

SIGNIFICANT CHANGES IN COOLING SYSTEMS OF MARINE DIESEL ENGINES

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ABSTRACT

In this paper some constructive changes in marine Diesel engines cooling systems are presented. These changes concern some solutions for removing air bubbles and salts from cooling water. The presence of air bubbles and salts in engine cooling water accentuate destruction by cavitation processes of cooling flowing spaces (especially cylinder liner and cylinder block of Diesel engines). We know that in the cylinder liner and cylinder block of Diesel engines vibrations, the presence of air and salts due to the acceleration of cavitation nucleation. In these conditions, when the temperature and pressure of water cooling increase, these nuclei allow steam bubbles formation and development in the cooling space between cylinder liners and cylinder block. Therefore, constructive methods were adopted to allow air removal and retention of salts from cooling water. The paper presents the influence of cooling water additives used in marine diesel engines.

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