



# The Last Stand

## What does a paint manager do?

In the first part of this three-part series (issue 83), Joop Ellenbroek made a convincing case for the need for a **Paint Manager** in the management structure of a yard. Part two now looks at what that individual's job description, what his responsibilities and goals should be and demonstrates where that role must lie in the management hierarchy.

In the previous article we touched on the position of the yard in paint matters and the need for a qualified paint manager in the yard's organisation. The size of the paint budget and the present situation – with an estimated 50% of newbuilds leaving the yard with paint issues – should be enough justification for any major yard to create the function of a paint manager.

We can define the Paint Manager as the person who makes sure that (1) the right paint and coatings are applied; (2) correctly; (3) within the agreed time; (4) within the agreed budget; (5) at the right quality and; (6) under safe and healthy working conditions. Moreover, a well positioned paint manager can prevent 'paint decisions' with potentially enormous financial and operational consequences from being taken at too low a level in the organisation.

To achieve this, the paint manager faces a tremendous task, balancing between the pressure of and interference from the various shipyard departments, the commitment of the yard management and ultimately the interest of the owner. What are the typical problems and challenges that a paint manager faces ?

### The right choice of paint & coatings

There are a multitude of surfaces on a yacht that require a coating; for protective purposes, for decorative purposes or for special purposes (anti condensation, insulation, sound dampening). These surfaces include:

- Exterior hull and superstructure
- Capping rails
- Ceiling panels
- Furniture
- Non-skid surfaces
- Chain lockers
- Inside deck lockers
- Behind linings
- Floors
- Tanks



Photo: Corbis



It is the paint manager's responsibility to ensure the right choice is made for each surface and service. In addition to this the paint manager has to judge suitability and practicality of an increasing number of specialty coatings for special services like fire retardant coatings, intumescent coatings, anti-condensation coatings, acrylic PU topcoats, dark hull coatings, metallic topcoats, pearlescent coatings and last but not least the choice of the right anti-fouling.

To judge the suitability of a coating system there is quite a number of properties and criteria that need to be addressed:

- Suitability: Does the coating do the job required?
- Quality: How well and how long will it perform?
- Cost: Cost per square metre at the specified thickness.
- Application efficiency: Application time, drying time.
- Health and Safety: Solvents, smell, health effects.
- Environmental aspects: VOC Solvent emissions.

If the above questions are properly addressed in relation to the yard's operation by a competent paint manager the benefits can be enormous; improving efficiency, saving time, reducing costs and limiting liability.

### A 'correct' application

The paint manager is responsible for the 'correct' application of all coating materials that are specified for his newbuilding projects. 'Correct' means that the materials are applied in a technically correct manner and in accordance with the paint supplier's specifications and application instructions. This is relatively easy when there is no extreme time pressure on the paint contractor. It becomes more difficult when the pressure on the production schedule pushes the yard to the limit, and cutting corners seems to be the only way out. In that case the paint manager has to know what the tolerance is of the coating system regarding this corner cutting.

Examples? What happens when the filler is applied at 14 °C, when the specification states that 18°C is the minimum? And then at 10°C? What happens when steel primer is applied at 8°C, just before the hull is launched and towed to the outfitting yard? What to do when 20%

of the primer on a faired surface is 30 % below the specified thickness? In these (and many similar) situations the paint manager has to assess the risk and consider possibly alternative options and solutions. His decision must be made in a delicate balance between technical integrity and production planning.

### Application within the agreed time

To have the application of all coatings completed within the agreed time is the main, continuing battle of a paint manager. He needs to understand how the planning of a paint contractor works and if the planning proposed by the contractor is realistic (number of workers per day or week, estimated number of hours per square metre, total number of hours calculated). The next step is to integrate this planning into the yards production schedule, together with other 'interfering' disciplines like the hot work and teak deck laying. However, the yard planning process is often very dynamic and is subject to many changes.

This requires a lot of coordination, improvisation and ingenuity from the paint manager to maintain a balance between keeping the original time path and requiring the paint contractor to stay within the agreed technical criteria.

### Application within the agreed budget

The contract price is supposedly based on a contract and this contract must stipulate clearly what is in the contract price and what's not. Other issues like extras, change orders, acceptance criteria and responsibilities must also be agreed upon. This requires at the start of a project a close cooperation between the paint manager and the department that issues the paint contract: the purchasing department.

During the execution of the paint contract it is the paint manager's responsibility to keep a close eye on the activities of the paint contractor and register everything that may lead to extra charges. In order to keep it workable both the paint manager and the paint contractor need to maintain a balance between 'small stuff' (contractor's risk) and the 'big extras' caused by major modifications or planning changes. The paint manager needs to have a good understanding of the estimating



process of a paint contractor to be able to evaluate and judge his charges.

### Application at the right (cosmetic) quality

As mentioned in our previous article a majority of the new-building contracts these days contain a paragraph about the cosmetic quality. It is the paint manager's responsibility to verify that the paint contractor's application process and QA/QC leads to the agreed cosmetic result. This verification is not just checking the final topcoat for dust and orange peel. It means following all phases of the fairing and paint application process to verify compliance with good fairing and painting practices. Important issues in this context are: compliance with the agreed sanding scheme, elimination of air pockets in the filler, fairness of the hull surface and consistency of the fairing on edges and corners (detailing).

### Safe & healthy working conditions

Health and safety on the work floor is an increasingly important issue at shipyards, driven by local as well as international regulations. Good paint management dictates that all paint systems used in the yard need to be scrutinised continuously for optimum compliance with the applicable safety/health laws and regulations. The paint manager may have to rely on his suppliers to support him, but he still requires a good knowledge of paint qualities and properties in order to be able to make the right decisions.

Examples? A high solid polyurethane may have the benefit of a lower solvent content, but higher solids often means more 'orange peel'. Replacing a two-coat paint system for interior use ('behind linings') to a one-coat system may be beneficial for a lower solvent emission, but it may not look good enough for the owner or the owner's representative. Introducing 'water-based' coatings for interior use may be beneficial for a lower solvent emission and less 'smell', but may require additional ventilation and heating during the full application period, while the cosmetic result may be considerably less.

The above sections are only an indication of the many subjects a paint manager in a major yard has to deal with. There are many further interesting issues like: how to deal with the damages to the paint system during outfitting, when nobody in the yard seems to be interested in preventing these damages? How to deal with the decision to change the hull colour from white to blue, knowing that the blue colour will soon cause major distortions in the fairness of the hull? How to deal with a specification for a metallic topcoat, knowing that the design makes it nearly impossible to get an acceptable result? How to convince top management – in a new yard – that fairing and painting is one of the main issues during construction?

### The paint manager's position

From the above it should be clear that the paint manager's department should be operating on a staff level as well in the production department. His position and authority should be in line with the budgets under his responsibility and the impact that fairing and coating quality may have on the yards name and fame. The actual situation, however, may also depend greatly on whether the fairing and coating process in the yard is yard- or contractor-dominated. In Paint Management I have stated that:

1. The fairing and coating budget may be as high as 10% of the overall building cost and
2. Probably 50% of all newbuilding projects leave the yard with major paint issues.

A qualified and experienced paint manager will be very beneficial in improving the yard's 'paint performance' by reducing cost, improving efficiency and performance and last but not least improving the yard's reputation.

An important tool to achieve these objectives is a Yard Paint Manual. Such a manual reflects the 'yard's paint identity' and is the basis for the preparation of individual project manuals, sales specifications and contracts with paint contractors. The Yard Paint Manual will be the subject of the third article in this series.

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