ISD s.r.l. has been founded by Stefano Pelizza and Francesco Breccia on mid 2013. They have been employed the last five years in Wally Europe where Stefano and Francesco duties covered various field; structures of sailing boat up to 50m and motor boat up to 26m. Stefano was the chief engineer of the wallycento MC3, while Francesco has done most of the 3D modelling including deck hardware, system arrangement, kinematic of doors etc.

Beside the wallycento, they worked also on the structures of Wally 164, Wally 148 and various powerboat.

Before they have been employed in Wally company, they had various experience varying from the analysis of a composite airplane in Germany, to the America’s Cup mast of Shosholoza, to the Finite Element analysis of various Ferretti boat's.
ISD can deal the most advanced structural problems.

- Composite materials Analysis
- Stress Analysis
- Stiffness Analysis
- Non Linear Analysis
- Buckling Analysis
- Modal Mode determinations
ISD using the RANS solver OpenFOAM is able to resolve fluid dynamics problems:

- Lift and drag determination on immersed or emerged surfaces.
- Exhaust back pressure determination
- Loads caused by wind or water flow
- Hull resistance
- Optimization to reduce drag
ISD is able to design and calculate complex kinematic mechanism. Our experience includes:

- Retractable propeller system
- Hydraulic doors
- Hatches with gas springs
- Under hull hidden anchor
- Custom Pantograph hinges
- Retractable booms
- Retractable ladders
ISD, using a 3D parametric CAD and a surface modeller is able to design complex mould to be CNC machined. We have managed complex mould with up to 80 plants.
ISD is able to model in 3D avoiding the necessity of expensive mock up.

- Engine Room
- Piping
- Deck Hardware
- Systems
- Structures
- Furnitures
LAMINATION PLAN

ISD has already built lamination plan for:

- Several masts for boats from 25 to 80 feet.
- Hull, deck and structures of boats from 25 to 160 feet.
- Coach roof
- Rudders
- Bowsprits
- Keels
- Oil tanks
- Pressure tanks
- Doors
FITTING DESIGN
At ISD we are able to improve the boat performance by modifying:
- the rig
- the rudder
- the keel
- the sail plan
ISD it is not only sailing boat!

Our know how is well used also in the industrial field where composite materials or FEA is needed.
EXPERTISE

ISD operate in junction with several Insurance company as expertise in damage assessment. Along with a network of professional, we are able to provide the following services:

- Laser scanner of complex surfaces
- NDT of composite parts
- Thermography for water detection
- Fiberglass humidity control
ISD believes in technology. In our office we have implemented the most advanced software and hardware to offer to our client the best solutions. We currently use the following software:

- Solidworks with PDM
- Rhinoceros
- MSC Patran
- MSC Nastran
- OpenFOAM

Hardware: three powerful workstation and one RAID 6 server.
Innovative Structural Design s.r.l. is situated in Ancona, Via Tagliamento 4 - 60124, only ten minutes from the Ancona Harbour and half an hour from the Falconara Airport.

Here below the route from the harbour to ISD office.

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