



WIND TURBINE GEARBOXES

Since 2008 Hofmann Engineering has been extensively involved in repairing and improving the life expectancy of various wind turbine gearbox models for local and overseas markets. Each repair and modification of wind turbine gearboxes is a complex project due to the required precision machining. As an independent service company, customers can have confidence in Hofmann Engineering's expert gearing knowledge, detailed analysis and technical reporting. Hofmann Engineering has carried out repair and modification projects on numerous models ranging from 500kW to 3MW all of which are tested in-house to full load capacity prior to installation.



WIND TURBINE GEARBOXES NEW & REBUILT

- STANDARD HELICAL
- PLANETARY

OEM models can be overhauled and rebuilt with improved high performance case hardened precision ground gearing. This ensures smooth, quiet, reliable operation.

- Flender
- Renk
- Valmet
- Hansen
- L&S
- Metso
- Clipper
- Gamesa
- Eickhoff
- Zollern



SLEW BEARINGS - Induction hardened and precision ground

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AUDITING YOUR WIND TURBINE GEARBOX REPAIR SHOP

Do they have the equipment and know-how to rebuild your gearboxes?

COMPARE		OTHERS	
	<p>GEAR DESIGN</p> <ul style="list-style-type: none"> • Do they have gear design and consulting services? • Do they have a full metallurgical laboratory for carrying out failure analysis? • Are they members of any gear standard associations? (AGMA, DIN, ISO) 	?	✓
	<p>GEAR INSPECTION</p> <ul style="list-style-type: none"> • Do they have a certified gear inspection laboratory to inspect gear accuracy? • Wind turbine gearing requires very high gear accuracy of DIN 3 or better. • Can they provide computerised printouts of lead, involute and pitch? 	?	✓
	<p>COORDINATE MEASURING MACHINE</p> <ul style="list-style-type: none"> • Do they have a Coordinate Measuring Machine for checking bore alignment and size of gearbox housings? • This is required for the planet carrier of the planetary stage on wind turbine gearboxes and components. 	?	✓
	<p>MACHINING/FABRICATION</p> <ul style="list-style-type: none"> • Do they have gear manufacturing facilities for producing improved replacement gearing? • Hofmann Engineering also fabricates and machines many of the wind turbine components. 	?	✓
	<p>HEAT TREATMENT</p> <ul style="list-style-type: none"> • Do they have heat treatment facilities for replacement gearing, including qualified metallurgists? • Carburising, induction hardening, nitriding, quench & tempering & stress relieving facilities? • Gas carburising to 1,800mm dia for the output stage gearing for wind turbines. 	?	✓
	<p>PRECISION GEAR GRINDING - EXTERNAL & INTERNAL</p> <ul style="list-style-type: none"> • Do they have modern, climate controlled gear grinding facilities, capable of producing accurate gearing to DIN 2 (AGMA 15) required to produce quiet running wind turbine gearing? 	?	✓
	<p>GEARBOX BACK TO BACK LOAD TESTING</p> <ul style="list-style-type: none"> • Do they have a gearbox testbed facility for load test running gearboxes? • Hofmann Engineering has full gearbox load test facilities to 3,000kW. 	?	✓
	<p>ON-SITE MACHINING & INSPECTION</p> <ul style="list-style-type: none"> • Precision Portable Coordinate Measuring Machine for checking bore alignment and accuracy in situ. • Portable line boring machine for re-machining worn gearbox housings in situ. 	?	✓
	<p>SITE INSTALLATION & SERVICE</p> <ul style="list-style-type: none"> • Do they have site crews trained in gearing to install and laser align gearboxes? • Are they able to provide on-site machining services? 	?	✓

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