

	Design	Manufacturing	Testing	Operation
Work Package 1 Code reviews	Task 1.1: typical design examples	Task 1.2: manufacturing and material degradation	Task 1.3: Structural integrity and End of Life design	Task 1.4: Safety factors and Failure modes
Work Package 2 Design requirements	Task 2.1: Functional requirements and geometrical properties	Task 2.2: Fabrication effects (welding, forming, heat treatment)	Task 2.3: Appropriate test methods applicable for new steels	Task 2.3: Assumed loads, temperatures, environment and life time under static, dynamic, cyclic loading
Work Package 3 Welding	Task 3.1: Selection of material welding procedure, consumables	Task 3.2: Plate/Forgings- manufacturing and delivery and welding of test material	Task 3.3: NDT and secondary stresses	Task 3.4: Conformity with EN Welding Codes
Work Package 4 Material characterisation <ul style="list-style-type: none"> • Strength, toughness, corrosion resistance, Fatigue • Effect of cold forming and heat treatment • Material modelling 	Task 4.1: QT-HSS plates and weldments Task 4.2: TMCP plates and weldments Task 4.3: Duplex stainless steel plates and weldments Task 4.4: Forgings of QT, Duplex Task 4.5: High strain rate Task 4.6: Statistical evaluation and correlations			
Work Package 5 Modelling	Task 5.1: new design aspects for new steels and design of test vessels	Task 5.2: Quantification of typical welding and forming effects and FEM Simulation of residual stresses	Task 5.3: Adoption of structural integrity concept, statistics, correlation	Task 5.4: FEM Simulation for representative structural parts, vessels under typical load scenarios
Work Package 6 Validation		Task 6.1: Fabrication of test vessels and component like large scale specimen	Task 6.2: Testing of component like large scale specimen	
Work Package 7 Development of safety concept	Task 7.1: Quantification of extreme loading parameters and other basic variables	Task 7.2: Quantification of effects of material degradation	Task 7.3: Statistical verification of structural integrity concept	Task 7.4: Assessment of Life time and inspection intervals
Work Package 8 Design recommendations	Task 8.1: Development of design tools for future code and practice implementation Task 8.2: Preparation of main project output for publishing			