Application Report 7

Company:	**Framo Morat, Eisenbach**
Sector:	**Industry**
System Description:	**Worm gear test bench**
Date:	**04/2014**

Test data:
- Standard-worm gear set
- Transmission ratio i = 12
- Total test duration: 96 hrs.

Aims of the application:
- To test the effectiveness of REWITEC® lubricant additives and their impact on temperature and efficiency.

Background:
Framo Morat GmbH & Co. KG designs and produces drive ideas ranging from individual spur gears planetary and worm gears through to complete drive motors. The company Franz Morat GmbH was established in 1912 in Eisenbach/Germany and has been continually developing drive and gearwheel technology since then. With its worldwide network of offices and sales partners, and subsidiaries in the USA and the Netherlands, Framo Morat is a global manufacturer of high-quality drive solutions for a wide range of industrial sectors. Framo Morat sees its role as that of a consulting company that looks after its customers from the specification of the drive idea, the development and construction right through to prototyping, testing, batch production and subsequent assembly.
www.framo-morat.com

Please visit us:
www.rewitec.com

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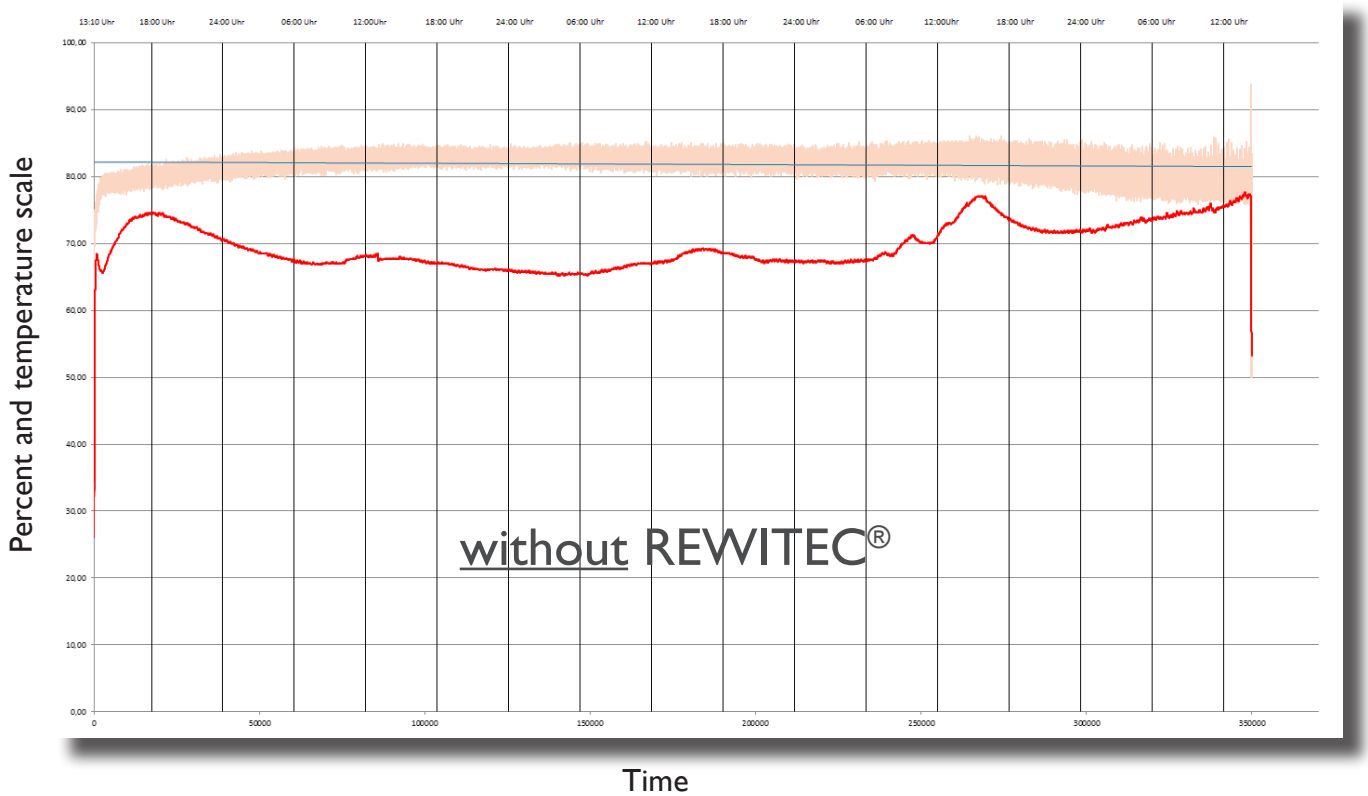
Application:

- As part of a practical study, the impact of REWITEC® products was examined in test sequences on worm gear test benches to better evaluate the basic use of the technology.
- The tests were done with a standard worm gear set with a gear transmission ratio i=12 and lasted for a total of 96 hours.
- As a comparison, each test run involved an identical gear set without and with REWITEC® additives.

Sample deciption of a worm gear set

Comparison test run (without REWITEC® additive):

- Red line = temperature progression during the test
- Light orange area = efficiency
- Blue line = trend line of the efficiency



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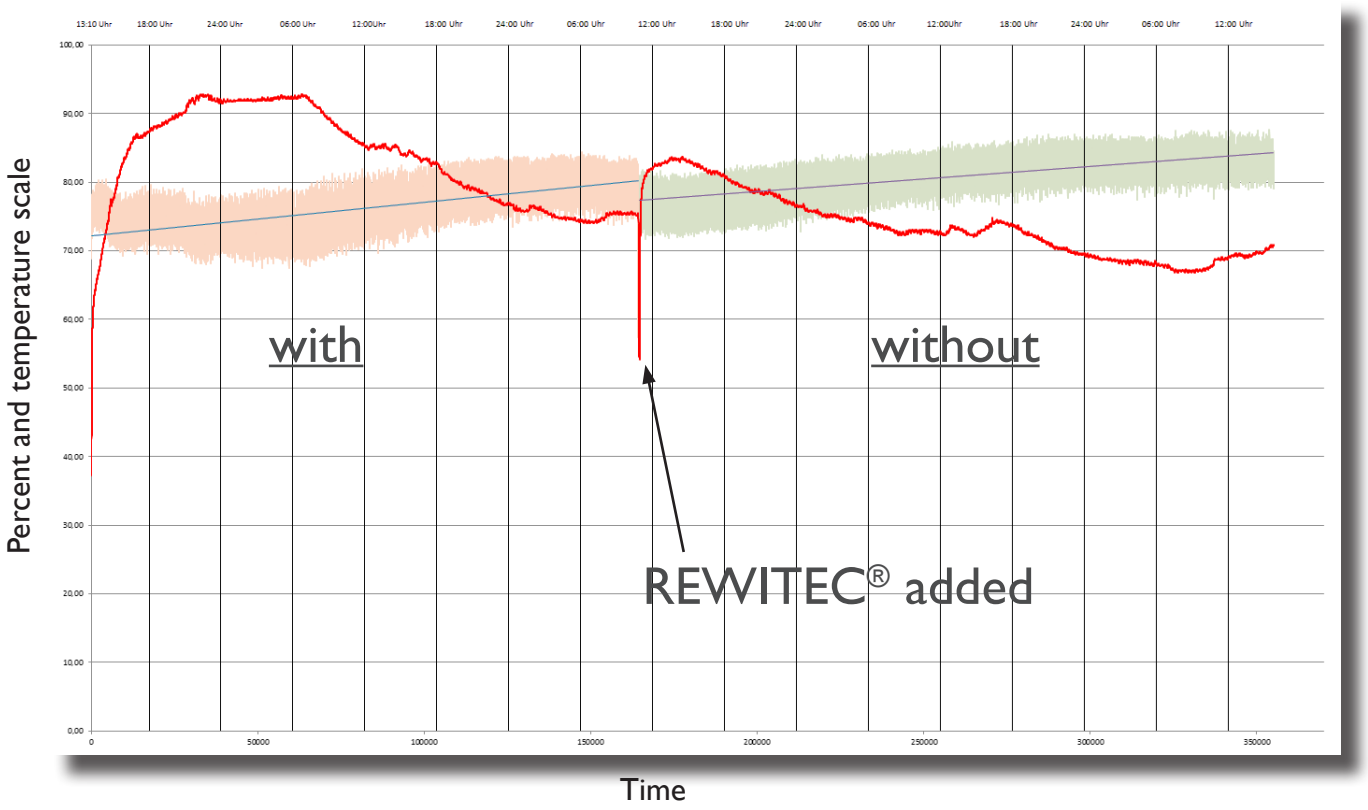
Subsequent test run (with REWITEC® DuraGear® added):

- Red line = temperature progression during the test
- Light orange area = efficiency without REWITEC®
- Light green area = efficiency with REWITEC®
- Blue line = trend line of the efficiency



Efficiency:

without REWITEC®:	max. 84,15%	on average 75,28%
with REWITEC®:	max. 88,99%	on average 79,90%
Difference:	+ 4,84%	+ 4,62%

Conclusion:

Almost 5% greater efficiency with simultaneous temperature decrease in the system!

We would like to thank the company Framo Morat for their permission to publish this information!

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