

GREASE TEST REPORT · COKE-CHEMICAL PLANT, OJSC SEVERSTAL

Coke pusher No. 2: screw-nut pair outlasts the standard interval, no top-ups

OJSC Severstal, coke-chemical plant · approved by V. E. Germanov, deputy head of the coke-chemical plant for maintenance · signed by specialists of the plant service unit, the coke equipment repair shop (TsRKO) and the shop of coke batteries 5-6

Russia · report dated 31 Mar 2005 · in-service observation 5 Oct 2004 — 31 Mar 2005

PRODUCT

XADO Repair Grease
single 2 kg charge into the
gearbox housing

TEST OBJECT

Worm-screw gearbox of
the door-removal drive
screw-nut pair · coke pusher
No. 2, shop of coke batteries
5-6

DOCUMENT TYPE

Report of the
coke-chemical plant,
OJSC Severstal
signed and stamped · four plant
signatories

EQUIPMENT

Coke pusher No. 2,
worm-screw gearbox of the
door-removal drive

MODE BEFORE THE TEST

IP-1 grease: 0.5 kg topped up
weekly, nut replaced every 3-4
months

WHAT WAS OBSERVED

Nut service life, condition of the
screw-nut pair, grease consumption

The unit stayed in service: observation ran under normal operation of the coke shop from 5 Oct 2004, without taking the machine out of work.

Key results

↑ **1.5x**

nut service life: 3-4 months on the standard grease → 5 months 26 days with no replacement, no failure occurred

↓ **6.3x**

grease consumption over 177 days: 12.6 kg of weekly top-ups (calculated at 0.5 kg per week) → 2 kg charged once

Screw-nut pair of the door-removal gearbox — standard mode and XADO Repair Grease

PARAMETER	IP-1 GREASE, STANDARD MODE	XADO REPAIR GREASE
Nut service life	replacement every 3-4 months	5 months 26 days with no replacement, unit still running
Grease replenishment	0.5 kg topped up weekly	2 kg charged once, no top-ups
Condition of the screw-nut pair	nut life used up within 3-4 months	good — per inspection by plant specialists

Observation in the live unit of coke pusher No. 2 from 5 Oct 2004; as of the report date the screw-nut pair was still in operation.

Costs per plant records

COST ITEM	IP-1 GREASE, STANDARD MODE	XADO REPAIR GREASE
Grease over the observation period	232.5 RUB including weekly top-ups	4112 RUB — single 2 kg charge
Nut of the screw-nut pair	10 800 RUB every 3-4 months	no replacements

2005 prices per the internal cost records of the coke-chemical plant; the report gives no final savings calculation.

Conclusion of the plant commission

The commission of the coke-chemical plant of OJSC Severstal recorded in the report: the screw-nut pair of the worm-screw gearbox of the door-removal drive of coke pusher No. 2 has been running on XADO Repair Grease from 5 October 2004 to the report date — **5 months 26 days** — and the condition of the pair is good. On the standard IP-1 grease, a nut costing **10 800 RUB** was replaced every **3-4 months**, and the grease itself was topped up by **0.5 kg** every week; XADO Repair Grease was charged into the gearbox housing once, in the amount of **2 kg**, and was never added again. As of the signing date the test was continuing and the unit remained in service. Conclusion of the commission: "Given the above, it is desirable to extend the use of XADO greases to various equipment of the coke-chemical plant."

XADO

© XADO. All rights reserved.

The results apply to the screw-nut pair of the worm-screw gearbox of the door-removal drive of a coke battery pusher; with a different unit, load or lubrication mode the figures may differ. The original report of the coke-chemical plant of OJSC Severstal dated 31 Mar 2005, with signatures and stamp, is published in full and available for download.