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consulting engineers

June Newsletter – Code Compliance Issue

Welcome.

Sometimes important and exciting don't go together. We wouldn't presume that Code Compliance isn't exciting (but we can appreciate all perspectives).

What we are sure about is the importance of any design development being managed carefully, particularly in its early stages, to ensure costly changes aren't incurred when assuring code compliance of the design.

We have a lot of experience in this area which we touch upon in the article below - or you can visit our web page for the full low-down: www.dcwhite.co.uk/services/designanalysis.aspx.

And just to show how exciting we find this subject, read Doug's Digest below for his unique view.

Design Optimisation

Ok, the stop sign is a bit dramatic. But in truth, we would urge anyone in the middle of a major design project to STOP and think very carefully about the the next steps. Because, without a clear programme of optimisation, driven by robust analysis, you could be on the verge of racking up a large bill (if you haven't already).

Not only might you have to consider code compliance (see Doug's thoughts on that below), but the bigger picture is to ensure the end product is fully optimised for its purpose - this means maximising profit margins.

And that's what we do. With over 25 years' experience in this field, we understand how to take a design at any stage in its development, and deliver the best output against your objectives.

We use Solidworks to do the desk analysis, but our main tools are a practical knowledge of how things work, drawn from many industries, coupled with high levels of academic insight: the result? High quality, tailored solutions that meet your needs.

"*I have worked with Doug and his team on design evaluation for fatigue life and properties of rotating fabricated structures under load. They were able to analyse and offer good practical advice in improving design performance.*" - R. Eggink of GEA Pharma Systems.

Visit our website for more information on our design optimisation service.

Doug's Digest - Code and Design

How do you go about designing something which potentially could cause harm? Do you use the appropriate code as a design guide? Or do you design on the basis of 'Fit for Purpose' and when satisfied, then assess it against code?

"What's the difference?" - you might ask. Well, design by code can lead to unimaginative design. I have seen this repeatedly in the seismic design of buildings: stresses are high so add more steel – but the added mass produces only a small benefit in increased natural frequency. One nuclear site engineer I know quipped "this new building requires no weather cladding, there's enough structural steel to keep the rain out!" Safety does not preclude economic design.

Understand How it will Fail

To design on the basis of fit for purpose means that you have to have a thorough grasp of the required duty, the operational requirements and fault conditions; you need to know how the component, machine, building etc works; how it can be made; how it responds to fault conditions; and, most importantly, how it will fail.

If you design to code for normal duty, modify it for earthquake and then for blast or whatever, you will end up with a mish-mash of patches each added to address another code requirement.

The codes are your servants, they embody countless years of engineering experience. These are the fences that keep you away from the cliff edge but why build against the fence when you have an open field to work in?

If you would like to work in a bit more room, contact us on 01252 811461 or drop us an email.

To Get In Touch

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