



Steel Making Industry

The steel industry consists of a plant that produces iron and steel from scrap or molten metal. Most of these foundries also have finishing mills on site that convert iron and steel into both finished and semi-finished products. Some of the goods produced in finishing mills are steel wire, pipe, bars, rods, and sheets. While wire, steel reinforcing bars, and pipes are considered finished products, rolled steel is unfinished, meaning it is normally shipped to companies, such as automotive plants, that stamp, shape, and machine the rolled steel into car parts. In these finishing mills, products also may be coated with chemicals, paints, or other metals that give the steel desired characteristics for various applications.

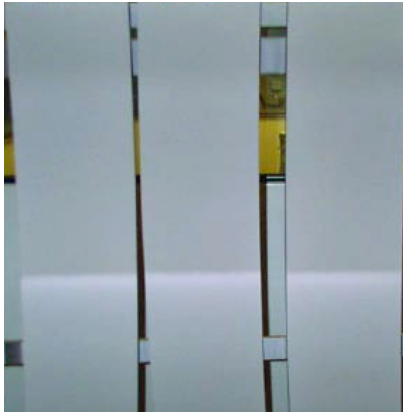
Monitor Coatings Limited, in conjunction with Corus plc, has developed several key enabling technologies for Continuous Casting equipment, process rolls and many other ancillary equipment with asset life extension consistently extending up to X8 compared to conventional modes of operation.

Other added benefits of these coating systems include the downstream surface quality of the cast or rolled product increasing the yield and efficiency of the process.

Furnace & Hearth Rolls - Bridle Rolls - Sink (POT) Rolls

Significant benefits have been realised due to:

- Reduced mill down-time for roll surface grinding due to thermal fatigue cracking, spalling or surface defects in Mills due to asset life extension hence significantly fewer rolls, and
- Not having to shut down austenitizing furnaces for frequent grinding of current rolls to remove blisters,
- Elimination of re-melt and process out-of-specification steel plates that are marred by blisters or defects on rolls
- Improved productivity can be reached from minimization of furnace down-time.
- Improved quality is possible by eliminating scratching the plates and sheet.



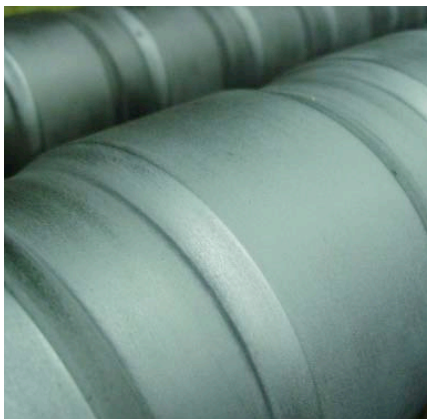
CASTCOAT®

In conjunction with Corus plc, Monitor developed a composite coating which has extended copper mould plate life in continuous casting by up to X8. Now available world wide, the coating has provided a step-wise change in steel making.



Caster Segments

Coating systems provide sustainable protection to the aggressive environment that is continuous casting. Heavily corroded segment carcasses as shown opposite can be protected with TSA (thermal sprayed aluminium and aluminium alloys). Many of the roll systems in continuous casting, cold roll mills, and continuous annealing lines are coated with Monitor's composite coatings.



Rolls

Foot rolls on a continuous caster machine have exceeded all expectations after being coated with Monitor's unique formulation composite coating. Over 850,000 tonnes of steel were cast and passed through the same set of foot rolls.

Surface Engineering in extreme environments