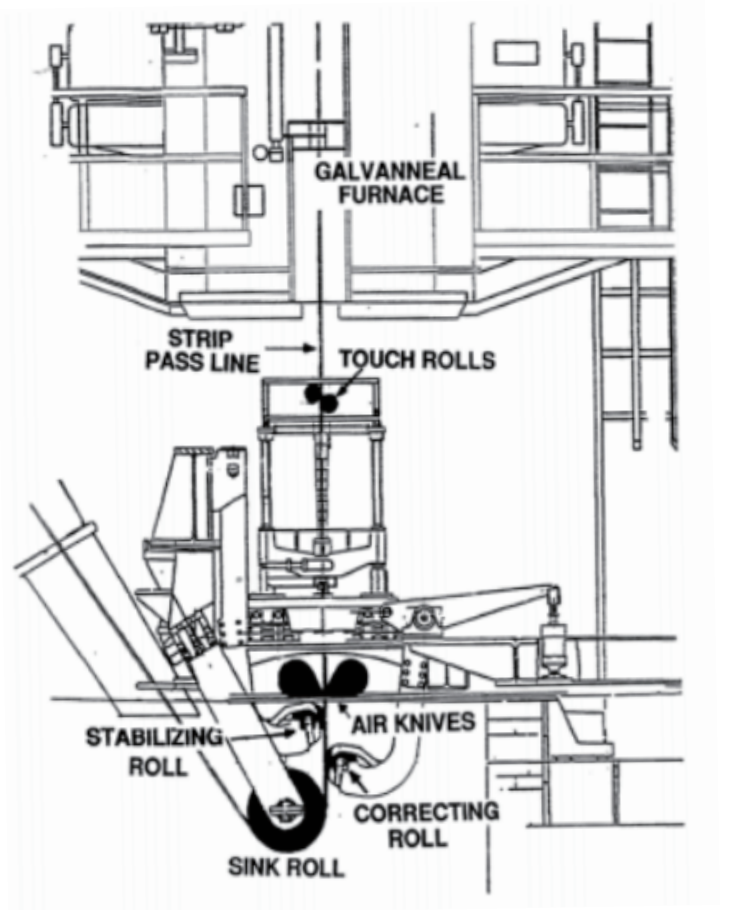
HOTION SINK ROLLS AND STABILIZER ROLLS

HOTION

Sink Rolls & Stabilizer Rolls

SINK ROLL

The sink roll, is a roll used in molten zinc tank in continuous galvanizing line. It is generally made of SUS316L ferrite free, stainless steel that can withstand extreme temperature & high corrosion for extended periods of time. It made by cetrifugal casting. There body uses different shapes like straight body, crowned and tapered depending upon applications. A variety of groove patterns and pitches are made on the surface as per as customers specifications. Special grooves are provided for carbide coatings.



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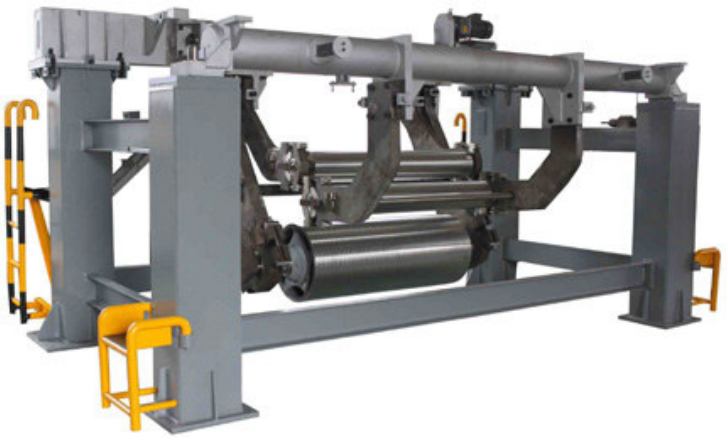
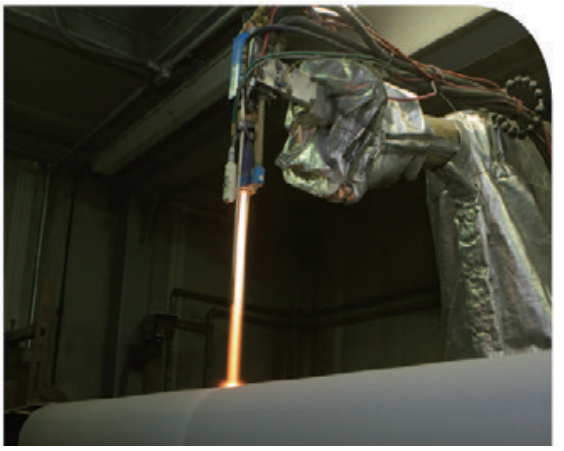


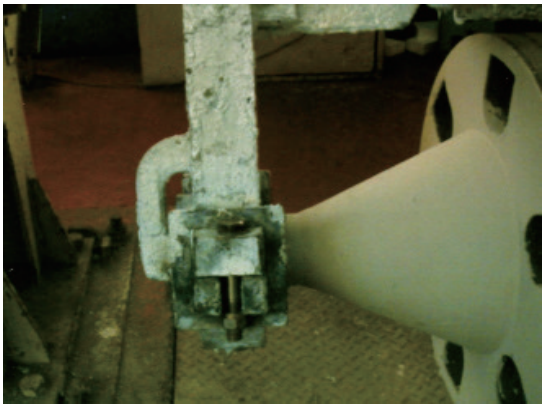
Sink Rolls and Stabilizer Rolls Assembly



Tungsten Carbide Coating

SHAFT SLEEVE & BUSHING HOLDER

Shaft sleeve and bushing of sink roll and stabilizer roll are matched for use in the same manner of plain bearing assembly. In the operation of sink roll and stabilizer roll, and shaft sleeve and bushing for sink roll will undertake approximately two times strip tension force, while the tension force undertaken by shaft sleeve and bushing of stabilizer roll is smaller, but the stabilizer roll is required to run in at the same line speed of strip. The rotation of sink roll and stabilizer roll are generated by the friction force between strip and roll surface.



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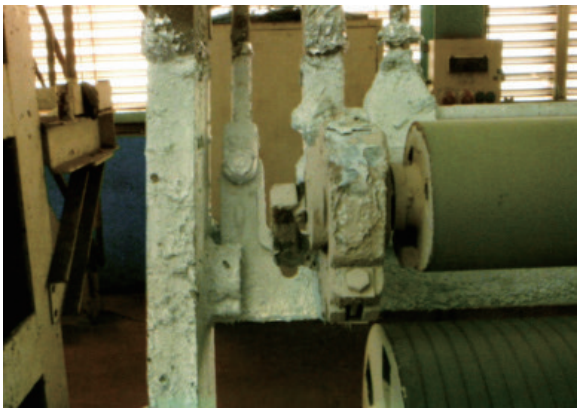

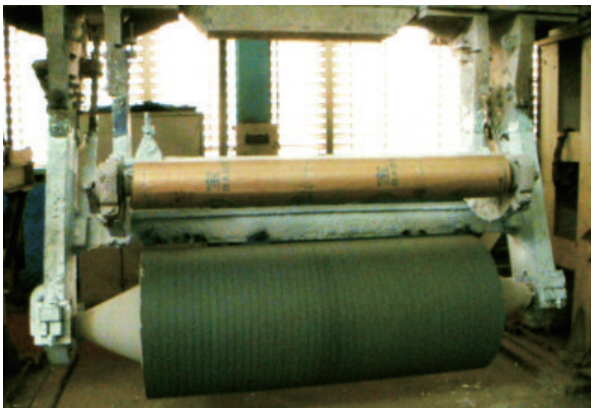

Therefore, the shaft sleeve and bushing for both sink roll and stabilizer roll should be characteristic of: anti-corrosion to zinc liquid; wear-resistance; low friction coefficient.

Hotion selected the many kinds of high-alloyed shaft sleeve and ceramic bushing used at different working conditions for analysis, except for conventional physical and chemical tests, we also use sophisticated instrument like SEM, EPMA, TEM, XRD to observe macro and micro fractures, sources of cracks and crack propagation and morphology of corrosive wear surface and to measure the chemistry, crystal structure for each phase in the microstructure, to analyze and judge all the data and conclusion in failure mechanism research of shaft sleeve and bushing. We successfully developed the hi-Cr, hi-Mo Co-based alloy material for shaft sleeve and two engineering ceramic material for bushing

High-Mo, Cr Co-based Φ140mm shaft sleeve of sink roll

High-Mo, Cr Co-based Φ120mm shaft sleeve of sink roll

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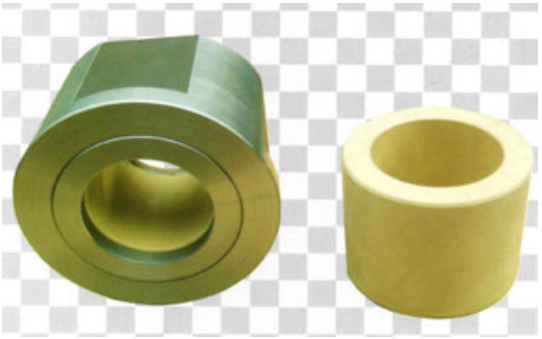
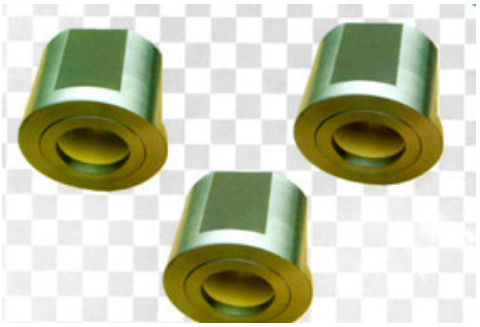
High-Mo, Cr Co-based Φ 90mm shaft sleeve of stabilizer roll

High-Mo, Cr Co-based Φ 70mm shaft sleeve of stabilizer roll



Bushing holder and ceramic bushing

Ceramic bushing



Stabilizer roll bushing holder

Sink roll bushing holder

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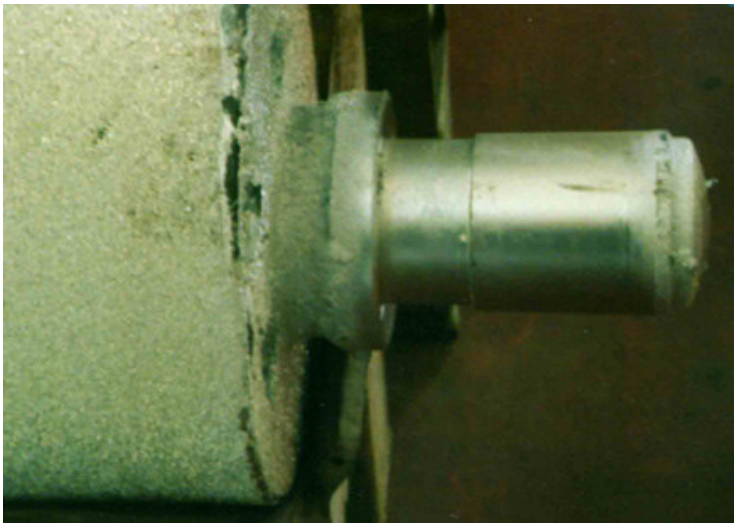
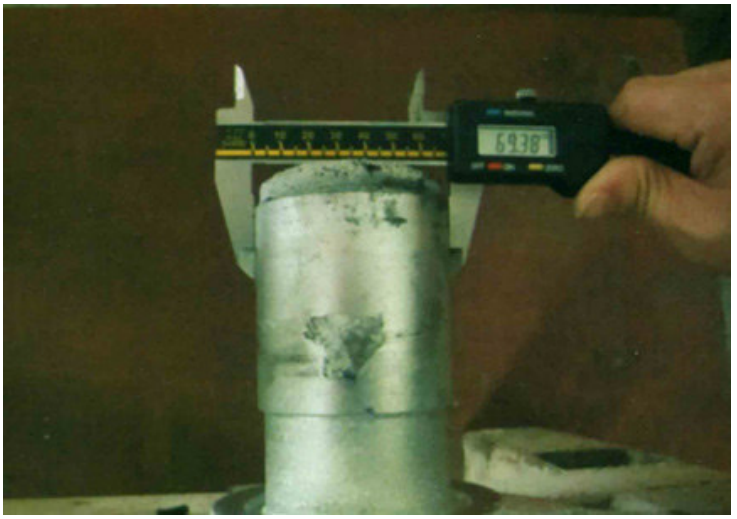


Φ70 stabilizer roll shaft sleeve condition after service of 14 days
Working condition:
Strip Width-1250mm, Strip Thickness-0.80mm
Line Speed-120m/min, Tension-2000KG



After 14 days' working, the wear of shaft sleeve of sink roll is Φ0.62mm

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