

Silent propulsion for shallow water applications

The Schottel Pump Jet (SPJ) is one of the most popular propulsors for shallow water applications. The 360° steerable thruster was developed in the early 1990, supported by model tests and extensive full scale trials. The main advantage is that the SPJ is very compact and can be installed fully integrated into the ship's hull. This makes the SPJ to the most favorable type of propulsor for extreme shallow water.

With modern CFD methods the inner housing and the impeller of next SPJ-release is fully streamline optimized. This leads to a higher efficiency and more silent operation. For a better performance at higher speeds a new grid with scoop was developed and approved. The new developed scoop suppresses flow separation at the SPJ's inlet, preventing cavitation inception and its expansion within the inlet region.

The development process of the new SPJ-release is supported and validated by extensive full scale tests at Potsdam model basin.