



# Model Update

Ran Test Model 31 – Which was with compressors of the correct dimensions and almost correct locations (Racks were placed a few mm to far away from west wall) Interestingly this ran and completed in 14hours although I've not checked the results.

Next I gave the racks a 2mm skin and then took the remaining compressor mass and I was going to try to use a reduced BH curve to simulate the effect of having this mass evenly distributed within the volume of the compressor. Also applied a correction to the compressor locations.

This model generated some volume meshing errors due to the thin skin on the compressor walls.

On looking though the log file it also appeared that there were an additional 80 surface mesh errors in other parts of the model that the modeller had chose to ignore both in this model and in test-model 31.

I think these errors have appeared as it seems that the new version of OPERA is much pickier about what it considers to be a good mesh.

However this was the thread sticking out of the carpet that I decided to pull...

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Firstly to put this in perspective 80 surface mesh errors on 65600 faces means 99.9% of the faces were meshing ok... (8.2m elements in the Hall model)

However I still thought it would be prudent to go through these errors and check what was causing them. In a lot of cases I feel that the modeller was really whinging about nothing, the odd element that was really thin because we were transitioning from a region of high resolution to one of much lower resolution and could be safely ignored.

However there were a few surfaces that were clearly problematic and needed fixing and there was a void in the model that had clearly gone unnoticed for some time...

However fixing these errors introduced other meshing errors which introduced other meshing errors, which introduced other meshing errors which then turned into volume meshing errors etc. Anyway that's the kind of week I've had...

5 days later, plenty of late nights and a I now have a model that is about working again...

# Model Update

As of this morning I'm running test model 32 without any compressors as a baseline model.

So, we are about where we were last week but I'm sure we have a better model....

What do I want to do?

I want to get the improved compressor models working.

I want to get the new geometry in for the South Side of the Hall (Proposed Rack room etc) – but still need the drawings to do this.

I still want to move the model over to 'production' but I want to run a few models first to ensure that there aren't any more surprises in store for me...

I would also like to do another thorough geometry check with Jason of everything we have but maybe this would be better done once the new geometry is in situ...