The SSP M36 Root Joint

SSP Technology A/S specializes in blade component design that offers increased load capacity, reduced size of blade connection, improved structural performance, uniform quality, reduced investment in production tools and reduced production costs of the blade. The M36 root solution is available to any blade manufacturer and can be adapted to existing blade designs, or included in new ones by either SSP Technology or other blade designers.

Our specialized, lean serial production with all plies pre-cut by CAM machines in prepreg materials together with our standard SSP components such as the steel inserts enable us to run a very efficient operation with the highest possible accuracy and repeatability. The root design and related processes ensure that materials are correctly allocated, preventing material inconsistency and reduced durability resulting from this. Further, it ensures that the risk of variance in weight is eliminated. Due to strategically located production centers, the costing of the SSP M36 root joints is always competitive.

Our patented method of manufacturing a root joint for a wind turbine blade consists of having fully bonded bushings with an internal thread for mounting bolts for attachment of the blade to the hub of the wind turbine.

Advantages of the patented M36 root joint:
- Saves time and costs in blade production by use of pre-manufactured components
- Possibility of reduced Bolt Circle Diameter (BCD) and thereby reduction of the total weight of the blade
- Strongest and most reliable solution on the market
- Great accuracy and minimal weight deviations
- Key component manufactured under economies of scale
- Reliable and thoroughly tested
- Minimized distance between bolts allowing high load capacity and greater flexibility in BCD design
- Cost savings on service and maintenance, since the SSP root joint has fully bonded bushings making re-tightening of the bolts obsolete
Strong focus on accuracy and quality
SSP Technology develops moulds with an integrated heating control system that connects the oven’s heating system with the mould. The oven has a computer controlled heating system that during the cure cycle collects and logs data related to part number, vacuum and temperatures. The controller also includes an alarm system. The system ensures high accuracy and quality through process control. The heating system for mould and oven is designed for optimal curing process.

SSP root solution

SSP root joint vs. traditional T-bolt solution

Additional loading capacity using SSP root

The M36 root in brief
- Light construction
- Flexible in design
- Less material consumption
- Strongest construction
- Repeatable process
- Carry more load
- Overall lighter blade
- Pre-manufactured/approved
- No drilling and grinding
- Traceability and confidence
- High quality and security
- Flexibility in production
- Opportunity for reduced BCD

For more information on our patented root joint, go to www.ssptech.com

About SSP Technology A/S
SSP Technology develops and manufactures moulds and patented blade components for the production of cost effective, high performance and reliable blades made of composite material. We possess leading edge knowledge in the area of rotor blade technology and mould construction from drawing board to production, placing strong emphasis on aerodynamics, uniform quality, low weight and high productivity. Through the use of SSP’s technology expertise, the customer’s blade performance will become highly competitive especially with regard to future development.