

Light fishing strategy for squid jigging in Japan,
with consideration of the catchability and fuel consumption

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Japanese common squid *Todarodes pacificus* is the main target species of the squid jigging boats around the coast of Japan, for the yearly landing amount as 100-200 thousands tons by 25,000 jigging boats in these decades. Light fishing system for squid jigging has been established through the development of the lighting technology, so as to have the high power light output as 300-400Kw even for 20GT coastal boats with the high intensity discharged lamps. On 1997, the self-regulation strategy was realized to set the maximum light output as 180Kw for coastal boat, and 250Kw for offshore boat, in order to stop the lighting power competition among the boats. As the follow-up project to confirm the optimum light power output, the series of comparative fishing operations among the differed light output boats were conducted during the period from 1998-2002, for aiming the further reduction of lighting power output to minimize the operation cost. The catch amount for each boat with the differed light output was analyzed with the daily monitoring of the fuel consumption for over two months during each fishing season, to show the fuel consumption and catch amount being increased in proportion to lighting power output. The cost-profit analysis will be reviewed here for giving the opportunity to fishers by seeking the optimum lighting strategy, how to share the squid resources in the fishing ground without the high competitions among the boats