TRIMROB ROBOTIC SYSTEMS
AUTONOMOUS COIL TRIMMING AND SAMPLING FOR WIRE ROD MILLS

The TrimRob system (patent-pending) was specially developed to improve job safety, increase efficiency, enhance product quality, optimize repeatability and reduce operating costs of wire rod lines. The system provides a safe alternative to manual coil trimming and a viable alternative to current high-speed shear systems. TrimRob is less intrusive, requires less maintenance and is less process-intensive than current alternatives.

FEATURES

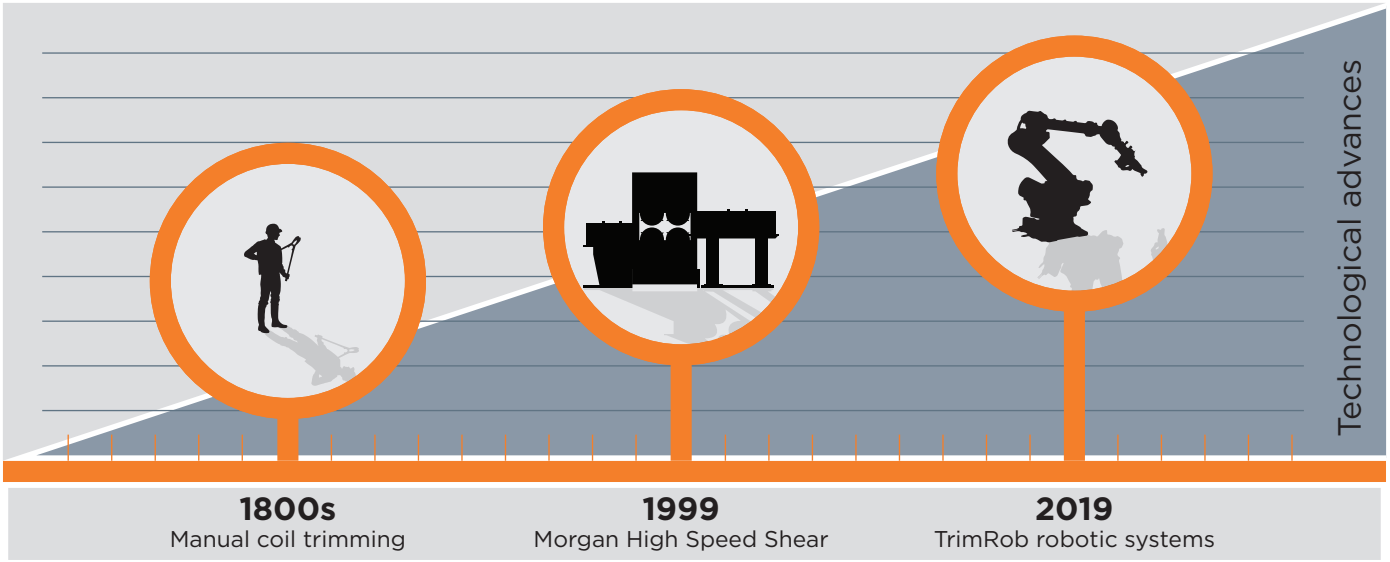
- Designed for horizontal and vertical coil handling systems
- Capable of cutting wire rod up to 28 mm
- Easily retrofitted within confines of existing coil handling system with minimal impact on equipment and production cycle
- Automated sample collection
- Universal design of robots simplifies spare part requirements

FIELD OF APPLICATION

Wire rod mills

MAIN BENEFITS

- Improved safety and reduced operator incidents
- Improved metallic yield
- Reduced operating costs
- Immediate savings and rapid ROI
- No change to the rolling line process or operating parameters during implementation
- Latest technology helps you attract and recruit young, tech-savvy talent
- Step towards the concept of the operator-less mill of the future



The evolution of coil trimming and sampling for wire rod mills

SAFETY

- Removes operators from the hazardous environment of the trimming cell in the coil handling area
- Eliminates the need for shared tooling and close contact between employees
- Reduces employee injuries caused by mistakes made during the mundane and repetitive task of manually trimming coils
- TrimRob workcell equipped with smart safety light curtains to sense entry of operators and instantly initiate safe-mode or shutdown of the robot arm
- Robot arm range of motion mechanically locked to avoid movement outside the required operating area
- All cables mounted through trench or walkable cable tray to eliminate tripping hazards
- All controls located outside the workcell guide fencing at a safe operating distance
- Designed according to ANSI/RIA R15.06-2012 Industrial Robots and Robot Systems – Safety Standard

ACCURACY

TrimRob is a vision-driven system and is accurate within +1 ring for sizes above 8.0 mm and + 2 rings down to 4.5 mm wire. The number of rings to be trimmed can be manually input, or or driven from a recipe or level 2+ system coupled to the quenching line control.

REPEATABILITY

TrimRob does not tire. It repeats commands all day – every day. It does not get distracted, take breaks, or lose concentration.

DURABILITY

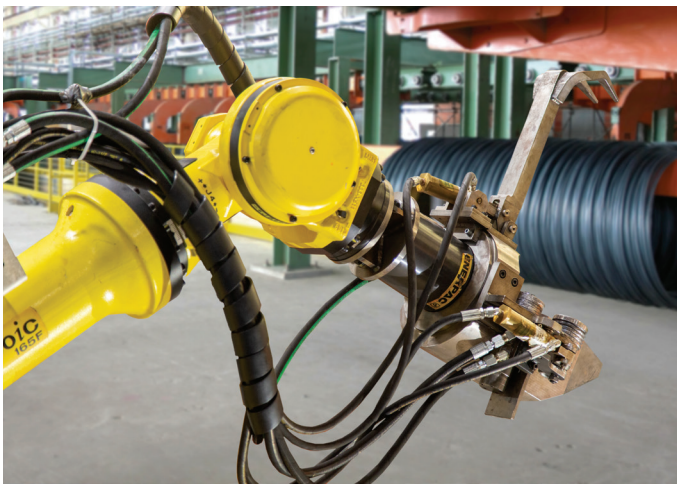
Foundry-rated and industry-proven robotic technology is at the heart of the TrimRob system. Its durability has been proven with millions of hours of operational service.

PROCESS

The TrimRob has no affect on the rolling mill process unlike a high speed trim shear which typically needs to be situated in the water-box line before the laying head.

TECHNOLOGY

The system utilizes well-proven, modern industrial equipment and is the latest automated robotic technology bringing the steel industry one step closer to the concept of the operator-less mill.



Innovative trimming-end effector tool mounted on the wrist of the robot mechanical unit, with cutting head, a pinch roll assembly for sample cuts and an arm clap for holding the scrap rings.

Primetals Technologies USA LLC
A joint venture of Mitsubishi Heavy Industries and partners

93 Gilmore Drive | Sutton, MA 01590 | USA

primetals.com

Order No. T06-4-N721-L4-P-V1-EN
Printed in USA | © 09.2020