



Drive system is a key component to facilitate the smooth operation of every cement mill, proper mechanical conditions ensure maximum working time at lowest owing costs for user.

SATAREM-NOVEXA team in Latin America, in coordination with the technical team of one of the Cementos Argos plants has performed the **reprofiling of a 2500 HP FLS ball mill gear** improving its lifespan for 10 more years guaranteed.

Inspection

Our specialists visit the location to review the equipment, check the status of the drive and the functional system. This work included:

- Detail measured profile of transmission elements
- Verification of mill alignment
- Review of Vibrations



List of measurement		Lifting		Pushing		Gear		Value	
		pinion		pinion				Limit	Critical
Wear working face	mm	1,8				2,2			
Lost of thickness	mm	1,8				2,2			
Wear speed	mm / y	0,9				0,08		0,25	0,5
Profile deformation	%	7,8				9,6		6	10
Remaining thickness	%	92,2				90,4		65	50
Contact pattern	%	100				90		50	30
Spalling	%	0				0		50	80
Cracks	%	0				0		30	60
Tooth breakage	%	0				0		30	60

Diagnosis

The analysis of inspection data indicated the work to be done in order to bring equipment back to proper conditions. The diagnosis of our specialists, allows us to define which elements and how they should be intervened.

Reprofiling

This mechanical intervention is carried out in order to reach the geometric profiles from the factory, thus returning the equipment back to its normal operating conditions.

Results

After re-profiling work done in the mill, **vibration reduction was achieved**, finding that measurements are within the normal operation range, less than 6 mm/s.

The results indicate a vibration measurement of 1.8mm/s on the drive coupling side and 5.6mm / s on the free side.



Thanks to this reprofiling process Client has been able to **improve the running factor, to increase mill output and to reduce mill stoppages** for corrective maintenance.

Reprofiling took 7 days from the mill shutdown to mill start-up with excellent operating parameters and much lower investment than other alternatives formerly considered by the Client.

The reprofiling works **will extend the gear working life for 10 years** guaranteed.



Contact our specialists to attend any query for your grinding systems needs.

NOVEXA Partners
Beyond Expectations

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