

'HYMAR', PROPELLED BY AUTOPROP

Every yachtsman loves that moment when he can shut down the engine and allow the wind to do the work – the peace is wonderful! Now we at Bruntons are heavily involved in a European Union funded research project which will mean a real cut in the amount of time that we have to run the main diesel engine on our yachts. The resulting increase in 'peace' will be only one of the many advantages to this world of ours, that has quite rightly become, much more 'energy' conscious.

The project is called 'Hymar' and it features some of the best 'brains' in the propulsion and energy fields, each bringing the benefit of their extensive experience and knowledge in their respective fields. The object of the exercise is to produce a marine diesel electric / hybrid drive system for sailing yachts and other smaller craft that really works. Although there have been several attempts in the last few years to produce an efficient system, none have so far been totally successful. 'Hymar', by bringing together the talents of some of the 'best in the business' means to correct that.

So who are those involved and what are their roles in the project?

EnerSys – a global leader in 'stored energy' solutions will provide the battery knowledge.

Mastervolt - will provide leadership in the areas of power electronics and associated software development.

E- Motion Special Projects – led by Dave Tether, E-Motion already have extensive experience in marine hybrid system implementation.

Bosch Engineering – a company that needs no introduction, with vast experience across a huge range of electronic equipment, will help perfect the central system controller.

Steyr Motors – highly respected for their in depth understanding of diesel engines and electric machine technology.

Malo Yachts – Swedish builders of fine sailing yachts will provide the test boat and related services.

....last but certainly not least!

Bruntons Propellers – Working closely with INSEAN, the Italian Research Institute, we shall be producing a special version of Autoprop and providing other specialist propulsion advice.

The team above has been described by Nigel Calder, respected marine technical writer, who is the Technical Co-ordinator for the project, as the, “dream team for marine hybrid development” but what exactly are the achievements that the group are hoping to produce. They are many but the main features are:

- Zero emissions to air and zero external noise and vibration in port.
- A reduction in overall fuel consumption by 30%, but increasing to up to 90%, on applications such as long distance sailing yachts able to make use of the systems regenerative processes.
- Very significant reductions in CO₂, HC, and Nox emissions

It is not difficult to work out why Bruntons and Autoprop are part of the consortium. Our experience and knowledge of small vessel propulsion is probably unmatched in the world; after all, we have been at it for over 100 years. More particularly, with this particular project, we have been producing the world's first self pitching propeller in the Autoprop, for over 20 years.

As a result of this project Autoprop will eventually appear in a new version. A version that takes all of its current abilities and specially adapts them to maximise thrust delivery, not under diesel engine as is normally the case, but this time with electric power.

We have entered this project knowing that when it comes to smaller vessels no one has produced a really successful hybrid power system that works but, also knowing, that as they have been successfully in use on many large ships and submarines for many years, with our partners in the consortium we should be able to reach a successful conclusion.

The information on our web site will be added to as the project progresses, so please drop by the 'Hymar' page from time to time to keep fully up to date with one of the most exciting projects for yachtsmen in many years.