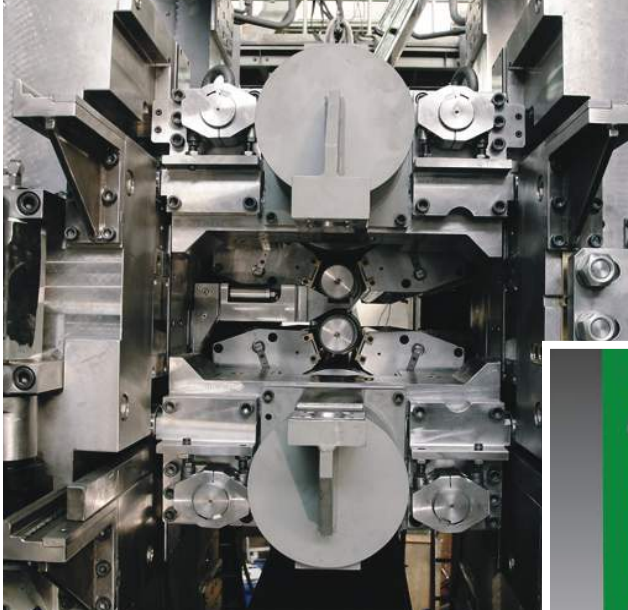


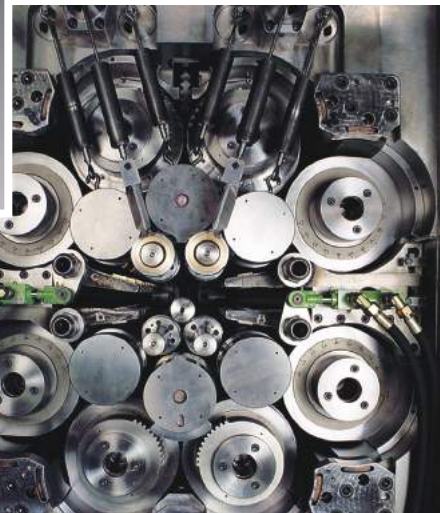
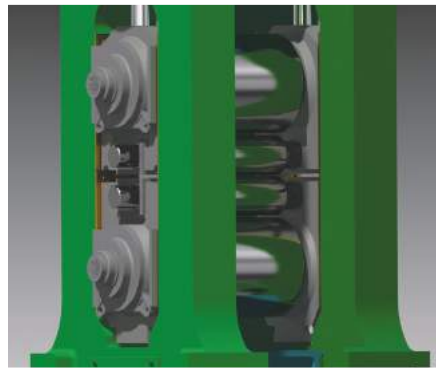
Sendzimir Z-High® Mills

I N N O V A T I O N B Y D E S I G N

Design, Fabrication, Installation, Maintenance



Sendzimir precision cold rolling mills have name brand recognition worldwide for gauge accuracy, flatness of strip shape, and ultrathin gauge. Before 90% of the world's stainless steel strip is used, it is precision rolled to exact thickness using Sendzimir rolling technology.



Design and Application:

- Developed to combine the advantages of the Sendzimir 20-High cluster-type rolling mill with those of the 4-High
- Permits the revamping of a classical 4-High mill with a system that uses a much smaller work roll
- Conversion of a 4-High to a Z-High can require no other electrical changes, except to reverse the leads to the main mill motor so that it will rotate in the opposite direction
- Allows the mill to take heavier reductions per pass and achieve thinner gauges
- Harder materials can be rolled without intermediate anneals, and a better surface can be produced, because the work roll can be easily changed out last pass
- Intermediate rolls are equipped with axial shifting displacement and are ground with parabolic (or straight) tapers at their ends, so that the mill can change "effective flat" and relieve the edges as required, similar to the 20-High mill, as well as provide other excellent shape control possibilities
- The Z-High produces superior gauge accuracy because the mill is now stiffer with a tighter mill modulus

Sendzimir Z-High[®] Mills

I N N O V A T I O N B Y D E S I G N

Design, Fabrication, Installation, Maintenance

Process Line Z-High

- Modifications were made to the Z-High Mill to make it compatible with operating conditions within the continuous casting environment or the continuous conditions of a process line.
- Work roll is small enough to allow high specific pressure for thinner gauges yet large enough to give a sizeable draft reduction on heavy gauge materials without skidding. Can realize reductions in stainless steel of up to 35% or more.
- The lightweight, chockless work roll can be exchanged in under a minute with strip in the mill, using a roll change robot thus ensuring virtually nonstop performance in a continuous production situation.
- Z-High Mill is the only design capable of reducing incoming stainless steel strip hot band to cold-roll gauges in a single pass (in a process line)
- No upstream equipment is required other than superficial surface cleaning brushes and like equipment

Opportunities exist for a high value-added, thin gauge strip of very high surface quality and strip profile being produced continuously and directly from a continuous thin-strip caster. Coils of indefinite length are possible, since the entire system will be capable of synchronization. The expectation is that when stainless steels are strip cast, the Process-Line Z-High mill will be essential, because it will be the only mill capable of reducing and finishing such hot-rolled material directly to thin gauges in an in-line process.



a 269 Brookside Road • Waterbury, CT 06708 USA

t 203.756.4617

f 203.756.4610

w www.sendzimir.com

