1. Introduction

With global warming becoming an increasingly serious problem, a framework for ${\rm CO_2}$ reduction was discussed in the international shipping industry, and in July 2011, the International Maritime Organization (IMO) adopted regulations on CO

age CO_2 emission after January 2015 and a 30% reduction in 2025.

On the other hand, high fuel costs in the shipping industry, driven by the continuing high price of crude oil, have also heightened the need for `d

greenhouse gases (GHG) by 25% within 2 years and

50% in 10 years" and created a Green Ship Planning Dept. as the organization responsible for promoting this goal. Centering on that department, a total of more than 50 persons, including members not only of the Design Division, but also the Technical Research Center and others, has been participated in the Green Ship Development Project.

With the cooperation of outside research organizations and manufacturers, Japan Marine United Corp. carried out development of a "Green Ship," with improvement of hull performance and higher effciency engine plant as the priority items, and completed the development of the "G-Series" No. 1 ship, a 209 000 DWT (dead weight ton) bulk carrier, in August 2011. After the development, marketing and sales activities of new vessels were immediat _ el _ omplm

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