

BEARING PARAMETER MEASUREMENT REPORT · TREATMENT WITHOUT DISASSEMBLY

KhTK turbocompressor: bearing clearance reduced, drive turns more freely

PGT «KHIMPROM», shop 101 — chlorine production line · approved by chief mechanical engineer A. A. Levchenko; signed by shop manager A. F. Kalina, shop power engineer A. B. Bolshakov, XADO LLC engineers A. I. Novikov and N. I. Babanskikh

Ukraine · contract No. 20 of 28.05.2001 · measurements 19.07.2001 and 29.08.2001

PRODUCT

XADO restorative compound
in the report — «XADO restorative grease»; the current product generation is revitalizants

TREATED COMPONENT

Bearings No. 32222 and No. 222L
supports of the KhTK turbocompressor electric drive, shop 101

DOCUMENT TYPE

Measurement report on electric drive bearing parameters
approved by the plant chief mechanical engineer, certified with a seal

COMPONENT**WHERE IT OPERATES****WHAT WAS MEASURED**

Bearing No. 32222	Support of the KhTK turbocompressor electric drive	Radial clearance
Bearing No. 222L	Support of the same electric drive	Radial clearance
Electric drive assembly	Chlorine production line, shop 101, continuous cycle	No-load current, coast-down time

Treatment performed under contract No. 20 of 28.05.2001 without disassembling the units; measurements before treatment — 19.07.2001, after — 29.08.2001.

Key results

↓ **16.7 %**

no-load current draw, 120 → 100 A

↑ **30 %**

electric drive coast-down time, 10 → 13 min

Turbocompressor supports — radial clearance

BEARING	RADIAL CLEARANCE CHANGE	MEASUREMENTS
No. 32222	–48 %	19.07.2001 → 29.08.2001
No. 222L	–36 %	19.07.2001 → 29.08.2001

Clearance decreased in both supports — a layer built up in the friction zone. The relative change is given: it does not depend on the recording scale used in the report.

Turbocompressor electric drive — current and coast-down

PARAMETER	BEFORE TREATMENT	AFTER TREATMENT	CHANGE
No-load current draw	120 A	100 A	–16.7 %
Coast-down time	10 min	13 min	+30 %

Lower current and longer coast-down on one and the same unit are two independent indications that rotational resistance in the supports has dropped.

What the report recorded

The report of shop 101 at PGT «KHIMPROM» states: «in accordance with contract No. 20 of 28 May 2001, restorative repair of bearings No. 32222 and No. 222L of the KhTK turbocompressor electric drive was carried out with XADO restorative grease» — without disassembling the units and without taking the chlorine line out of service. Measurements before treatment and **41 days** after it showed a reduction of radial clearance in both supports: by **48 %** in bearing No. 32222 and by **36 %** in bearing No. 222L — this is restored geometry in the friction zone. Measurements of the drive itself point the same way: no-load current draw fell by **16.7 % (120 → 100 A)**, and coast-down time grew by **30 % (10 → 13 min)** — the shaft began to turn more freely. The report is approved by the plant chief mechanical engineer and certified with a seal.



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The results apply to bearings No. 32222 and No. 222L of the KhTK turbocompressor electric drive under the conditions of shop 101 at PGT «KHIMPROM»; on other units and duty modes the figures may differ. The original report with signatures and seal is published in full and available for download.