

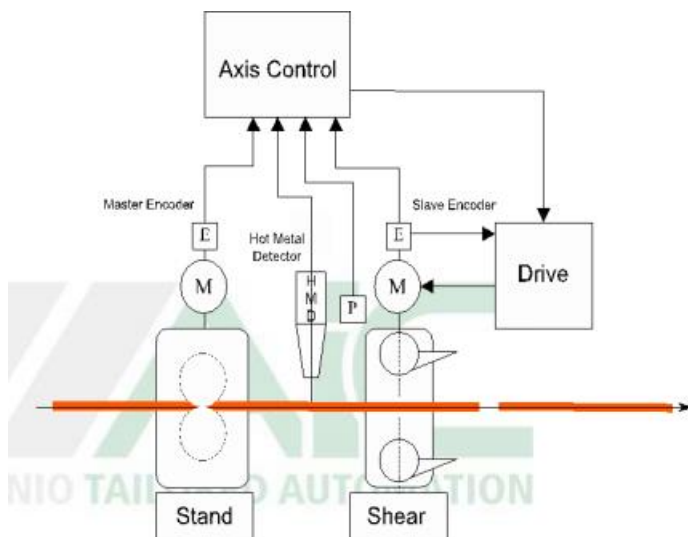
## AIC India received order for revamping of existing shear control systems.

Yield improvement is a crucial issue for any steel plant, since poor yield performance can negatively affect both the steel plant output and production cost and the Management of yield performance is vital for overall steel mill cost control. In December 2022 AIC India received the order from one of the Stainless-Steel manufacturers in western India to overcome problems regarding control systems of Existing Pendulum Shear and Dividing shears. The target of the upgrade was to:

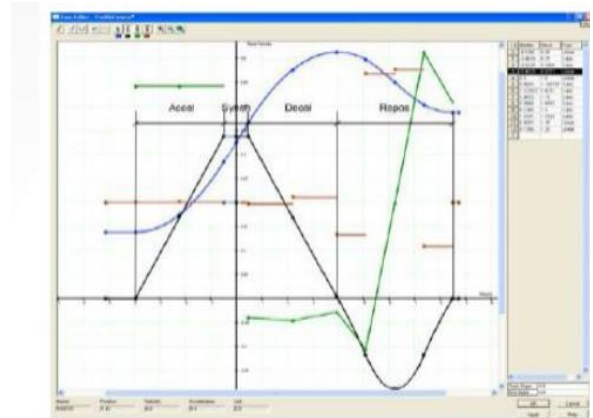
- Eliminate the missing tail cut;
- Reduce the length variation at Pendulum Shear;
- Optimization of the Dividing shear to reduce waste and improve mill availability by eliminating the cobbles in the finishing area;
- Reduce wear and tear of mechanical and electrical equipment due to controlled shear trajectories to achieve best utilization of process requirements and overall equipment limitations.

The scope of supply consists in:

- Advanced Motion controller from Siemens;
- Axes control to optimize motor usage;
- Integration with the existing system over Profibus.



*Motion control components*



*Cut cycle control,  
Controlled shear trajectories with AIC motion  
optimisation technologies*

The System was put in operation in April 2023 and the performance of the implemented motion control system has exceeded the expectations of the customer:

1. High cutting accuracy and repeatability as well as cutting optimization strategy: The system automatically calculates an optimal cutting strategy to minimize material scrapping. This system can also take advantage of a pre-optimization shear to scrap the material in the middle of the rolling process;
2. Cut cycle simulation: The system allows the operator to simulate the presence of a billet, with a prearranged length, in transit in the rolling mill at the selected line speed. Through the simulation it is possible to verify the correct operation of every machine involved in the cutting cycle;
3. Complete process optimization, including shear control, cooling bed, finishing and delivery area optimization for aprons;
4. Performance of all Shears has improved significantly, since cut-to-cut variation of length has been minimized. Therefore, the monthly percentage of crops has been reduced.

**About Companies:**

**AIC Group** is a technological partner with extensive experience and deep know-how and stands itself as a global power control supplier and system integrator designing, manufacturing, and implementing automation systems, process control, and mechatronic solutions for both greenfield and revamping projects. Focusing on the steel and metals industries for long and flat products, the Group provides cutting-edge technical solutions by handling complex project schedules and thus establishing satisfactory and remarkable partnerships through its 6 international offices. More than 45 years of modernization for endless reliability processes.

AIC decided to enter the Asian market in 2008, selecting India as a reference point and committing to invest in the country. As the CES unit for the Indian subcontinent, **AIC IN** works closely with the other units and divisions within the Group.

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