

INTERNSHIP SUBMARINE DESIGN



INTRODUCTION:

Considering market growth of submarine project for export markets, PRINCIPIA would like to define a support for the preliminary development of submarine design.

SCOPE OF WORK:

The scope of work includes the 5 following tasks:

- ✓ State of the art and retro-engineering
- ✓ Principle for layout and General Arrangement
- ✓ Preliminary structural analysis - Rules for weight assessment
- ✓ Stability analysis for various operations

State of the art and retro-engineering of existing submarines

Analysis of specialized bibliography and review of existing submarines, based on public information. Purpose is to assess and understand design principles.

Principle for layout and General Arrangement

Based on the state of the art review, main components and associated interfaces will be summed-up with a special attention paid to operational constraints.

Preliminary structural analysis - Rules for weight assessment

Based on Rules, a preliminary structural analysis will be performed, using 2D models for steel plates and secondary stiffeners, and direct calculations for primary members.

Stability analysis for various operations

Submarine stability during various operations will be checked and corresponding Excel tool will be developed.

DELIVERABLES:

1 - Technical report including

- ✓ Documentation about the technological choices
- ✓ Main assumption and design parameters
- ✓ Calculation outputs

2 - 3D Model of the submarine and associated 3D views (RHINO)

GENERAL:

Based in PRINCIPIA offices at La Ciotat (13).

To apply : job@principia.fr