PUMPING STATION No. 8 · 24.12.2000 – 10.01.2001

Water supply pump D 6300: bearings now run cooler with no shutdown or teardown

OJSC MMK im. Ilicha, water supply shop, pumping station No. 8 · report approved by V. N. Redya, head of the water supply shop; treatment carried out by Promelektrotekhpostach

Mariupol, Ukraine · treatment on 24-26.12.2000 · monitoring until 10.01.2001

PRODUCT

XADO RVS technology

units treated under normal operation, without teardown and without spare parts

TEST OBJECT

Pump D 6300 No. 16

babbitt sleeve bearings (shaft-and-shell pair) and the oil sump, pumping station No. 8 of the water supply shop

DOCUMENT TYPE

Water supply shop report and economic effect calculation

PUMP AND UNIT	CONDITION BEFORE TREATMENT	WHAT WAS MEASURED	TREATMENT
Pump D 6300 No. 16, station No. 8 — babbitt sleeve bearings	Bearing was due for replacement, oil sump housing at **60-65 °C**	Sump and bearing oil temperature, repair costs	**24-26.12.2000**

The pump was treated under normal operation — without shutting down the station, without dismantling the unit and without any special equipment.

What the water supply shop recorded

↓ 25 °C

oil sump housing temperature, 60-65 → 35-40 °C

Bearing unit temperature — by measuring point

PUMP AND MEASURING POINT	BEFORE TREATMENT	DURING OPERATION	AFTER STABILIZATION	CHANGE
Pump D 6300 No. 16 — oil sump housing	**60-65 °C**	**50-55 °C**, day 4	**35-40 °C**, day 10	**−25 °C**
Pump D 6300 No. 16 — bearing oil	**65 °C**	—	**35 °C**	**−30 °C**

Ambient air temperature in the pump house did not change over the monitoring period — the drop relates to the units themselves.

Sleeve bearing repair on pump No. 16 — water supply shop calculation

ITEM	CONVENTIONAL REPAIR	XADO RVS TREATMENT
Cost of repairing one bearing	**411.77 UAH**	**96.12 UAH**
Bearing replacement	required	not required
Economic effect	—	**3.28 UAH** per 1 UAH spent

The water supply shop calculation was signed jointly with the contractor; plant prices are from the year 2000, the effect per 1 UAH spent does not depend on them.

Conclusion of the water supply shop commission

The pump was treated while running — without shutting down the station, without dismantling and without spare parts. The bearing of pump D 6300 No. 16 was queued for replacement, and its oil sump housing heated up to 60-**65 °C**. After the treatment the sump temperature dropped to 35-**40 °C** and the oil temperature to **35 °C**, and the shop calculation records: “Bearing replacement is not required”. The commission recorded in the report: “The positive results achieved indicate reduced friction in the sleeve bearings and optimization of the shaft-to-shell clearance, which ultimately led to the temperature drop”. Equipment repair by this technology is recommended by the shop for further rollout at OJSC MMK im. Ilicha.

XADO

The results relate to the bearing unit of the D 6300 water supply pump at pumping station No. 8 of OJSC MMK im. Ilicha and to its operating conditions; on other equipment the figures may differ. RVS is an obsolete XADO designation, the zero-generation compounds; the current product generation is revitalizants. The original report and the calculation are published in full and available for download.