

Tribol CS 1750 Eliminates Compressor Carbon Build-Up

CEMENT (USA)

Rotary Vane Compressors

Castrol Tribol® CS 1750/150 Compressor Oil*

ANNUAL SAVINGS: \$10,305

THE SITUATION

A major cement mill was using a conventional oil in their 10 Fuller (FLSmidth) rotary vane compressors. They had to routinely clean the blades due to carbon build-up and were replacing many blade sets every year.

The customer was looking for a solution to the high maintenance and blade costs.

BEFORE

- Conventional oil in use
- Six (6) blade sets replaced annually
- Maintenance headaches due to routine blade cleaning from **carbon build-up**

AFTER

- Tribol CS 1750 high performance compressor oil
- Three (3) blade sets replaced annually (**50% reduction**)
- **Carbon build-up eliminated**

THE SOLUTION

- Castrol technical representatives recognized that the conventional oil was oxidizing in the high temp, high load conditions of the compressors.
- They recommended Tribol CS 1750/150 for its natural detergency gained from the synthetic ester base oil.
- This property allowed the blades to remain free of carbonaceous deposits, eliminating the need to routinely clean them.
- In addition, the improved lubrication allowed the blade life to double.



- **Carbon build-up on vanes eliminated**
- **Vane life doubled**

Tribol CS 1750 Eliminates Compressor Carbon Build-Up

RECOMMENDATIONS

Beyond the improved compressor oil, Castrol also worked with the customer to improve compressor PMs and ultimately reduced oil usage significantly. Tribol CS 1750 has proven to be an excellent lubricant for the compressors, even in an incident on compressor #212 where oil flow to the vanes was disrupted for 8 hours and no damage was found.

CONCLUSION

Tribol CS 1750/150 has eliminated maintenance problems and greatly reduced costs associated with them.

The result was \$10,305 in annual savings along with the ability to redirect maintenance resources to more important areas of the plant.



5-Year Blade Costs for Previous Conventional Oil

Compressor	Year 1	Year 2	Year 3	Year 4	Year 5	Avg Annual Cost
303	\$3,805	\$4,717	\$1,761	\$3,302		
309	\$2,866	\$1,525	\$1,761	\$7,204	\$6,005	
212	\$2,244			\$4,210	\$4,470	
620		\$2,105			\$2,365	
315		\$1,446	\$5,213	\$3,450	\$4,806	
511	\$1,419	\$1,525		\$7,204	\$2,970	
2213	\$3,772	\$5,776	\$2,005	\$3,888	\$4,049	
302	\$264		\$2,064	\$513		
2215	\$1,768					
620-1		\$1,926		\$2,468		
Total	\$16,138	\$19,020	\$12,804	\$32,239	\$24,665	\$20,973

Castrol Tribol CS 1750-150 reduced this cost by nearly 50%!

OTHER POTENTIAL APPLICATIONS

Castrol Tribol CS 1750 series compressor oils utilize a synthetic blend base oil which provides good detergency to keep compressors clean while maintaining excellent compatibility with seal materials and downstream air components.

Castrol, the Castrol logo and Castrol Tribol are trademarks of Castrol Limited, used under licence.

