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Borescope in power plant technology

In this area, a borescope can really have multifunctional use. Machinery in heat and power plants, coal power plants and in many countries nuclear power plants must be inspected continuously.

Wind turbines also belong to this area. The operation hourly rates of power plants are very high. To keep downtime to a minimum or to avoid it at all, the inspection is carried out during the operation. Machinery and equipment which are redundant or are doubly installed help. For the aggregates which should be stopped for the inspection or visual check, the downtime must be planned and as short as possible (e.g. a regular revision).

Then turbines, cables, aggregates and containers can be inspected. In addition to gas and steam turbines (blades, combustion chambers, compressors) the pipelines inside the boilers in power plants should particularly undergo the inspection in order to repair all the located defects as quickly as possible and avoid the possible tube tear that leads to unplanned downtime. It is impossible to check all the welds in a boiler by only one inspection, that is why a few examiners must check certain sections at a time and during the next revision or downtime the next section can be checked.



Wind turbines are subject to large forces which bring to an increased wear. Even for this kind of power generators endoscopes are used for inspection. Particular attention is paid here to the gear unit. It is located at an altitude which does not allow to change the gearbox short-term (at offshore installations even more difficult).



Accessibility is guaranteed only through service lifts or ladders. There is very little space available in machine room. By means of endoscope the tooth fracture, spottiness can be detected. The warehouses, which are the most tested parts of wind turbines, experience the highest changing stresses and must be regularly subjected to a visual inspection with the help of an videoscope.

The only danger during the analysis is that the hose remains stuck inside the machine. Then only this helps: carefully turn and easily withdraw.

