

Manufacturing Requirements for the Wind Industry

Foundries

Multiple furnaces - larger the capacity the better, 35,000 lbf ideal, on-site metallurgy & NDT. Charpy testing usually required.

Forges

Sizes for 80lbf gear blanks to 45, 000 lbf main shaft billets

Machine shops

Large castings and fabrications, up to 40,000 lbf, CMM availability

Fabrications

AWS Certifications

Large fab: roll/bend plate up to 1.5 inch, fit & weld 50 ft sections, NDT, surface coating process

Small fab: automation, surface coating process

Electrical

Large generator units complete or main components, slip rings and brushes

Power Electronics

Transformers, cables and connectors

Control Systems

Sensors, cables connectors and PLC modules

Hydraulics

Tanks, pumps, accumulators, filters, heat exchanges, manifolds, valves, tubes, hoses and connectors

Fasteners

M4- 60 studs, cap screws, washers and nuts

Brakes

Rotors, calipers and pads - component or turnkey systems

Nacelle Structures and Blades

Composite layup equipment

Supplemental Equipment

Ladders, elevators, hoists, fire suppression, lightening, meteorological instrumentation, electrical cabinets

Information provided by the Great Lakes Wind Network