External Speed Probes
Steam turbines and expanders

Challenge
Usually the speed probes for speed controllers and overspeed detection systems are installed within the bearing pedestal. Therefore, these sensors can not be accessed, checked or changed during operation. In case of a possible malfunction of the speed probes, e. g. electrical interferences, wiring problems, aging effects, or increased shaft currents due to grounding issues, the machine must cool down before the lube oil supply can be shut off and opening of the bearing pedestal can take place. As a result of this, unit downtime is significantly prolonged.

Modernization Solution
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Modernization Solution
MAN PrimeServ has developed a bearing pedestal cover having all speed probes installed on the topside instead of in the inside as a means to improve the accessibility and maintainability of the speed probes and therefore to increase the overall availability of the equipment. This enables access to the sensors during operation for checks or exchange without affecting production. In addition to this, with the new design no adjustment of probes is required to set the distance to the speed wheel in case of an exchange of speed probes. The modernization solution is available for steam turbines as well as for expanders and can also be used in hazardous locations.
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Management Summary
Features:
- Bearing pedestal cover with external speed probes
- Mechanical and electrical engineering for implementation

Benefits:
- Reduction of downtime and avoidance of unnecessary shutdowns
- Access to speed probes without opening of the cover
- Quick exchange of speed probes without mechanical adjustment during operation
- Re-use of other sensors and brushes in cover
- Probes suitable for standard overspeed detection systems

Comprehensive Modernization
MAN PrimeServ provides comprehensive modernization concepts to upgrade your equipment – no matter if you want to optimize reliability, operating costs, environmental sustainability or anything else. Please contact us for further information.