

# MODERN PAINT FINISHING BY NO MEANS A DULL SUBJECT

BY REMY MILLOTT



I WAS DELIGHTED TO BE ASKED BY COLIN TO WRITE AN article for this edition of his magazine as it is an opportunity to touch on several aspects of yacht painting that should be of interest to crew and owners alike and to offer an update on what has been happening recently in the high tech world of paint. In the past three years there have been many discussions and initiatives to try to 'define the quality of a paint finish'. This has been and still is a difficult topic and the objective of defining a set of global acceptance criteria for yachts has been especially hard to achieve. There are many experts and many opinions which do not necessarily agree on the principle let alone the methods and measurements required to establish the criteria themselves.

'The Draft ISO Standard 11347 Coatings – Measurement and Analysis of the Visual Appearance', which I have been involved in, has been created to deal with the methodology of 'measuring'

a vessel. It is progressing well but it has taken three years to produce the first full draft and it will likely take another two years to become operational, but it is certainly the right international certification. ICOMIA, which is the International Council of Marine Industry Associations, has created a 'Minimum Industry Paint Standard' which is a positive step, however ICOMIA, after many months of hard work, was unable to get all of the 'experts' to agree on the acceptance criteria and had to compromise, which is a pity from an industry point of view.

I have personally been a strong supporter of an internationally recognised paint standard and very vocal on the subject but, since to date this has not fully materialised, we at Pinmar had no choice but to create our own internal 'Pinmar Paint Standard' in the autumn of 2010. To date we have had a lot of very positive feedback and as far as I am aware Pinmar is the only



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Distinction of Image and Dust. This then determines the overall quality which will be delivered and if we are not able to achieve this 'standard' it becomes an area of non-conformity. This avoids the blue tape scenario where hundreds of pieces of blue tape are stuck on the vessel and endless lists are created as discussion points, which usually lead to frustrating disputes. In my opinion, if you need blue tape to remember where the faults are they probably are not large enough to justify the discussion. The most important part of any paint standard is to take away subjectivity and the different opinions of individuals. This we achieved by getting approval of our standard from all the main paint manufacturers and surveyors.

What an owner should expect from his paint applicator is a well organised, professional, financially stable company who will give value for money and high quality – defined within a written contract – and the ability to correct it if it does not at first achieve it. In Pinmar, we believe that our strong management structure allows us to get the best results from our painting teams. There are many fine sprayers in the world but they do not always have the infrastructure and support they need to produce top quality finishes.

This leads me to yacht finishes on a new build. I believe this is a very complicated process, not only does the vessel have to have the complete filler and paint system applied to the highest of standards, which is the expectation of the owner and his representatives, but the vessel has to be built and fitted out at the same time. For comparison, a normal repaint of, say, a 65 m vessel might take approximately four months and can take anything from 8000-14,000 hours of work depending on condition. A new build of that size could be in the region of 60,000 hours so approximately six times more work in far more difficult circumstances but usually with only two or three times the length of time that a refit would take allowed for in the contract, so there is often disappointment.

company using a recognised high quality paint standard. However and surprisingly, some strange comments have been made about it such as 'My concern is that when a company interested in a subject sets a standard over its quality you have an immediate conflict of interest and in this case a huge one.' I am surprised because it is not an 'industry standard' but an internal Pinmar standard for the benefit of our clients and to help us to improve quality – hardly a 'conflict of interest' – in fact most people would probably just call it quality control.

Although we still have more work to do in terms of internal re-training and re-educating our workforce, the results so far have been well above our expectations. The method behind the Pinmar Paint Standard is to mutually agree the quality of the various elements of the paint finish at the beginning of a project including, but not limited to, Gloss, Orange Peel, Dullness,

In order to avoid this all parties must contribute; the owner must provide clear expectations through his advisors and a budget that matches those requirements, the yard must provide the conditions and planning in order to avoid on-board conflicts and the paint company must be well organised and well managed with a properly qualified workforce and sufficient capacity. With these elements in place the desired high quality can be achieved. In reality, there never are the perfect conditions to paint a superyacht, logistically and practically they cannot be produced, even without taking into account the cost. Cars are robotically painted in climatically controlled environments and then polished and treated and yet there are often comparisons made between car finishes and yacht finishes so what is the difference? Basically in finish there may be very little but the real contrast lies in the huge amount of man hours and materials that are used to paint

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a large yacht. Fortunately, however, with high quality scaffolding and tenting, a good and environmentally sound dust extraction system and well planned activities we can still achieve the results our clients expect.

With regard to the environment and going 'green' quite a lot has been done from the manufacturers' point of view with a large reduction in the use of VOCs and governments throughout the world are insisting on painting activities being carried out in an enclosed environment thus controlling the overspray which might escape into the atmosphere. In Europe our facilities are regularly inspected to measure these volumes and conditions and now in the USA things are quickly tightening up which will help the environment and also increase costs.

I can remember not too long ago when we would happily spray outside in winter with frantic covering up of vessels close by and people watching out for overspray – it was quite ridiculous. Then there would be nervous moments in the morning to see if the dew and low temperatures had made your previous day's shoot go flat. It never seemed to affect the overall

longevity of the paint although this would not be accepted by today's 'experts' who believe that cross linking and uninterrupted curing should be the norm.

What is curious is that people say finishes have deteriorated over the years. Do they honestly believe that compared with a windy day in February with no cover, a temperature that didn't exceed 15° and a drop in temperature over the first two hours of curing we are in a worse state today? Personally I don't believe so, but what I can say is there is a lot more subjectivity and opinion now. From my understanding, in terms of the products we use, there will be no further changes in formulations for the next five years or so. The next step is to move towards more high-solids paints meaning further reductions in solvents, but the obvious ultimate goal is to change to water-based products, as has already occurred in the car industry. The reason this is so difficult goes back to the size of the yachts and the conditions in which we paint them. Water-based

products dry very fast, which is precisely what all the dangerous ingredients currently stop paint from doing, thus allowing large surfaces to be sprayed without affecting the finish. In order to use water-based paint we would need climatically controlled environments with constant temperatures and humidity control. As already explained this is nearly impossible for a large superyacht. Quite apart from the fact that we are painting areas several hundred times larger than a car, we couldn't buff the surface (as the car makers do) and still achieve durability equal to the current Polyurethane products.

There is clearly no easy solution to going green with yacht painting systems but I guess the manufacturers are working on this in the same way that Shell is working on an electric car. >||

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