

The Report of the Turbocharger Rotor PDH50V E2-B2 Dynamical Balancing 24.04.2025

The dynamical balancing of the turbocharger rotor PDH50V E2-B2 was done in dual plane on 24.04.2025. The scheme of the rotors and the view are presented in fig. 1.

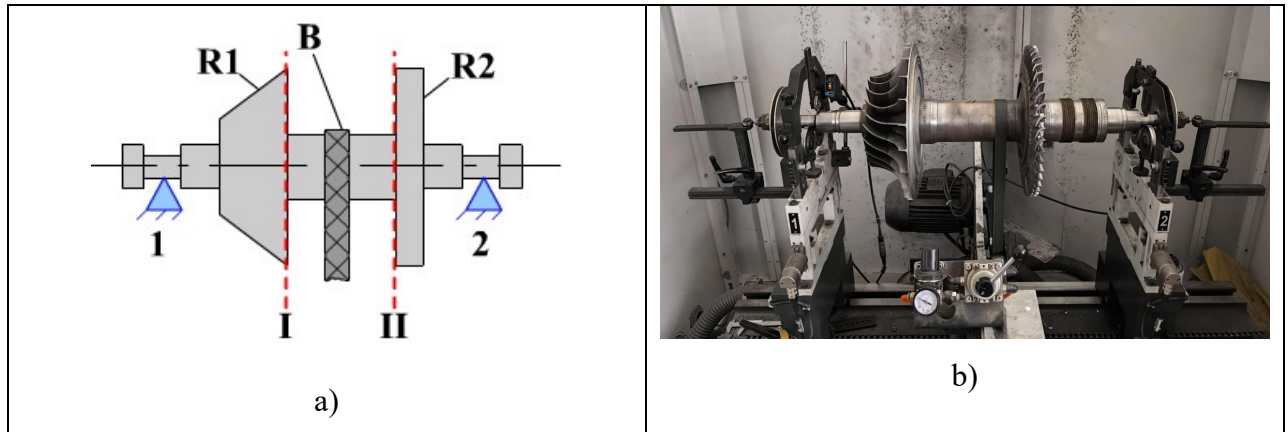


Fig. 1 The scheme of the turbocharger rotor PDH50V E2-B2 dynamical balancing a) and the view of the rotor

Here is: 1 and 2 – supports of the balancing machine; I and II – balancing planes; R2 and R1 – the gas expulsion impeller and the compressor, B – a belt.

The results of the turbocharger rotor PDH50V E2-B2 dynamical balancing are presented in the table No.1

Table No.1

The results of the turbine rotor PDH50V E2-B2 dynamical balancing

Balancing course	The imbalance, gmm	
	I plane	II plane
Before balancing	184.74	157.94
After balancing	2.98	2.98

NOTE: the rotor's dynamical unbalance levels are presented when the rotor was rotated at 900 rpm. According to ISO 1940, the permissible unbalance of the rotor must be not higher than 59.68 gmm (when mass of rotor is 50 kg and balance quality grade G2.5), i.e. the permissible unbalance on I and II balancing planes must be not higher than 29.8 gmm. Permissible unbalance was calculated when rotor rotates 20000 rpm.

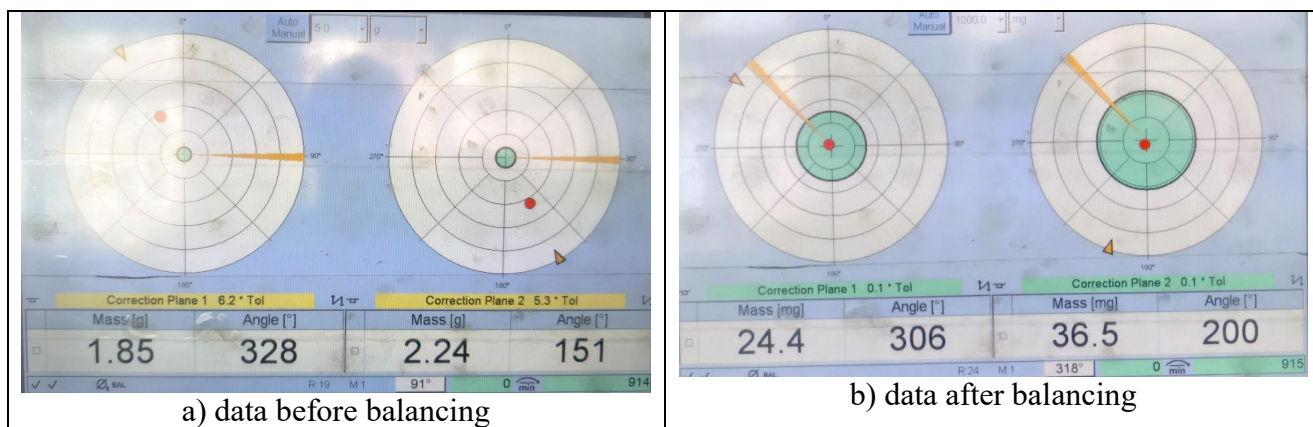


Fig. 2 Data which were given during dynamical balancing of the turbocharger rotor PDH50V E2-B2

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