

## RollGuard™ CS-10 Roll Overlay

Improving roll performances and reducing overall maintenance costs

RollGuard™ CS-10 is a newly developed, high temperature resistant steel mill roll overlay that is proprietary to SMS group. The product was formulated for improved corrosion, wear, and cracking resistance compared to standard roll overlays used in the metals industry. The product has been both laboratory and service tested and has proven to improve roll performance and reduce overall roll maintenance costs.

### Issue:

Customer has experienced significant roll body diameter loss and thermal fatigue cracking of continuous caster rolls. This has resulted in reduced campaign life below the goal tonnage because of open gap conditions. Additionally, the severe cracking has reduced the number of allowable skin cuts before full roll repair is required.

### Typical surface conditions after a campaign



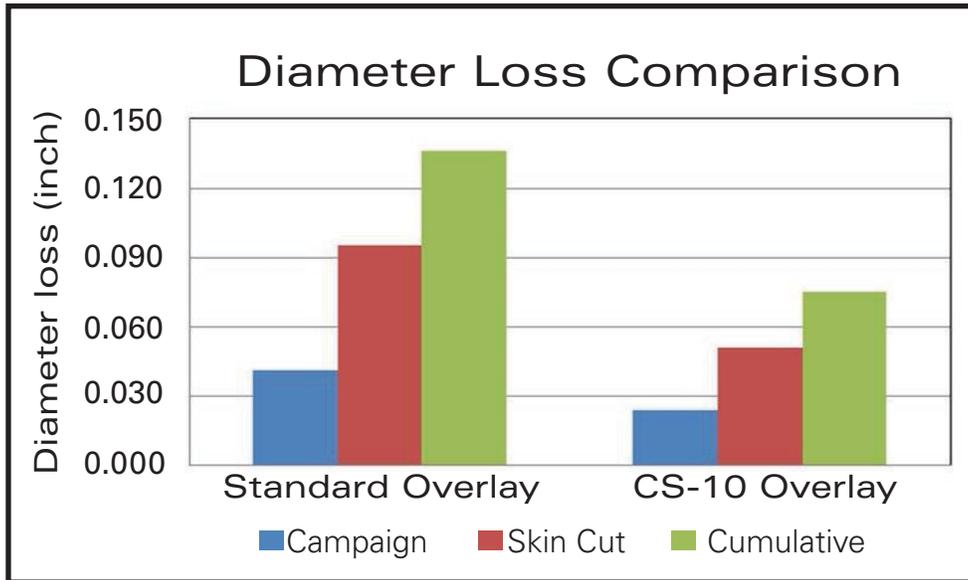
Standard Overlay



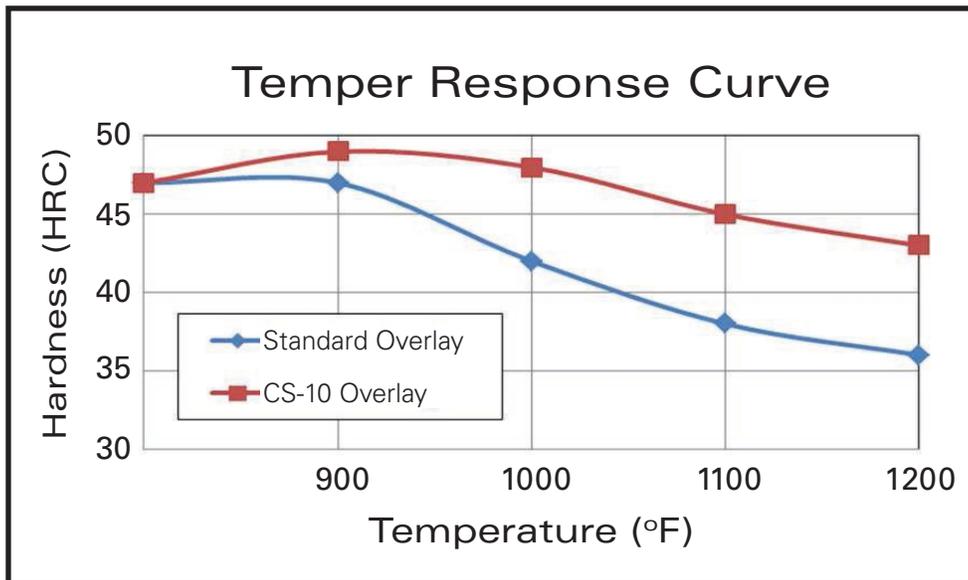
RollGuard™ CS-10 Overlay

### Solution:

SMS group has introduced the advanced roll overlay RollGuard™ CS-10. The CS-10 resulted in a 30%-50% reduction in diameter loss compared to the previous overlay. This overlay also reduced thermal fatigue cracking severity, which reduced the required skin cut stock removal by 40%. The success of the advanced roll overlay allowed the customer to not only meet their tonnage goals but increase them. The results also allowed for additional skin cuts between full roll repairs, which further reduced maintenance costs.



The RollGuard™ CS-10 overlay allowed for extended roll campaign life and additional campaigns before full roll repair.



The RollGuard™ CS-10 overlay exhibits an improved resistance to softening at elevated temperatures, allowing for better wear resistance in service.

Chemical Composition Comparison		
	Standard Overlay	CS-10 Overlay
C	.12	.14
Cr	12.5	12.8
Ni	2.5	2
Mo	1.3	1.3
Residuals	Nb, V	Nb, Ti, N

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