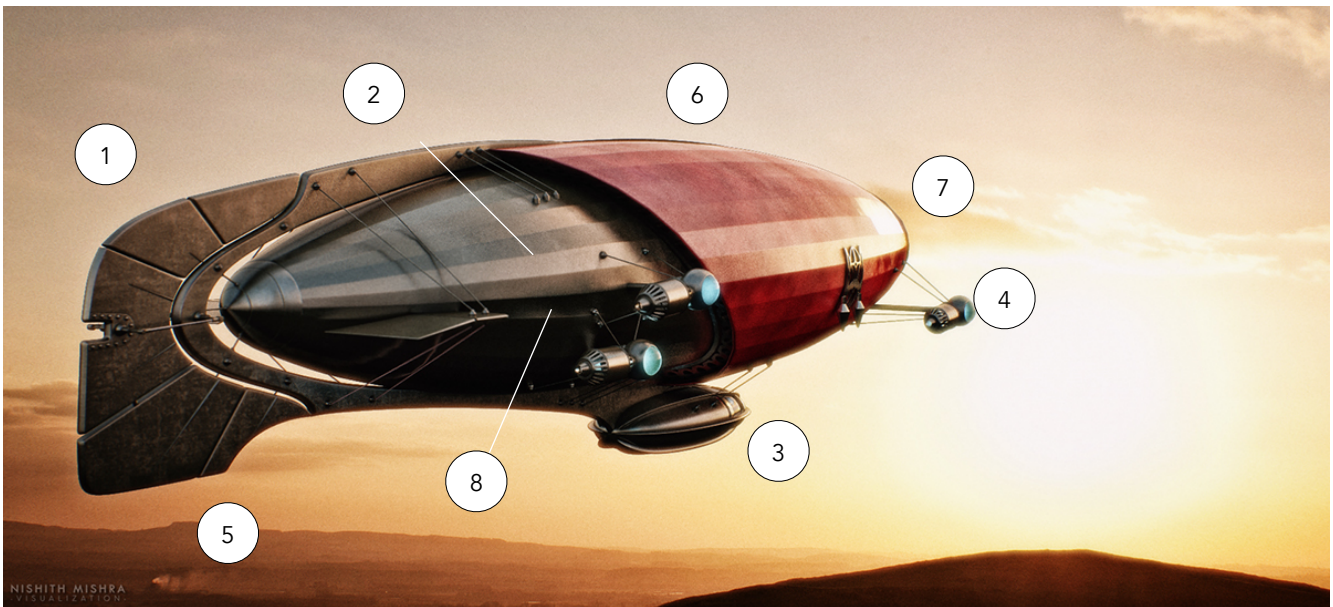


AIRSHIP 'IMAGINEERING'

By Alan Shrimpton

There are a great many wonderful and improbable designs for new airships out there that owe their existence to a well crafted artist's impression or computer graphic, but which will never progress beyond this stage. Just take a look at Pete Lobner's excellent on-line index to modern airships and you will see what I mean. We may examine some of those ideas in a future edition of AIRSHIP but I thought, for this edition, we'd try something new and take a critical look at airship designs produced by the film industry. They may never fly but sometimes they get somethings right...

For me, the best example of this is the Magisterium Air Ferry from the 2007 film 'The Golden Compass' (adapted from Philip Pullman's 'Northern Lights' novel). This craft had purpose and elegance, something the much better BBC TV series failed to achieve with their airship designs.



The 'Good' Design elements

1. The aircraft has a pretty standard cruciform tail plan and the empennage is braced with wires.
2. The hull envelope is of conventional appearance and is securely attached to a keel and a dorsal spar, so I think we might term this a semi-rigid airship. The envelope does also mount 4 of the 6 engines but Airlander achieves this with carbon fibres and hi-tech adhesives so that's possible.
3. The control gondola is nicely located and, whilst streamlined, seems appropriately sized for the two man crew.
4. The 6 propulsors are mounted on pylons and, as seen in the film, do rotate to provide vectored thrust and improved manoeuvring. Of course, the power source is not disclosed.

The 'Questionable' Design elements

5. The rudders appear to be asymmetric which either implies some level of differential input, or a degree of roll in the turns.
6. The additional rigid hull covering the forward half of the vehicle, whilst undeniably cool, would add a substantial weight penalty, and a trim problem.
7. The passengers accommodation is all the way forward in the bow behind a glass nose cone. Whilst providing privacy and superb views, the ship would need to be trimmed each flight to account for passenger weight that far forward.
8. Whilst the overall design is gorgeous, it does appear that the envelope may be rather undersized for the volume of lifting gas needed.

Do you have a favourite fictional airship design or is this too frivolous for the AIRSHIP Journal? Drop me an e-mail and let me know.