DISTRIBUTION OF CYLINDER LINER VIBRATIONS DURING WORKING PROCESES

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ABSTRACT

This paper presents the constructive modifications carried out on a Diesel engine, used apparatus and the methodology of vibrations analysis. It presents the most important diagrams which show the vibrations distribution on the cylinder liner. In the study of the cylinder liner of the Diesel engines behavior, a great importance has the knowledge of the vibration characteristics and variations on the external surface of the cylinder liners. The existence of vibrations in a Diesel engine – power consumer is harmful from all points of view, thus we consider that these can be reduced but their complete elimination is not possible. In some working regimes the system can be started in instability, when the vibrations amplitude increase continuously, so they determine the damage of some elements of the systems by the dynamic forces which appear.

REFERENCES

- Crudu I., Simionov M., Studies and Researches concerning the Cavitation Wear of the Cylinder Liners from the Internal Combustion Engines, International Conference of Tribology ROTRIB'96, vol. 2, 451 – 460, Bucharest (1996).
- 2. Dumitru Gh., Simionov M., Vibroacustic Diagnosis of the Naval Propulsion Systems with Diesel Engines", (in Romanian), Contract nr. 4007/1995, Phase I "The Theoretical Study upon Vibroacustic Diagnosis of Naval Propulsion Systems with Diesel Engines, Galati (1995).
- Dumitru Gh., Simionov M., Vibroacustic Diagnosis of the Naval Propulsion Systems with Diesel Engines", (in Romanian), Contract nr. 5007/1996, Phase II "Designer of the Installation for Vibroacustic Diagnosis of Naval Propulsion Systems with Diesel Engines, Galati (1996).
- 4. Simionov M., Studies and Researches concerning The Cavitation Damage of Cylinder liners from Diesel Engines, University, Galati (1997).
- 5. *** Technical Notice of the U650 and U651 Tractor, 4th Edition, Brasov (1966).
- 6. *** Instrumentation for Sound, Vibration, Illumination, Thermal Environment, Signal Analysis and Medical Diagnostics, Brüel & Kjær, Nærum, Denmark (1989).
- 7. *** Building and Operation of Vibration Free Propulsion Plants and Ships, BUREAU VERITAS (1983).