

CONSIDERATIONS CONCERNING THE CAVITATION DAMAGE OF CYLINDER LINERS FROM DIESEL ENGINES

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ABSTRACT

In recent years, the increase power compression ignition engines used in marine and terrestrial applications, increasing the stress degree determined and hence the emergence and development of the phenomenon of cavitation damage cylinder liners and cylinder blocks on the cooling water wash. This cavitation damage is based mainly on vibrations generated during operation of diesel engines. This paper presents the cavitation process of the cylinder liners of the Diesel engines evolution, on the basis of the superficial layer principal parameters variation: the tension state, the microgeometry, the microhardness, the microstructure. These researches were effected on a special stand, which simulated a cooling circuit of a Diesel engine. The cylinder liners were exposed to mechanical vibrations, their parameters were determined on a real engine, for various working régimes.

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