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1. Work Experiences

➤ July 2014 - February 2015

Company: ERENAV Ship Repair Company

Position : Maritime Engineer

company : Enclave Simplification company

➤ March 2015 – August 2016 Position: Study Fluids Engineer Company: SATEM (Société d'Assistance, Technique, Engineering & Maitrise d'œuvres)

➢ February 2017 – July 2017 Position: HVAC Engineer Company: CSCEC (China State Construction, Engineering Corporation)

➤ January 2018 - September 2018 Position : Site Engineer HVAC & PLUMBING

Company: ATSP Atelier Tom Sheehan & Partenaires

## 2. HVAC BUILDING

## 2.1 Design Calculation

The design basis typically includes information on:

- Geographical site conditions (latitude, longitude, wind velocity, precipitation etc.)
- Outdoor design conditions (Temperature, Humidity)
- Indoor design conditions
- Building construction (materials, size and shape)
- Configuration (location, orientation and shading)
- Operating schedules (lighting, occupancy and equipment)
- Infiltration & Ventilation

• The cooling load calculation

The cooling load is determined according to the DTU and the American Society of Heating, Refrigeration and Air Conditioning ASHRAE Standards, by equation:

Q = U × A total × ΔT

The load Total is the sum of:

- External Loads (Solar loads and Conduction loads) of windows, wall Roof.

- Internal Loads (People, Lighting and Equipment).

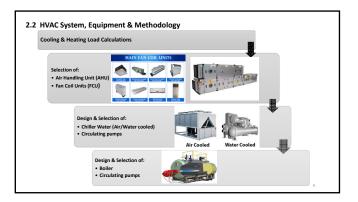
- Ventilation & Infiltration Loads.

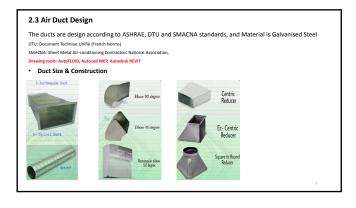
Note: The computing are carried out manually, by Autodesk Revit or by NAP Carrier software

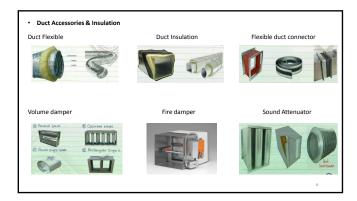
Sources of Cooling Load

computer & Sources of Cooling Load

Note: The computing are carried out manually, by Autodesk Revit or by NAP Carrier software











## 3. CONCLUSION

- $^{\star}$  The Building HVAC method of load calculations are similar to Marine & Offshore HVAC method using:
  - ASHRAE method.
  - SNAME Society of Naval Architecture and Marine Engineering method.
  - ISO Standards
- $\bullet \quad \hbox{Condensate drain pans must be designed to handle the ship's motion}$
- The HVAC system should provide comfort and protect from contaminents & Fire

THANK YOU VERY MUCH

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