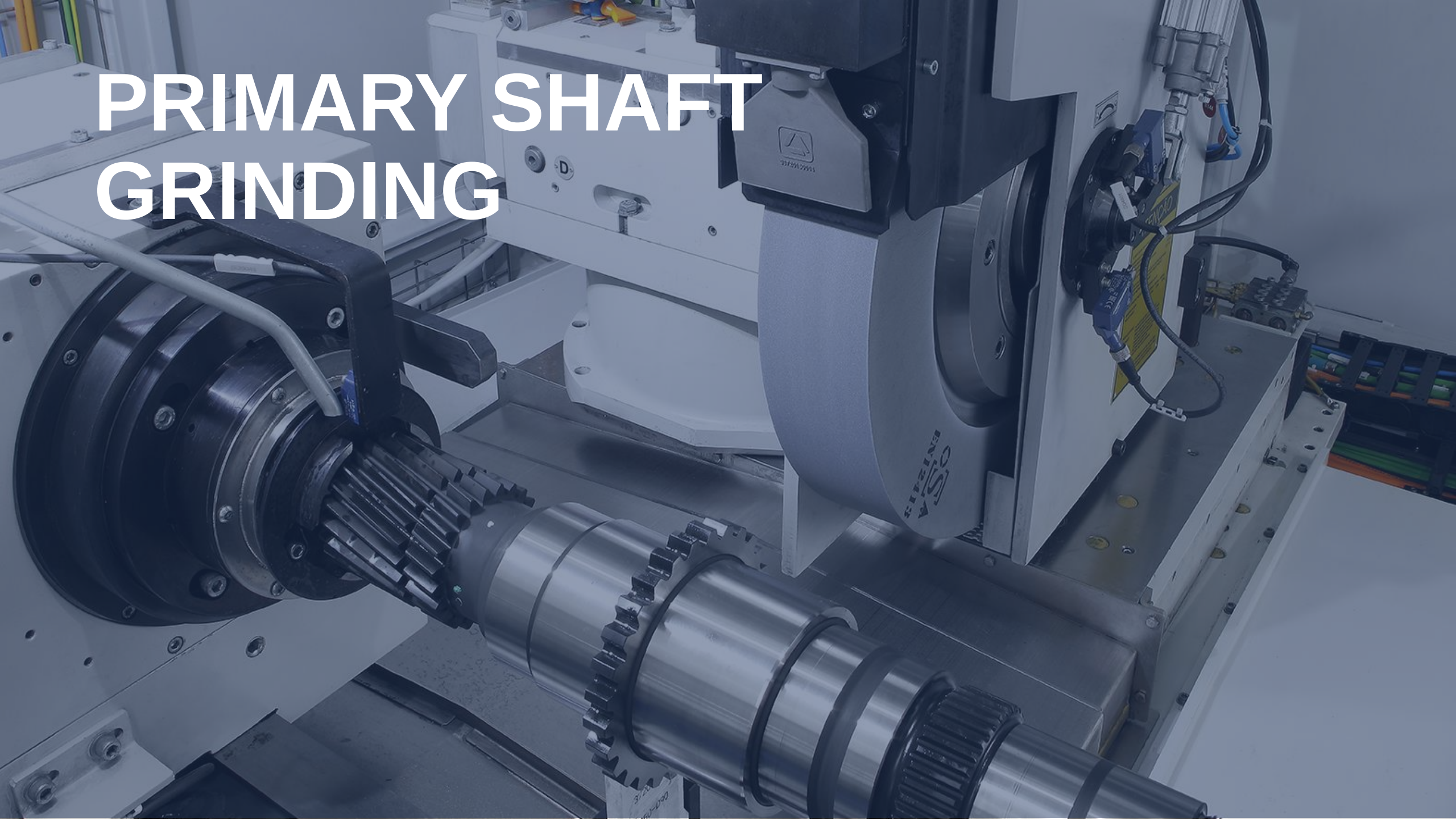
E-mobility

CVT

Truck transmission shaft

Primary shaft
Secondary shaft
Output shaft

PRIMARY SHAFT GRINDING

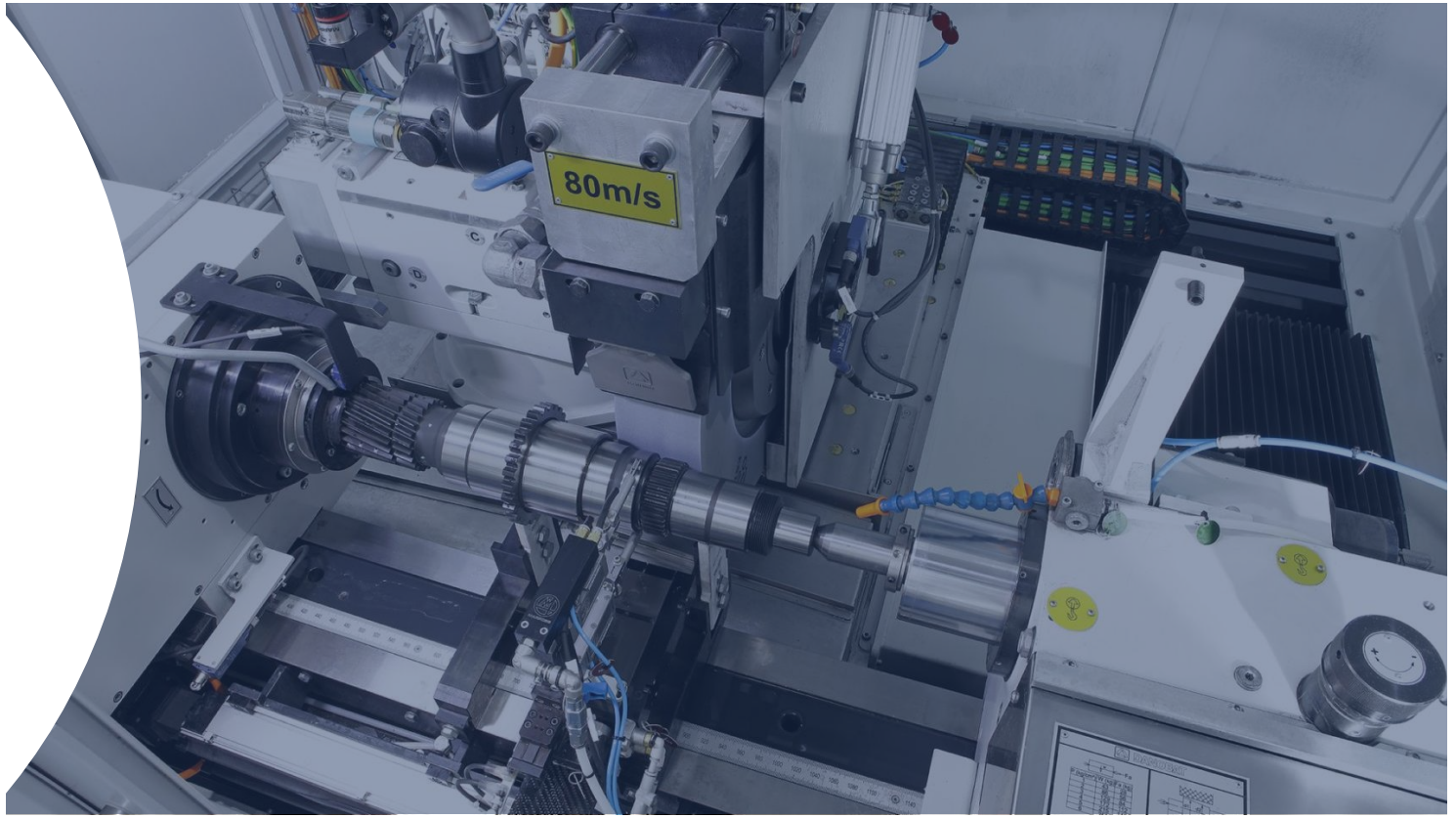


CASE STUDY I

Machine model
CG-600-S

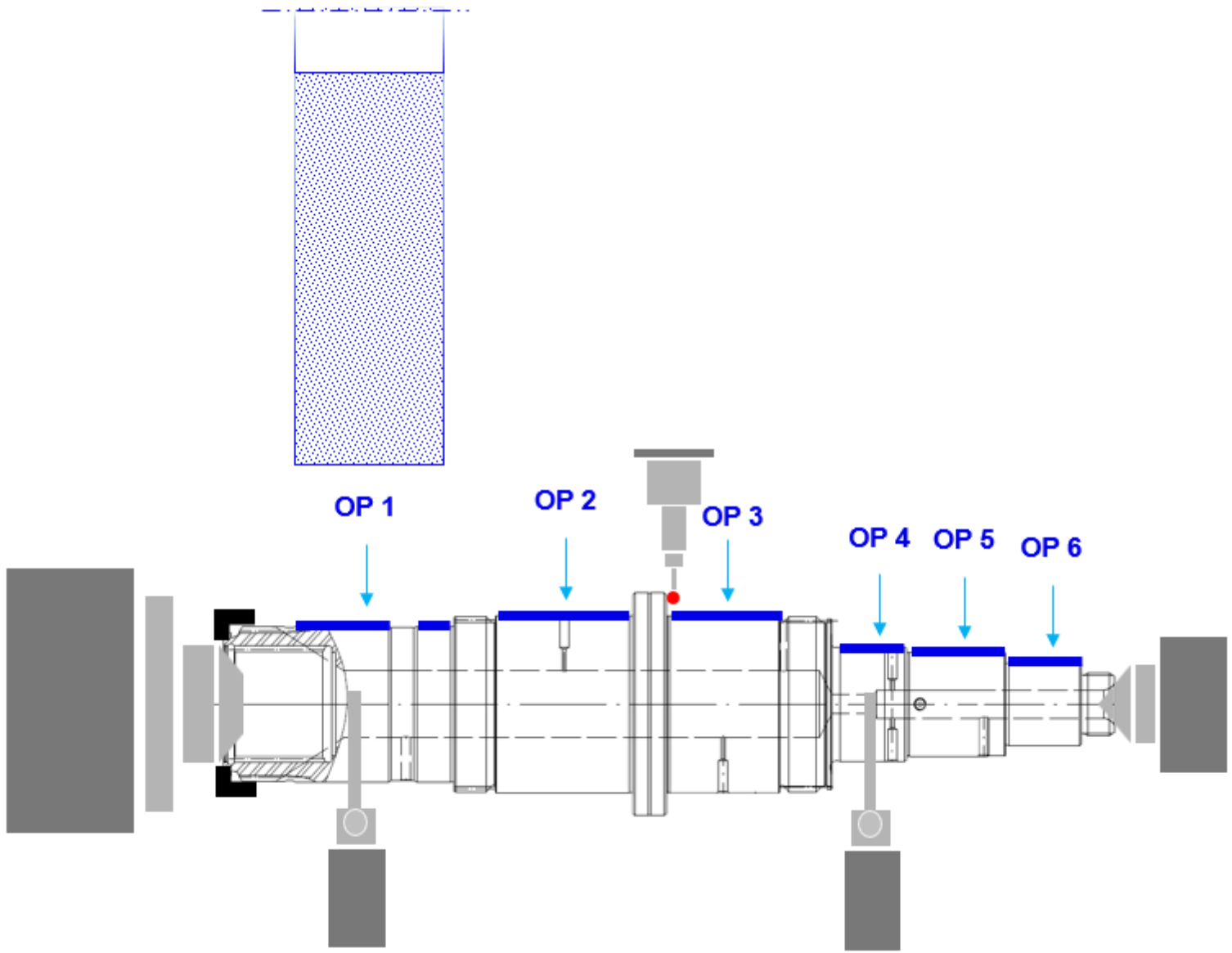
HIGHLIGHTS

- **Reduced tool change time and increased availability** by means of long tool life
- GO FAST! **80 m/s with conventional abrasive** improving the grinding performance
- Auto Setup. Automatic wheel dressing of new wheel without manual setup.
- Automatic part program selection by stock quill position
- **Mobile measuring system**. Wide range in-process measuring system on CNC actuated moving slide

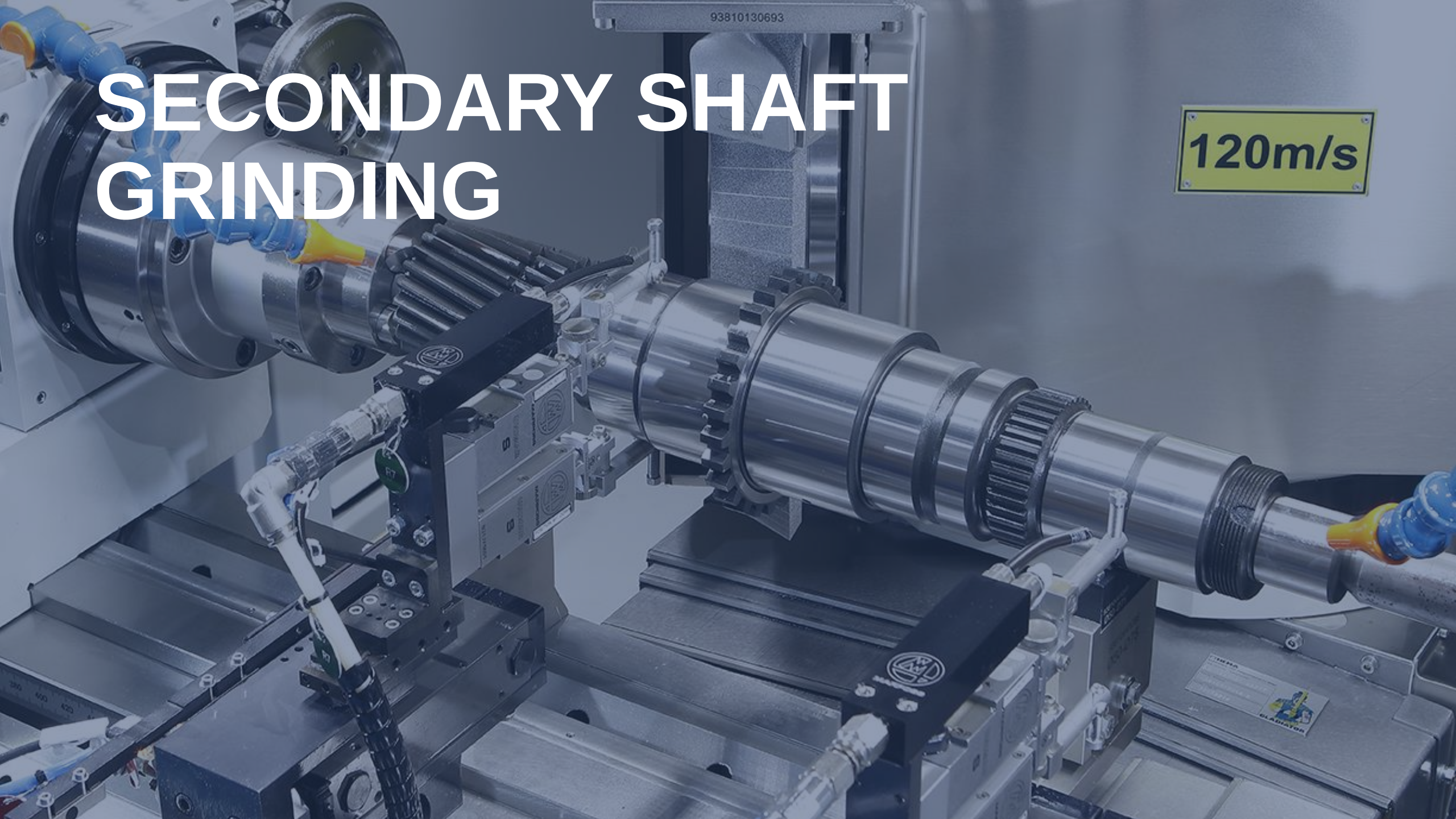


CASE STUDY I

Machine model
CG-600-S



Grinding technology	Time study	Wheel life	Time of changeover	Annual production	Cost per part
Corundum	160.8 s	15,000 parts	8 mins	100,477 parts	0.26 €



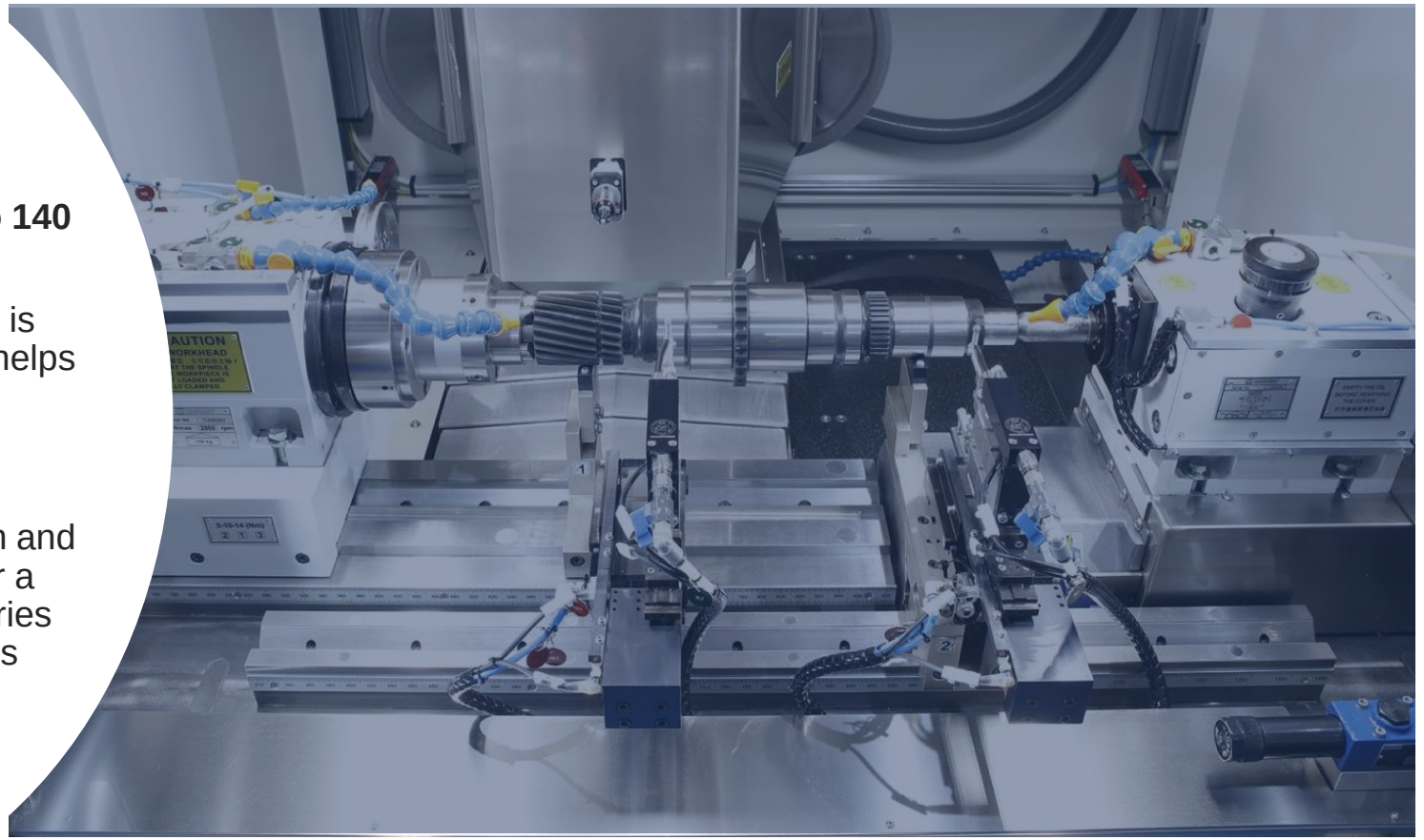
SECONDARY SHAFT GRINDING

CASE STUDY II

Machine model
LG-1000-B8

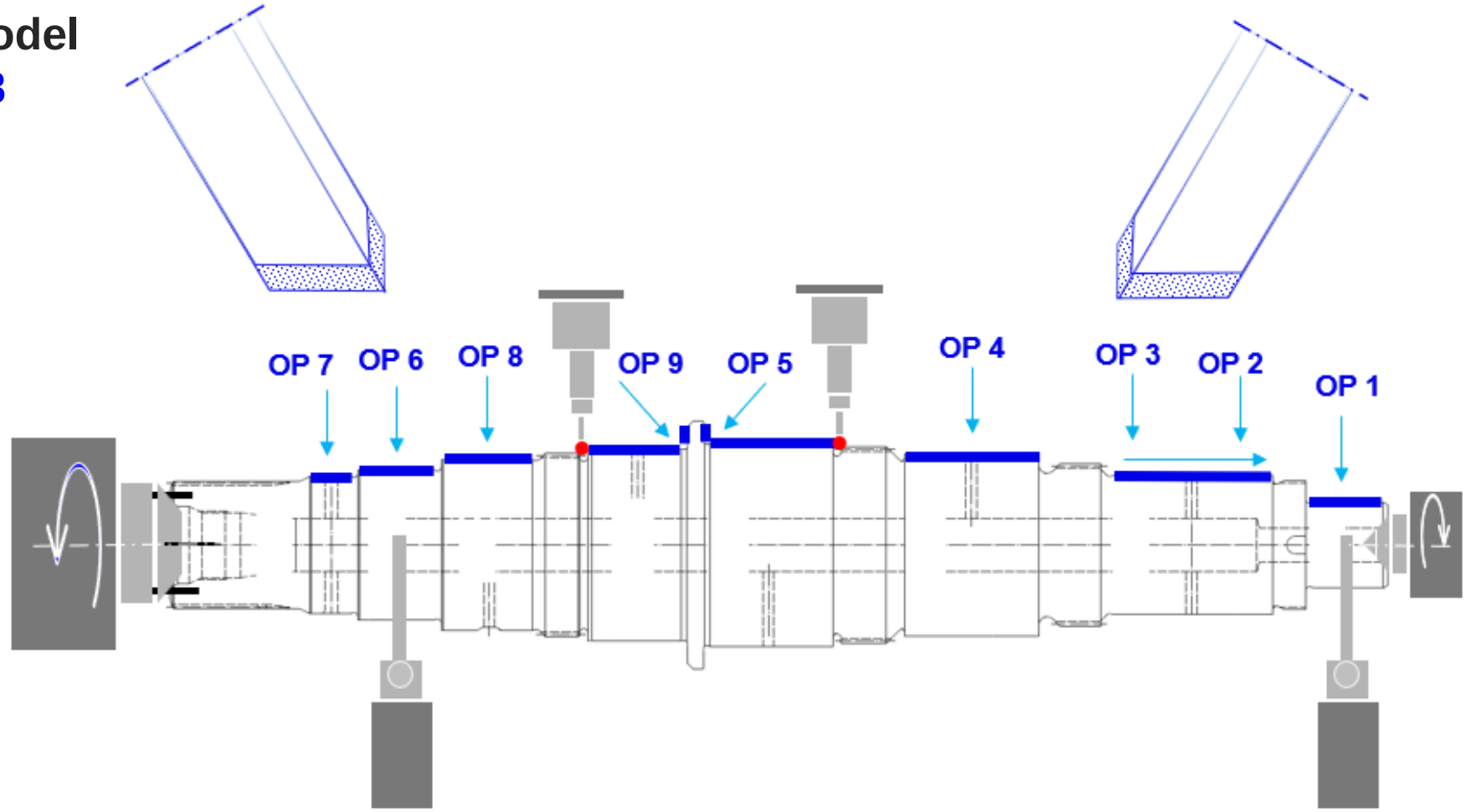
HIGHLIGHTS

- Enables high speed grinding, **up to 140 m/s peripheral speed**
- **Maximum flexibility**. The machine is fitted with a mobile tailstock which helps speed up the process of reference changeover
- **Flexible and efficient** grinding machine, which combines precision and efficiency, and is an ideal choice for a production of medium and large series including various references of parts



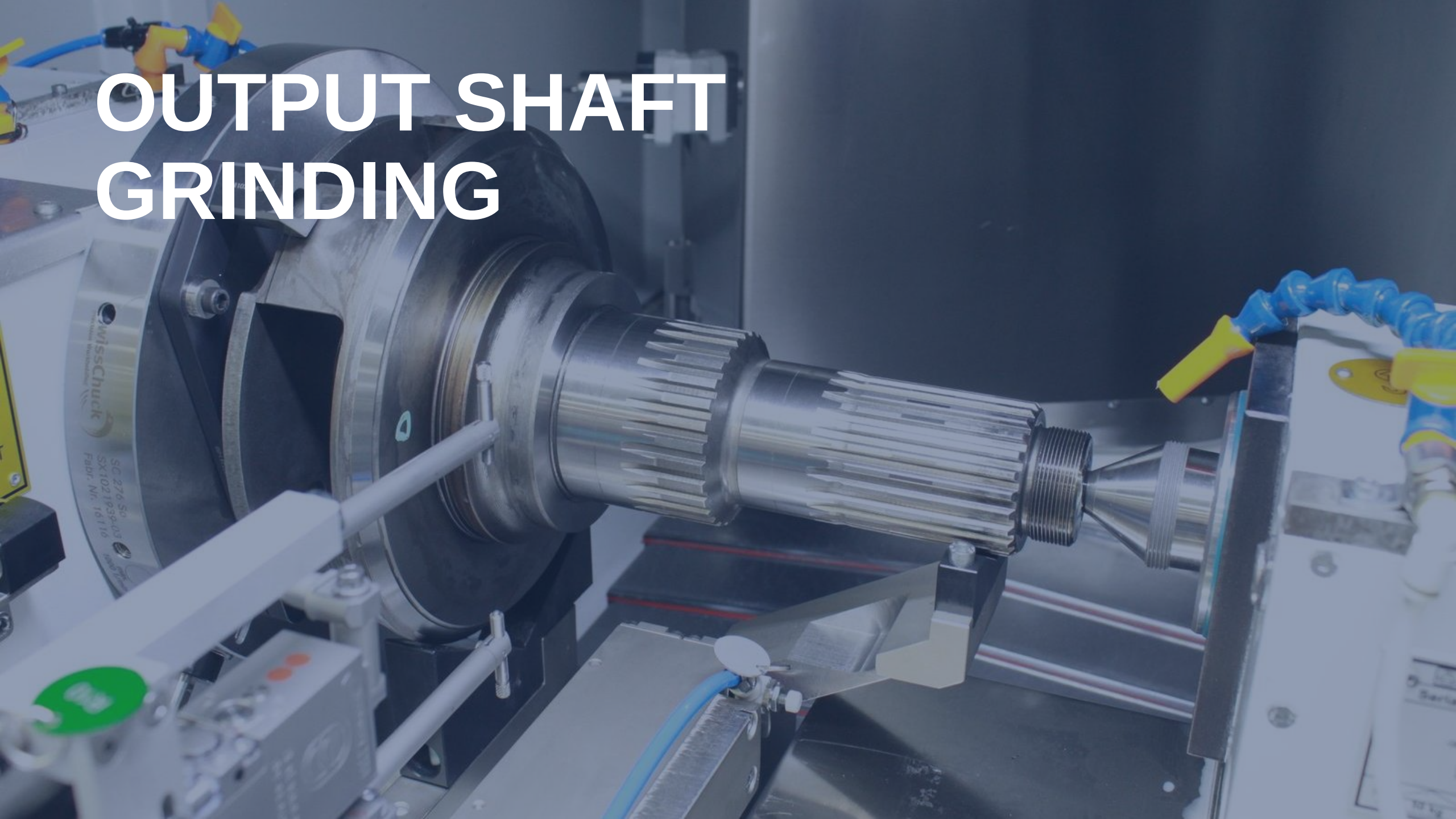
CASE STUDY II

Machine model
LG-1000-B8



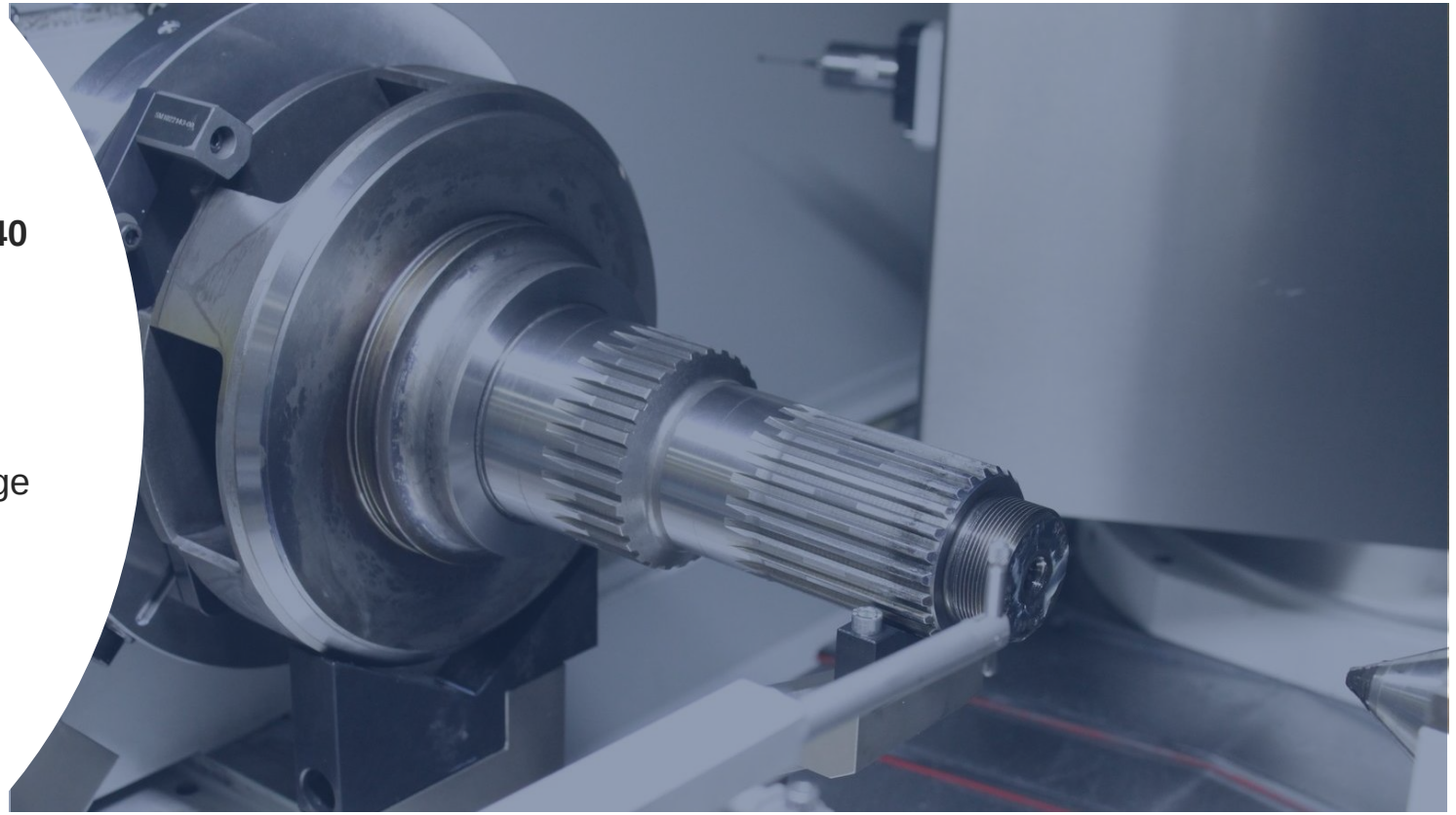
Grinding technology	Time study	Wheel life	Time of changeover	Annual production	Cost per part
CBN	226.3 s	45,000 parts	22.6 mins	71,395 parts	0.7 €

OUTPUT SHAFT GRINDING



CASE STUDY III

Machine model
LG-1000-B1

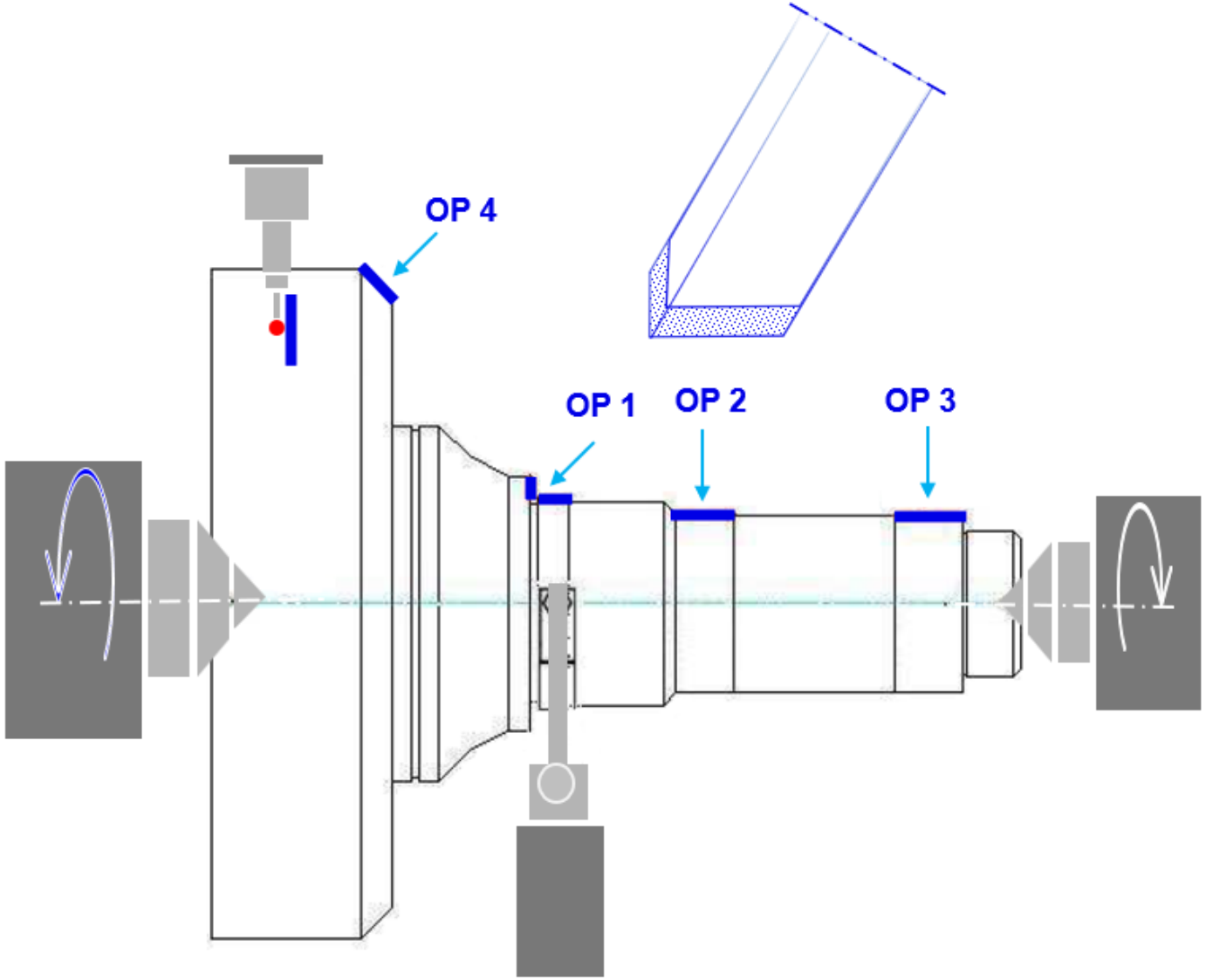


HIGHLIGHTS

- Enables high speed grinding, **up to 140 m/s peripheral speed**
- **Improve your performance** by grinding Ø + chamfer with the same grinding wheel
- **Mobile measuring system.**Wide range in-process measuring system on CNC actuated moving slide

CASE STUDY III

Machine model
LG-1000-B1



Grinding technology	Time study	Wheel life	Time of changeover	Annual production	Cost per part
CBN	129 s	58,000 parts	15 mins	125,246 parts	0.25 €

ADVANCED GRINDING SOLUTIONS

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