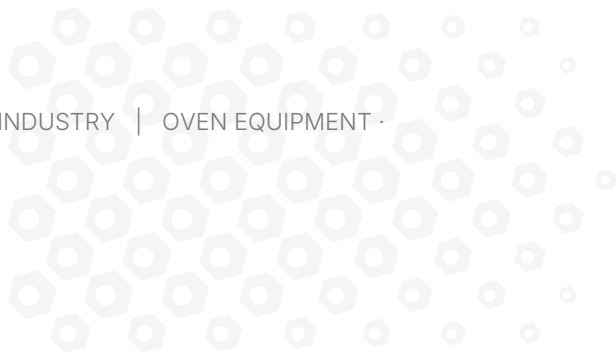




TEST REPORT ON XADO HIGH-TEMPERATURE GREASES

Wafer oven press: grease does not coke, units run without teardown

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Kharkiv, Ukraine · contract No. 1 of 30.03.2001 · testing 07.04–06.06.2001 · report of 07.06.2001

PRODUCT

XADO high-temperature greases

XADO-250 · XADO-300

TEST OBJECT

Bearing units of press No. 10, oven No. 3

roller bearing of the arc · 4 ball bearings of the carriage · roller and needle bearings of the lock

DOCUMENT TYPE

Test report of 07.06.2001

signatures of the plant officials · CJSC seal

OBJECT	OPERATING CONDITIONS	WHAT WAS MONITORED
Press No. 10 of oven No. 3 — treated	Temperature in the bearing unit zone above 200 °C , friction speed 0.1–0.2 m/s , rotation angle of the lock units up to 30° — without full rolling of the elements	Freedom of rotation, condition of rolling element surfaces, grease coking
47 presses of the same oven — control	Same process and same period on the standard "Shell" grease	Condition of the friction units at inspection
Fan bearing supports of the cracker line, biscuit shop	Continuous three-shift operation, Litol-24: servicing every 7 days , bearing life to failure 6 months	Treated on 21.05.2001 — bearings 32308 and 6308

Monitoring was visual: daily inspection of the units of press No. 10, weekly disassembly with inspection of the rolling element surfaces.

Key result

↑ **2.8x**

grease change interval in the press units, 21 → 60 days

Press No. 10 and the control presses of the same oven — 500 hours of operation

WHAT WAS ASSESSED	PRESS No. 10 — XADO GREASE	CONTROL PRESSES — STANDARD GREASE
Condition of the grease in the units	No traces of coking either on the friction surfaces or on the bearing parts	High degree of grease coking
Mobility of the units	Free rotation, no seizing	Loss of mobility of the bearing units and, as a result, disruptions in equipment operation
Surfaces of the rolling pairs	Smooth polished surface covered with a metal-ceramic layer	Friction units coked
Grease change	Not required over 60 days of testing (500 h of operation)	Disassembly with soaking or replacement every 3 weeks

The treated press and the **47** control presses of oven No. 3 ran in the same process and over the same period — at a temperature in the unit zone above **200 °C**.

Conclusions of the plant commission

As of the date the report was signed, the bearing units of press No. 10 were operating in accordance with the requirements and the grease did not need replacing. The commission of "Kharkiv Biscuit Factory" CJSC drew the following conclusions:

1. XADO grease ensures the operation of bearing units under heating up to a temperature of **300°C** for **2 months** and more.
2. The use of XADO greases as standard is advisable in all units of equipment operating at high temperature.
3. The use of XADO grease will make it possible to: A) Eliminate the costs associated with shutting down the equipment and carrying out disassembly, flushing and in some cases replacement of the bearings. B) Increase the service life of the bearings. C) Reduce the outlay on the purchase of bearings and grease, since XADO grease lasts **2-5×** longer and increases the service life of the bearings.



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The results apply to bearing units of wafer oven presses operating at a temperature in the unit zone above 200 °C, at low friction speeds and without full rolling of the rolling elements; under other conditions the figures may differ. The original report with the signatures and the seal of the plant is published in full and available for download.