

E-Course
E C O n o m y

Pilot

ECOP

E-コース
パイロット

MPH219

MORE FUEL SAVING !!
1% IMPROVEMENT



YOKOGAWA New Green Products

PT500 Series
UPGRADE

株式会社YDKテクノロジーズ
YDK Technologies Co., Ltd.

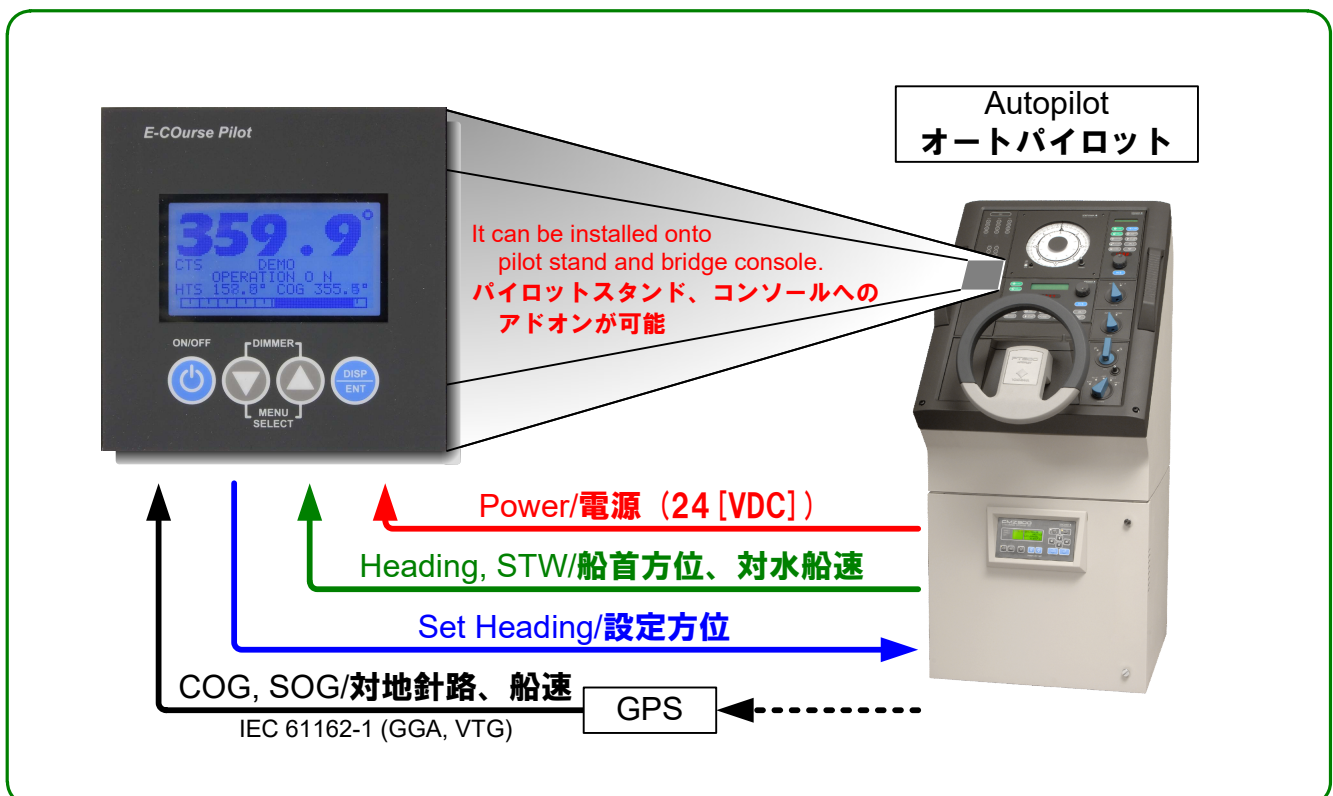
FEATURES

- ◆ E-Course Pilot measures XTD (Cross Track Distance) generated by the sea current or wind, produces a virtual course line, and controls the vessel to follow on that line.
- ◆ E-Course Pilot reduces a "stray" off from the track, and helps the vessel to arrive the destination with shorter track distance.
- ◆ Compared to TCS, rudder to steer is kept small and infrequent. This contributes to fuel saving effect. By combination with BNAAC control, further powerful synergistic effect can be expected.
- ◆ Virtual course line is set automatically by "POWER ON". No need of complicated operations!
- ◆ E-Course Pilot is "ADD-ON" feature to the existing PT500 model.

特徴

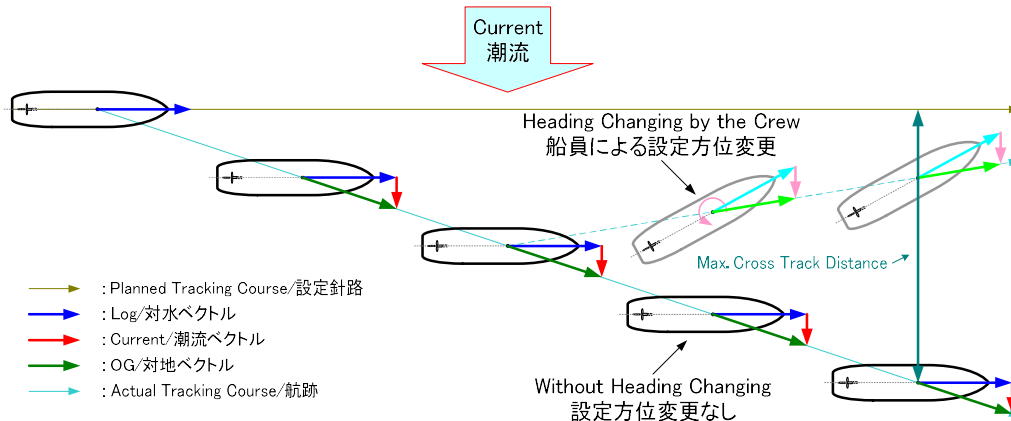
- 潮流・風浪による横流れを計測し、船をコースライン上に制御
コースライン上の遠方に目的地を仮想設定し、操船制御
- 航路損失の増大を抑えることができ、短距離で目的地へ到達可能
- 舵角/頻度はTCSより少なくなり、省エネ性に寄与
舵制御をBNAACで行えば、さらに舵角/頻度は減少
- 電源ONで、コースラインを自動設定するため、複雑な操作が不要
- アドオンタイプのため、既存のオートパイロットへ増設が可能

SYSTEM DIAGRAM/システム系統図



CONTROL METHOD/制御方法

Heading Control System ヘディングコントロールシステム(オートパイロット)



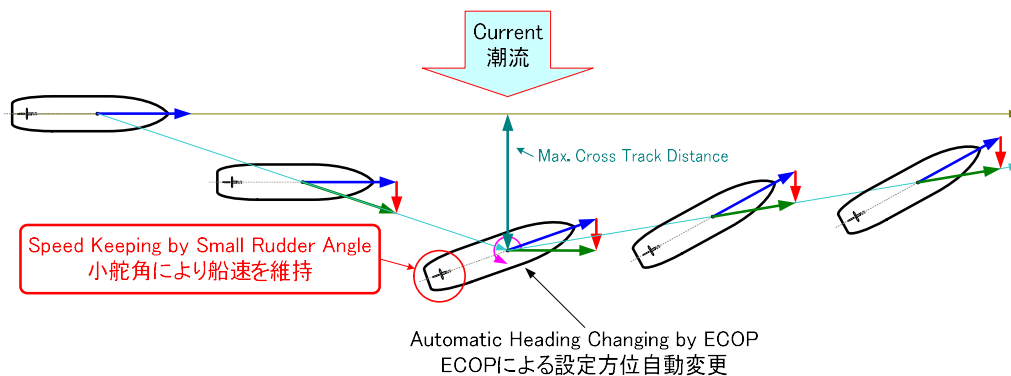
◆ Controlling of the vessel's heading through the water

- ※ HCS controls the vessel's heading through the water. So, drift by current or wind is not controllable.
- ※ To compensate the “stray” and to keep the vessel on track, repeated manual adjustment of the heading shall become necessary. This results in a longer rhumb line.
- ※ This also means an increased workload to the ship's crew, because the crew needs keep checking the vessel's position, and adjusting the heading, as may be required.
- ※ Drift by the current/wind is not controlled.
- ※ Loss of track is increased by several times heading changing.
- ※ The workload of crew is increased by several times position checking and heading changing.

◆ 船の船首方位(対水方位)を維持

- ※ 潮流・風浪による横流れまでは制御しない
- ※ コースラインからのずれと修正を繰り返し行うため、航路損失が発生し、航程が増える
- ※ 設定船首方位の変更が都度行われ、航海士の負荷が増える

E-Course Pilot



◆ Controlling of the vessel on the planned course line

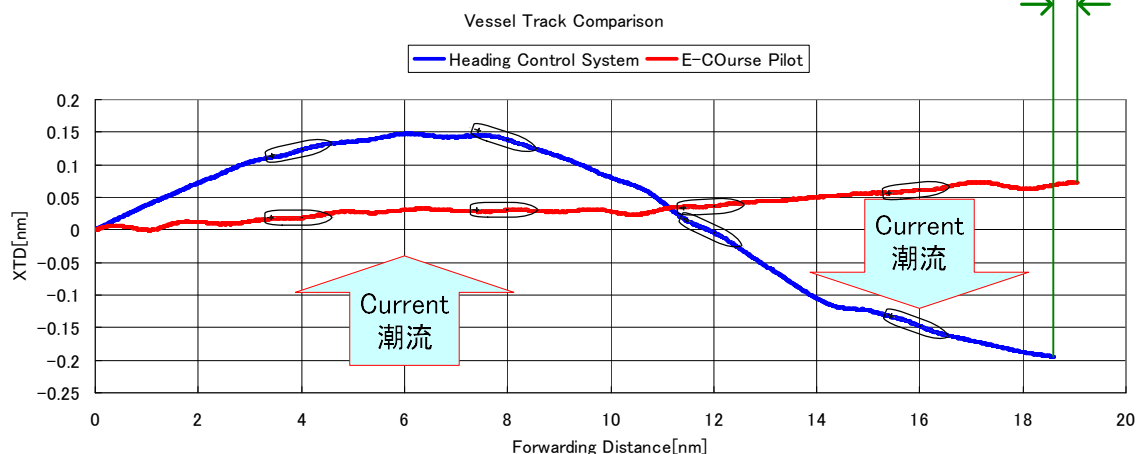
- ※ E-Course Pilot minimizes a stray off from the track, by generating a virtual course, and keeping the vessel to follow on that line.
- ※ Unlike HCS, repeated manual adjustment of heading is not required.
- ※ Compared to TCS, which requires a precise control, E-Course Pilot realizes fuel-saving, by simply keeping the vessel on the course by small/infrequent rudder to steer. Operations are as simple as just power on!
- ※ The vessel can expect further powerful synergistic effect by using E-Course Pilot and BNAAC, together.

◆ 潮流・風浪による横流れを計測し、船をコースライン上に維持制御

- ※ 遠方に目的地を仮想設定し、航路損失を最小限に
- ※ コースラインからのずれに対する、頻繁な方位変更が不要
- ※ TCSのような緻密な制御はせず、最小の舵角・頻度で、コースラインへ復旧
- ※ ECDIS上での航路計画は不要で、電源ONのみで対地制御を開始
- ※ BNAACとの組合せでさらなる省エネ性を発揮

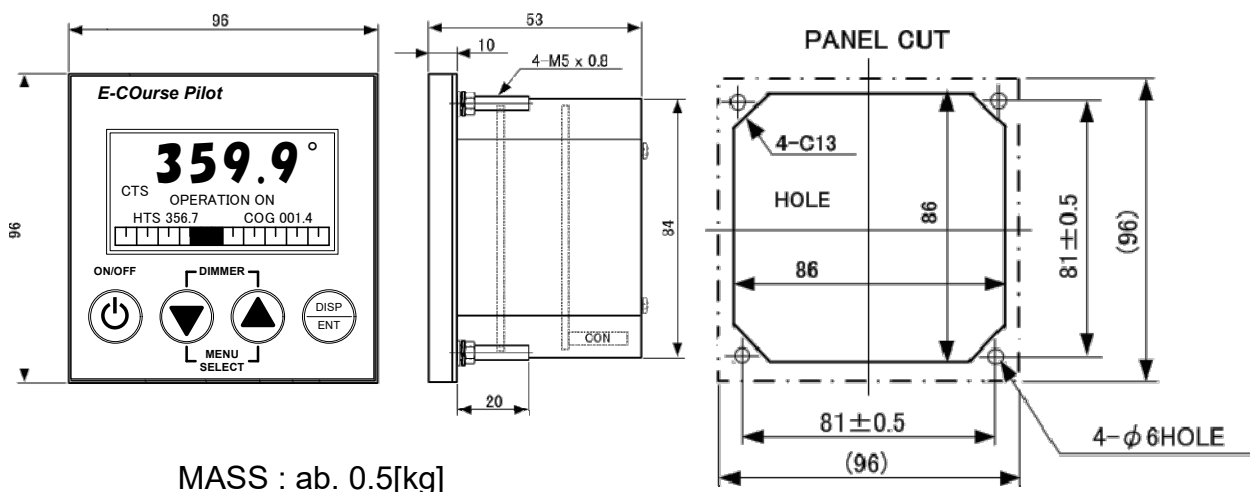
ACTUAL VESSEL TEST RESULT

実船試験結果



- ◆ On actual vessel test, ab. 1% of fuel consumption saving was achieved.
- ◆ More fuel saving is expected by combination with BNAAC.
- 実船試験において、約1%の燃料消費量削減効果が確認されました。
- BNAACとの組合せにより、さらなる燃料消費量削減効果があります。

OUTLINES/外形図



YDK Technologies

URL : <https://www.ydktechs.co.jp>



Caution:

Please read the manual before using this product

Marine Equipment Business Division

Address: Minami Shinjuku Hoshino Bldg.

5-23-13 Sendagaya, Shibuya-ku, Tokyo, 151-0051 JAPAN

International Sales Dept. Phone: (81) 3-3225-5383 FAX: (81) 3-3225-5316
 Service Dept. Phone: (81) 3-3225-5392 FAX: (81) 3-3225-5316
 Domestic Sales Dept. Phone: (81) 3-3225-5382 FAX: (81) 3-3225-5316

Osaka Branch Phone: (81) 6-4706-8027 FAX: (81) 6-4706-8028
 Imabari Branch Phone: (81) 898-22-4559 FAX: (81) 898-33-2005
 Nagasaki Branch Phone: (81) 95-826-5552 FAX: (81) 95-826-5553

Represented by: