



Fuel savings through trim optimisation

INTERSCHALT | TROP is a new trim optimisation module developed by INTERSCHALT maritime systems AG that is designed to help attain optimum ballast distribution and thus contribute to fuel savings. It is integrated in the company's proven MACS3 loading computer.

The company first developed a trim optimisation solution in the 1990s. At that time, German shipowners and operators commis-

sioned research, aided by model-towing trials, to find out which trim configuration for their ships would produce the least resistance. Based on these data, ballast optimisation was implemented in the MACS3 loading computer. Interest in this module remained low over the past decade and a half, according to INTERSCHALT, because the shipowners and operators considered the costs of performing the towing trials to be too high. But thanks to computer-aided numerical fluid mechanics (computational fluid dynamics / CFD) and most importantly high bunker prices, demand for trim optimisation tools has risen.

TROP is the answer to how tanks should be filled to obtain the optimum trim, and what effect this has on ship stability and consistency. With TROP, the user can automatically seek the best possible ballast distribution. As trim computation is accomplished through integration in the loading computer, stability and load safety are ensured. MACS3 recognises safety deficiencies and proposes the alternative that is both the best and safest.

The company reports that 2 to 3% savings in fuel consumption can be realistically attained by using TROP. For example, INTERSCHALT was able to verify this in practice with a large shipping company whose some 50 ships were equipped with the loading computer and TROP module. INTERSCHALT is now also working on integrating TROP in stowage planning. The objective is to transport containers instead of ballast water. The company said that by integrating TROP in the stowage planning program Stowman, it aimed to stake out a unique position in the market and thus "set a landmark" in container stowage. Talks with large container lines are being held at present with regard to further implementation.

About INTERSCHALT

INTERSCHALT maritime systems AG is a leading supplier for the shipbuilding and shipping industry. Its product portfolio includes hardware, electronic switchboards, automation applications, software solutions, global services from its own service stations and crew training. Based in Schenefeld, near Hamburg, and with more than 50 years of experience, INTERSCHALT has carried out a long list of projects with all major shipowners and operators. It operates globally from nine locations in three time zones.

www.interschalt.de