

ENDURA Dual Application in LIBEHEER 994





Abstract

1. **ENDURA Dual** and AR500 plate were used as test pieces
2. The wear plates were welded at the same level but different sides of the bucket where most sliding abrasion occurs.
3. The bucket capacity of LIBBEHIER 994 is 18 m³. The average working time is 19 hours every day, and there are 7 working days every week
4. By the end of the third evaluation (2013/3/29) the test plates had been on the bucket for more than 551 hrs of service.

Welding



1. the surrounding temperature is -14 deg. Celcius.
2. the welding material is general Lincoln 7018.
3. welding process is SMAW.

Thickness measure



ENDURA Dual (2013/3/1)



AR500 (2013/3/1)

Thickness measure



ENDURA Dual (2013/3/9)



AR500 (2013/3/9)

Thickness measure



ENDURA Dual (2013/3/21)



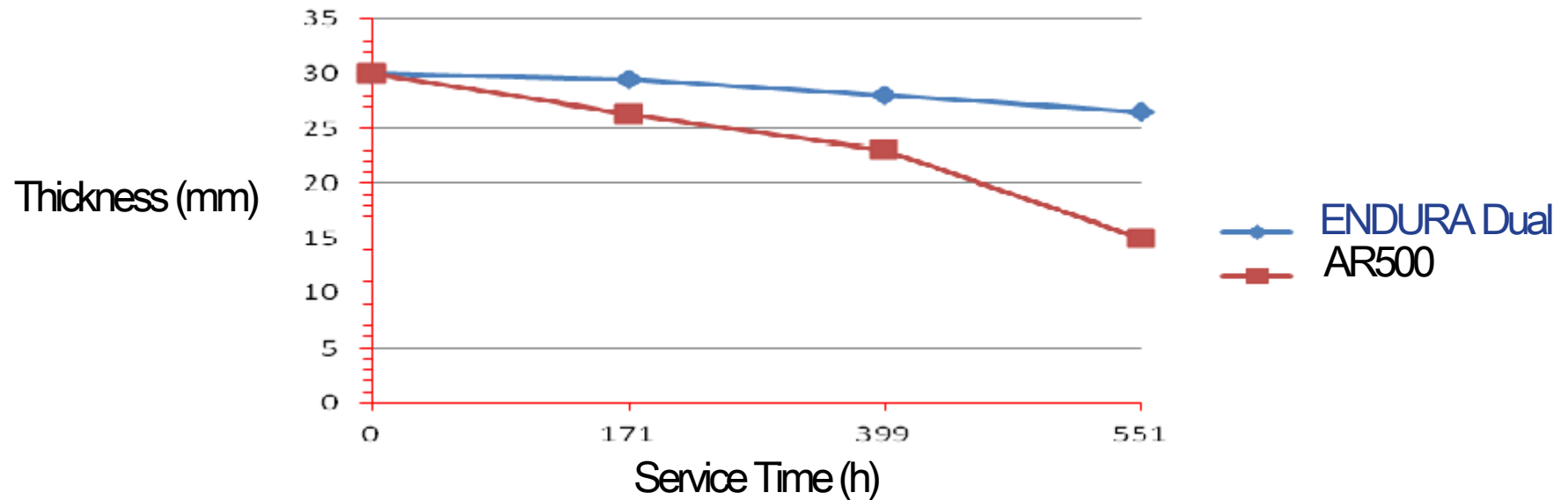
AR500 (2013/3/21)



Anti-Abrasion Evaluation

ENDURA Dual Compared with AR500

Time (h) \ Thickness (mm)	0	171	399	551
ENDURA Dual	30	29.5	28	26.5
AR500	30	26.3	23	15





Conclusion

1. In low temperature, **ENDURA Dual** has excellent welding performance.
2. The projected service life of **ENDURA Dual** is 7.58 months compared to AR500 which is 3.63 months.
3. The service life of **ENDURA Dual** is projected to be more than double that of AR500 plate.
4. **ENDURA Dual's** homogeneous microstructure guarantees the abrasion rate is uniform and consistent during the application.
5. Even in low temperatures with continuous abrasion, the wear surface **ENDURA Dual** is smooth and even.
6. This illustrates exceptional anti-abrasion characteristics vs. AR500 which exhibited significant pitting, gouging and serious wear on the surface, as well as cracking thru the body of the plate.



thanks for your attention, any questions?