



Concept development and engineering

Ever since SSPA was founded in 1940, we have supported our customers with services and expertise within the hydrodynamic sphere. Over the years, the scope of services has increased and now covers most facets of maritime technology.

Thanks to the continuing and purposeful development of our competence and a wide network of partners/subcontractors, we can now offer a complete range of services within the field of Total Ship Systems Engineering (TSSE).

Design

Regarding the design of ship and marine applications, we have experience within the following fields:

- Hydrodynamics
- Speed and range predictions
- Hull design and materials
- Strength calculation, FE-Analyses and optimisation
- Propulsion and auxiliary systems
- Onboard systems, electrical, HVAC, hydraulic, piping
- Ship system surveillance and control
- Sensors, command- and control systems and weapons (Naval ships)
- Acoustics and vibrations
- Fire protection
- Damage control
- Stability (intact and damage)
- Vulnerability analysis and assessment

- Environmental issues

Systems engineering

A modern ship is a complex system and, when tackling a new design, a systematic approach is essential if you want to end up with a cost-efficient, safe, and environmentally friendly ship. Hence, there is a need for thorough Systems Engineering.

In our projects, we normally use the international Standard ISO/IEC 15288 Systems Engineering – System Life Cycle Processes, which we tailor to suit the ambition level in each project. The processes of current interest in the early life cycle stages in a typical ship design project include:

Project Management Processes

- Planning Process
- Assessment Process
- Control Process
- Decision Making Process
- Risk Management Process
- Configuration Management Process

Technical Processes

- Stakeholder Requirements Definition Process
- Requirements Analysis Process
- Architectural Design Process
- Implementation Process
- Integration Process
- Verification Process
- Validation Process

