

INSULATION TREATMENTS

Van Cappellen Consultancy draws from its experience in selecting sound insulation materials during the early stage of a project. At a later stage, the effectiveness of the insulation materials is verified using our VAOne noise prediction software.

Sound insulation is divided into structural insulation (bulkheads, sides and overheads) and joinery insulation (floors and partitions).

Insulation treatments can be divided into the following categories:

- Sound insulation
- Fire insulation
- Thermal insulation

Whenever applicable, fire insulation materials are selected to comply with the structural fire protection rules outlined by the classification society or flag state, including DNV, Lloyd's Register, MCA LY2 and Passenger Yacht Code.

Thermal insulation materials are selected to meet and maintain internal temperature limits and to prevent condensation, thermal bridging and "under insulation corrosion".

There is a logical sequence in which Van Cappellen Consultancy defines the insulation treatments to be used on board your new build, refit or conversion project. First in line is the insulation space requirement (ISR), followed by a structural fire protection (SFP) plan, insulation plan and details, and finally a material weight calculation.

Determining the space to reserve for bulkheads, floors and partitions is a challenge shipyards and interior designers always face during the early stages of each project. The ISR schematic outlines the space needed for each bulkhead, floor and partition, determined by the vessel's characteristics, insulation requirements and building specification.

Extensive experience and know-how of classification societies enable Van Cappellen Consultancy to produce SFP plans compliant to the class or flag state of your choice. Clever ideas and innovative materials will prove valuable during the plan approval procedure and construction phase.



Based on the general arrangement, SFP plan and construction drawings, insulation plans consist of deck plans showing the various insulation treatments in both coloured lines and hatches and in text.

Insulation treatments are sub-divided into such categories as damping, bulkheads, floors, sides, overheads and partitions.

After the insulation plans receive initial approval, insulation details are produced to assist the shipyard and interior contractor in understanding how the insulation treatments and box-in-box should be fitted. Different installation methods are evaluated, and whenever possible the customer's standard method will be used.

Material weight calculations are performed not only to assist the naval architect in performing stability calculations, but can also be used as a bill of material. This greatly assists the shipyard and interior contractor when ordering insulation and joinery rough-in materials from the preferred suppliers.

On the next page you can see an example of our insulation plan and details.



