A simple method has been established for the evaluation of the service performance of ships. Input data are easily collected daily on board and transformed to a well-defined condition that makes possible the comparison between ships, for instance, sister ships, and between different time periods of voyages for the same ship. The procedure has been applied to two ships that are identical, with the exception that one has a conventional propeller, whereas the other one is fitted with a high-efficiency propeller of the KAPPEL type. The results are obtained from a period of 2 years steaming for both vessels. They clearly confirm the increase of propulsive efficiency obtained with the KAPPEL propeller in the order of magnitude of 4%.