

Notes on Irish Air Corps colours and markings.

By and large modellers will always try and find the exact shade of paint to match the full size aircraft they are trying to replicate in scale form. There are myriad arguments about scale colour and what shade of a particular paint was used in a given time frame. Leaving those arguments aside, the starting point has to be either an existing colour sample from the real aircraft or failing that, documentary evidence from archival sources. So if we can find out what shade of a particular colour was used the next step is to find the nearest equivalent modern model paint or mix our own to match the sample. This article will attempt to answer two questions, what was the original paint used and what is the nearest equivalent modern model paint colour that may be used without having to go to the trouble of mixing our own.

Modern colour standards

There are four widely available colour standards in use today that may suit our purpose. Firstly there is the British BS standard known as BS381C for military aircraft colours but many swatch books also include samples from BS4800 commercial paint standard as well. As you might imagine the BS 381C standard was widely used to specify paints for British built military aircraft but recently there has been some move towards specifying some special marking colours from another well known standard set of colours, the Pantone range. Pantone colours are widely used in the print industry to specify exact shades. Most decal artwork producers will use Pantone colours to specify the colours that should be used by the printer to replicate the markings on a full size aircraft. So for example a full size aircraft might have a roundel or other marking painted in BS381C 110 Roundel Blue. The decal artwork producer will have to find a colour in the Pantone range that will match that colour and may specify something like Pantone 282.

The other modern standard ranges are the Federal standard FS595 used to specify colours on US Government property including military aircraft and the RAL standard, originating in Germany but widely used throughout the European aircraft industry to specify aircraft paint colours.

So armed with a selection of modern swatch books of BS381, RAL, or FS 595 paint standards we can compare them to an existing paint sample on a surviving piece of airframe to determine what colour it might have been painted originally. Then we can use the information gleaned to see if there is some model paint that closely matches this colour.

Some Caveats to this method:

- All paint changes colour over time. A surviving piece of airframe going back 70 years or more will have oxidised and might well change the colour significantly.
- Swatch books of colour standards may vary from the paint in the tin which is often mixed by different manufacturers. A small change in one of the ingredients, either by volume or chemical composition can result in wildly different shades of colour purporting to be the same thing!
- The human eye is not the most accurate instrument for determining colour matches. We all perceive colours slightly differently and there are specialised computer controlled machines used for matching colour standards. When trying to match a colour by eye it's helpful to get a consensus view from a number of people under the same lighting conditions.

- Model paints from different manufacturers purporting to be the same shade e.g. BS 283 aircraft grey green can vary significantly from each other.

So taking into account all of the limitations mentioned above we can at least attempt to get an approximate match if we have an original sample to hand.

Irish Air Corps Seafire III

Perhaps the most controversial colour scheme amongst modellers interested in Irish Air Corps subjects is that of the Air Corps Seafire III. There is a document in the Military Archives addressed to Vickers in the UK referring to an attached paint sample that was specified for the IAC Seafires but the sample is missing. So it is true to say that the colour was an Irish specified colour. It is not clear if Vickers mixed a batch of paint specially to match the sample supplied or used the nearest match of an existing paint that they happened to have on hand. More research is needed on this topic. No fully intact airframe survives but there are various surviving panels, hatches and cowlings amongst private collectors. In 2009 I had the opportunity to examine some small parts from Seafire 152. This aircraft had been used on the fire dump at Dublin Airport after withdrawal from service by the Air Corps in 1949 following a forced landing. The airframe was scrapped in 1962. So bearing in mind that it had been outdoors for a long period, subject to the ravages of wind, rain and fire it is entirely possible that the colours will have changed somewhat over time.

In our attempt to match the colour we used a BS swatch book produced by Technical Paint Services Ltd in the UK. This book had a selection of BS381, BS4800 and RAL colours for us to choose from. I say us because 5 people (four of them modellers) were asked to individually compare the colours in the swatch book to the sample at hand. The sample was a small D shaped hatch cover with the overall green colour and a small section of the dark green used on the national markings. There was also a separate sample with the orange paint used in the national markings so we took the opportunity to match the three colours.

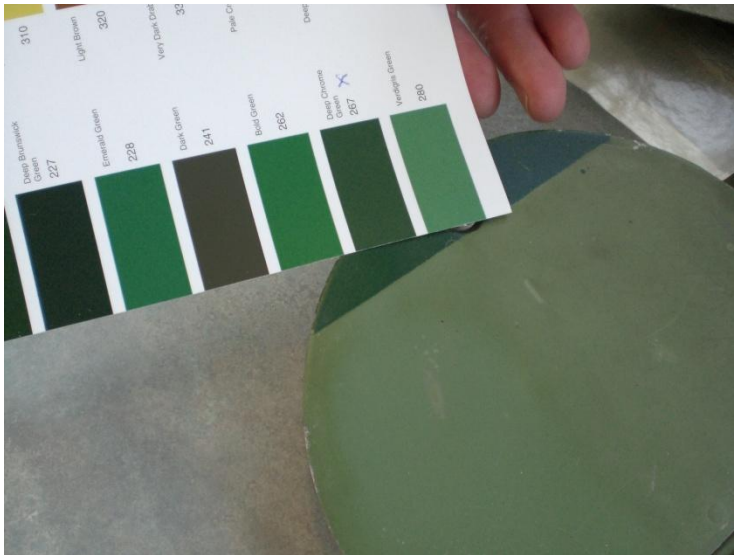
I've included some photos showing the samples with the paint swatches beside them. You will notice that the sample had darkened somewhat with a thin patina giving the dark green colour an almost blue tinge. This patina was cleaned off the lower half of the sample using de-ionised water to reveal the colour underneath. The comparison took place at midday in a west facing room lit by natural daylight through a very large window.



Sample 1: left hand side has been cleaned with de-ionised water using cotton buds.



Checking which shade matches the clean orange portion of Sample 2.



Sample 1: checking the shade that closely matches the dark green.



Sample 1 again, this time checking the overall airframe colour.

The consensus amongst those present was as follows:

Overall green colour closest match: BS 381C 283 Aircraft Grey Green

Dark green in national markings: BS 381C 267 Deep Chrome Green

Orange used in national markings: BS 381C 568 Apricot

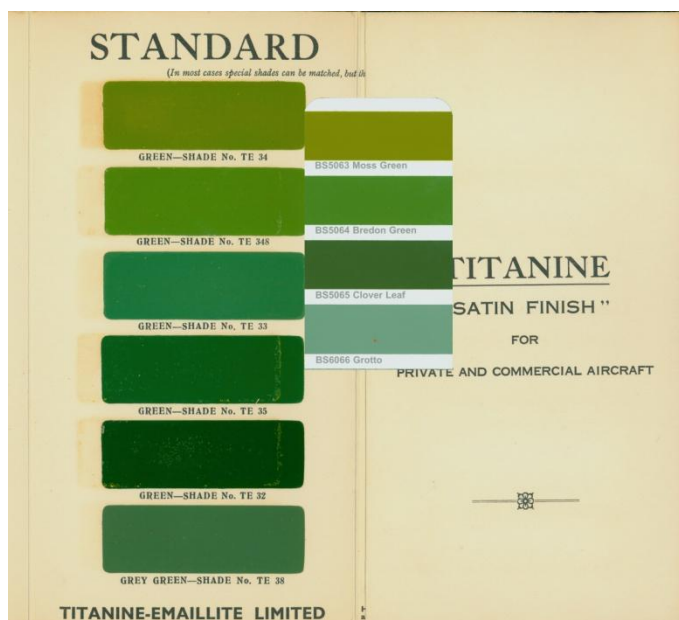
These were the closest matches to the standards we happened to have available to us on the day. I should also stress that these are the matches arrived at using a modern swatch book. The colour names and standards may have changed over time and it is quite possible that the original shades used did not have these names. So taking into consideration all of the caveats listed above, the age of the samples and the variance that can exist between swatch books and real paints I am satisfied that a modeller will get a reasonably accurate interpretation of an Irish Air Corps Seafire if they should choose to paint it overall BS 381C 283 aircraft grey green. But which model paint

manufacturer most closely matches the shade of grey green in this swatch book? Although I would normally have a preference for acrylic paints, in my opinion Humbrol 78 gives the closest match. Finally, feel free to interpret this any way you like. It is after all only just one opinion and we are all entitled to hold them!

Early Irish Air Corps- silver and green schemes, the Anson, Gladiator and Dragon

In the 1930's the Air Corps operated three aircraft types in a very attractive scheme of green fuselages with silver wings. These were the delivery schemes worn by the DH-84 Dragon, Avro Anson and Gloster Gladiator. Later these aircraft were repainted in camouflage colours of dark green and dark earth upper surfaces with black lower surfaces on the Anson, the Gladiator and Dragon retaining silver on the lower surfaces of the wings. No original sample of the green shade exists but research by others has shown that the green paint specified for the Anson was called Titanine TE348. Titanine was a manufacturer of aircraft paints and finishes during that period based in Croydon. It would be a fair extrapolation to conclude that the Dragon and Gladiators may also have used the same paint as specified for the Anson. A search on the internet turned up a gentleman in the USA who happened to have an original Titanine paint chart from 1935. It's the closest thing we are likely to get to a sample unless an original piece of an airframe painted in this colour turns up somewhere. Bearing in mind all of the caveats stated at the outset of this article and given the age of the colour chart we can only hope to arrive at a loose interpretation of what the colour might have been. The owner of this rare colour chart naturally enough did not want to part with it but he kindly agreed to compare it with a BS standard swatch book made by e-paint.co.uk containing the full gamut of BS 381C and BS4800 colours. The owner took photos of the sample next to the swatch book and made these very helpful comments:

It is a gate-fold chart on heavy stock. The chart folds so that all the paint samples are enclosed within the cover and back, a sheet of tissue paper lays across the colors to protect them from directly contacting each other. The chart is not faded at all, nor damaged or stained in any way. Most likely it was never used and stored away someplace safe all these years. The paint samples themselves are actual paint, directly applied to the heavy paper stock. The paint is rather thick, perhaps 1/32 thick. The TE348 color chip is in perfect condition and shows no color change or darkening at all. So I feel very confident that the color on the TE348 paint chip is true. BS5064 Bredon Green is a very good match to TE 348 (your Anson color). To be an exact match BS5064 will need to be about 10% lighter with a bit more yellow.



BS5064 is not a military colour. It's a British house paint colour so there is not likely to be any match in the usual model paint ranges. However I compared the Bredon Green in the BS swatch book to various shades of green in the RAL and FS ranges and I found that the nearest match to Bredon Green was RAL 6025 Fern Green. It turns out that Revell produce this colour in their Aquacolor range of acrylic paints. The reference number is 36360 RAL 6025 Fern green. Once more this is just my interpretation of the colours used and I intend to use this colour on my next Gladiator model but feel free to differ!

A modern colour conundrum

The two helicopter types currently in service with the Air Corps are the Eurocopter EC-135 and the Agusta AW-139. I understand that the specification for both types was that they should be painted overall RAL6031 Bronze Green. However, if you look at any photographs of the two types over on say Worldairpics.com the colour can appear to vary between the two depending on the ambient lighting conditions. There may be variations in the undercoat/primer used on the two types and this can also lead to variations in the perceived colour and of course there is the fact that they were assembled by two independent manufacturers who would have sourced the paint from different suppliers. If you wish to model an Air Corps EC-135 or AW-139 then the good news is that Revell have this colour in their Aquacolor range of acrylic paints. The Revell reference code is 36165 RAL 6031 Bronze Green and it will serve as a good starting point for achieving whatever variation of finish you choose for you model.

Although I have mentioned Revell and Humbrol paints above there are many more paint ranges available worldwide and it is entirely possible that there is a better match out there somewhere so Caveat Emptor!

Acknowledgements

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Joe Maxwell

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